

**RESOLUTION OF THE BOARD OF TRUSTEES OF THE UTAH TRANSIT AUTHORITY
AUTHORIZING EXECUTION OF AN INTERLOCAL COOPERATION AGREEMENT
WITH SALT LAKE CITY CORPORATION AND THE SALT LAKE CITY COMMUNITY
REINVESTMENT AGENCY FOR THE S-LINE EXTENSION**

R2026-04-02

April 8, 2026

WHEREAS, the Utah Transit Authority (the "Authority") is a large public transit district organized under the laws of the State of Utah and created to transact and exercise all of the powers provided for in the Utah Limited Purpose Special Government Entities - Special Districts Act and the Utah Public Transit District Act (collectively the "Act"); and

WHEREAS, the Utah Interlocal Cooperation Agreement Act, UTAH CODE § 11-13-101, *et seq.* enables components of government to execute an Interlocal Cooperation Agreement ("ILA") so both entities may obtain mutual advantage and economies of scale, among other things; and

WHEREAS, the Act empowers the Board of Trustees ("Board") of the Authority with the ability to execute ILAs on behalf of the Authority; and

WHEREAS, Salt Lake City Corporation, the Salt Lake City Community Reinvestment Agency, and the Authority have reached agreement for the Extension of the S-Line Streetcar; and

WHEREAS, this agreement allows for the design, construction, and operation of an extension of the Authority's S-Line Streetcar Line in the Sugarhouse Neighborhood of Salt Lake City; and

WHEREAS, the Board of the Authority recognizes the mutual advantage of this agreement, and desires to, in accordance with the Utah Interlocal Cooperation Agreement Act, approve and authorize the execution of an ILA with Salt Lake City Corporation and the Salt Lake City Community Reinvestment Agency for the extension of the S-Line Streetcar.

NOW, THEREFORE, BE IT RESOLVED by the Board:

1. That the Board hereby approves the Interlocal Cooperation Agreement with Salt Lake City Corporation and the Salt Lake City Community Reinvestment Agency in substantially the same form as attached as Exhibit A.
2. That the Executive Director is authorized to execute the Interlocal Cooperation Agreement with Salt Lake City Corporation and the Salt Lake City Community Reinvestment Agency in substantially the same form as attached as Exhibit A.
3. That the Board hereby ratifies any and all actions previously taken by the Authority's management, staff, and counsel related to negotiating and

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implementing the Interlocal Cooperation Agreement with Salt Lake City Corporation and the Salt Lake City Community Reinvestment Agency.

4. That the corporate seal shall be affixed hereto.

APPROVED AND ADOPTED this 8th day of April 2026.


Carlton Christensen, Chair
Board of Trustees

ATTEST:

Secretary of the Authority

(Corporate Seal)

Approved as to Form:

Signed by:

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Legal Counsel

EXHIBIT A
(Sugar House Streetcar Extension Interlocal Cooperation Agreement
With Salt Lake City Corporation and the Salt Lake City Community Reinvestment Agency)

SUGAR HOUSE STREETCAR EXTENSION INTERLOCAL AGREEMENT

This Sugar House Streetcar Extension Interlocal Agreement (the “Agreement”) is entered into as the day this Agreement is executed by both Parties (the “Execution Date”), by and between the UTAH TRANSIT AUTHORITY, a large public transit district organized pursuant to the laws of the State of Utah (hereinafter “UTA”), SALT LAKE CITY COMMUNITY REINVESTMENT AGENCY, a Utah political subdivision (hereinafter “CRA”), and SALT LAKE CITY CORPORATION, a Utah municipality and political subdivision (hereinafter “City”), each a “Party” and collectively the “Parties.”

RECITALS

WHEREAS, City, CRA, and UTA are public agencies as defined by the Interlocal Cooperation Act, Utah Code Section 11-13-101 *et seq.*, and as such, may enter into an agreement with one another to provide services that they are each authorized by statute to provide; and

WHEREAS, the City owns and has jurisdiction over a network of streets within its municipal boundaries; and

WHEREAS, UTA owns and operates the Sugar House Streetcar in the rail corridor known as the “Sugar House Spur,” which runs easterly from UTA’s North/South TRAX light rail corridor for approximately two miles through South Salt Lake City (“SSL”) and Salt Lake City at approximately 2200 South; and

WHEREAS, SSL is not a party to this Agreement as the limits of construction are outside of their city limits; and

WHEREAS, UTA is engaged in a project to design, construct, and operate the S-Line Streetcar Extension that will extend from McClelland Street parallel to Sugarmont Drive going east towards Simpson Avenue and across Highland Drive to the Sugar House Shopping Center in Salt Lake City (the “Project” or the “S-Line Streetcar Extension”), serving Salt Lake City; and

WHEREAS, the CRA currently owns property under a portion of the Project, but, shortly after the execution of this Agreement, intends to convey the impacted property to the City; and

WHEREAS, a portion of the Project will be constructed within certain public rights-of-way and/or property owned by the City, as generally identified in “Exhibit A” (“Licensed Property Map”), and as more specifically depicted in the S-Line Streetcar Extension alignment illustrations attached hereto as Exhibit “B” (“Design Drawings”); and

WHEREAS, the S-Line Extension will contain an exclusive alignment between McClelland Street Crossing and the intersection of 1100 East & Simpson Avenue, and then operate in mixed-traffic conditions until and across Highland Drive, with a terminus at Sugar House Shopping Center on privately-owned property (as depicted in Exhibit “A”); and

WHEREAS, the Parties have collaborated on this Project for several years; and

WHEREAS, UTA is the contracting party for the Project and has retained a progressive design-build contractor for the nearly-completed design and construction of the Project; and

WHEREAS, UTA will cause the Project to be designed and constructed, at a minimum, in accordance with UTA's Design Criteria Manual of standards and requirements, and, where applicable, in accordance with the Manual of Standard Specifications and Standard Plans, as published by the Utah Chapter of APWA, and the City Public Utilities Department Performance Specifications and Design Criteria for culinary water, sanitary sewer and storm drain facilities, and the FHWA Manual of Uniform Traffic Control Devices, and the Americans With Disabilities Act, and all applicable building codes, laws and regulations; and

WHEREAS, the State has provided funding for the Project, and City has committed \$395,000.00 towards the Project, and UTA will bear additional Project costs; and

WHEREAS, the City signed an Interlocal Agreement Regarding The Sugar House Streetcar Project, dated December 13, 2011, for the construction and operation of the initial streetcar system along the Sugar House Spur in Salt Lake City, and signed an additional Interlocal Agreement Regarding the Sugar House Corridor Management, dated December 8, 2013, outlining management policies for the Streetcar Project and providing for reciprocal license agreements for the use of certain City-owned property for the project and use of certain UTA-owned property by the City ("Historic Agreements"); and

WHEREAS, pursuant to the Historic Agreements, the City desires to permit UTA to use the rights-of-way and property required for the S-Line Streetcar Extension; and

WHEREAS, UTA and the City desire to define the Parties' roles and responsibilities with respect to the design and construction of the Project and with respect to the operation and maintenance of the completed S-Line Streetcar Extension.

AGREEMENT

NOW THEREFORE, based on the stated Recitals, which are incorporated herein by reference, and for and in consideration of the mutual covenants and agreements hereinafter set forth, the mutual benefits to the Parties to be derived here from, and for other valuable consideration, the receipt and sufficiency of which the Parties acknowledge, it is hereby agreed as follows:

ARTICLE I INCORPORATED TERMS AND DEFINITIONS

For purposes of this Agreement, the following definitions shall apply:

1.1 "City Facilities" means all City-owned surface, aerial, or subsurface public improvements of any kind which are located on the City or CRA property, including, without limitation, public utility facilities, water and sewer lines, gas lines, curbs and gutters, sidewalks, street paving, storm drains, canals, trees and landscaping, traffic signals, streetlights, electrical wiring, controllers, poles and related facilities, lighting facilities, and fire protection facilities.

1.2 "Communications Infrastructure" means UTA's duct bank for fiber and other lines necessary for the control of the track and station. This duct bank is located under the trackway, as shown in Exhibit "B."

1.3 "Foul Zone" means the area that is within ten (10') feet of the center line of the S-Line Streetcar Extension Trackway. When the S-Line Streetcar Extension Trackway crosses a signalized grade crossing, the foul zone is reduced to four (4') feet from the rail head, measured from the outer side of the

rail head that is facing away from the center of the tracks.

1.4 “Licensed Property” means the public right-of-way between the rail alignment curbs, consisting of the McClelland Street Crossing, Exclusive Trackway, and Mixed-Flow segments as depicted in Exhibits “A” and “B”. The Licensed Property includes any property owned by the CRA that CRA plans to convey to the City.

1.5 “S-Line Streetcar Extension Trackway” means the sections of track and area within the curb limits of the trackway to be constructed on or adjacent to Salt Lake City Streets as part of the Project.

1.6 “Salt Lake City Streets” means those public streets within the City’s municipal boundaries that are not designated as State highways under Utah Code Ann. Title 72, Chapter 4. Until such property is conveyed to the City, Salt Lake City Streets also means certain portions of CRA property under the Licensed Property.

1.7 “Salt Lake City Street Improvements” means the land, roadway materials, curb, gutter, sidewalks, traffic signal infrastructure and equipment and other improvements to be acquired, installed, constructed, reconstructed, or relocated on Salt Lake City Streets as part of the Project, and which are outside of the curb limits of the S-Line Streetcar Extension Trackway and are not considered UTA Facilities. The Salt Lake City Street Improvements include relocated curb and gutter, relocated sidewalks, modified roadway widths, added traffic signals and control devices for grade crossings, and other additional appurtenances required for the Project.

1.8 “Party” and “Parties” means UTA or Salt Lake City, and UTA and Salt Lake City, respectively.

1.9 “UTA Facilities” means the S-Line Streetcar Extension Trackway, appurtenant improvements, and Communications Infrastructure serving the S-Line Streetcar Extension.

ARTICLE II ALIGNMENT AND USE OF SALT LAKE CITY STREETS

2.1 The S-Line Streetcar Extension alignment is depicted on Exhibits “A” and “B” as attached hereto and incorporated herein.

2.2 The City (and, as applicable, CRA) grants to UTA a license in, and authorizes UTA to use, on a non-exclusive basis, the following portions of Salt Lake City Streets and land (collectively referred to as the “Licensed Property”) for the use of UTA to construct, operate and maintain the Project in the City right-of-way and property as depicted in the plans and maps attached as Exhibits “A” and “B”:

2.2.1 Such surface areas and air rights of City streets and property along the Project as necessary for UTA to construct the trackwork, grade crossing, signals, Communication Infrastructure, overhead contact system, and other appurtenances as necessary for the efficient operation of the Project already occupied by existing or currently planned City streets or land. UTA’s use of such property shall be strictly limited to the terms, conditions, limitations, and restrictions contained herein.

2.2.2 Such subsurface areas of City streets and property along the Project alignment as are necessary for UTA to install Communications Infrastructure such as duct banks, conduit, and fiber as necessary for the efficient operation of the Project, but not to include such subsurface areas that are already occupied by existing or currently planned utilities or other subsurface areas where the location of the Project's Communications Infrastructure would have an unreasonable negative impact on existing or currently planned utilities.

2.2.3 Whenever the City undertakes or approves the planned maintenance or construction of any facility owned, maintained, or operated by the City (including without limitation, installation of traffic signals, streetlights, sidewalks and pedestrian amenities where the improvement is so constructed or shall become a public facility owned, maintained, or operated by the City) and such maintenance or construction impacts the Project, the City shall:

- (a) Provide notice of such maintenance or construction to UTA at least one hundred and twenty (120) days prior to the commencement of such work; and
- (b) Provide UTA with copies of pertinent portions of the plans and specifications for any street improvement project so that UTA may consider and comment on such improvement project in regard to impacts on the S-Line.
- (c) No later than thirty (30) days after receipt of such notice and such plans and specifications, UTA shall complete its review of such facilities at no charge or expense to the City so as to accommodate such maintenance or construction at least thirty (30) days prior to commencement of such work.
- (d) If any relocation of UTA's Communication Infrastructure is required, UTA may, within forty-five (45) days after receipt of written notice requesting such relocation, submit to the City written alternatives to such relocation. Upon receipt, the City shall evaluate such alternatives and shall advise UTA in writing if one or more of the proposed alternatives are suitable to accommodate the work which would otherwise necessitate relocation of UTA's Communication Infrastructure. UTA agrees not to relocate Communication Infrastructure outside of the S-Line Streetcar Extension Trackway. In the event that the City is satisfied that there is no reasonable alternative, UTA shall relocate its Communication Infrastructure as otherwise provided in this Section. The City's determination shall be conclusive and not subject to any review, provided the City has acted in a non-discriminatory, non-arbitrary manner.
- (e) If the City requires the relocation (temporary or permanent) of UTA's Communication Infrastructure for the purpose of repairing, maintaining, or constructing any City Facility, UTA shall make such relocation and be responsible for all costs of such relocation. UTA may propose alternatives to such relocation to the same extent and subject to the same limitations as set forth in this Section.
- (f) Notwithstanding the foregoing, in the event of an emergency requiring immediate attention or access by the City to City Facilities or City Occupied Property, the City shall not be obligated to provide UTA prior notice, plans, or specifications as required in this Section. The City will notify UTA of any emergency work as early as practicable. In the event of such an emergency and upon request by the City, UTA agrees to stop S-Line operations at a location prior to the emergency area to prevent any

conflicts between S-Line operations and the emergency situation.

2.3 UTA accepts the Licensed Property “as-is” and hereby acknowledges that City has made no representation or warranty whatsoever with respect to the condition of the Licensed Property or fitness for a particular purpose, including but not limited to title matters inconsistent with use of the Licensed Property. As a provision of the Agreement, the City shall have the right to review and approve relevant Project deliverables and improvements that will be the responsibility of the City to operate and maintain as part of the Project. Should UTA fail to provide the City the right to review and approve relevant Project deliverables, the City has the right to refuse to accept the responsibility to operate and maintain such improvements. Such Project deliverables and improvements include UTA’s construction of a sidewalk adjacent to the Licensed Property during construction of the Project, which will be maintained by City and reconstructed by City to meet City standards. Upon satisfactory completion of the Project, the City shall accept such improvements that the City approved.

2.4 The final, precise locations and boundaries of the Licensed Property, City Facilities, and UTA Facilities shall be subject to change until delivery and acceptance of the final civil Design Drawings by both Parties. Because the Project is primarily a betterment for the benefit of public use and furthers specific goals and objectives set forth in the various City plans and official documents, and because UTA shall, at its own expense, operate, maintain, repair, and restore the Licensed Property, including paying all utilities and expenses associated with operation of the S-Line Streetcar Extension, the benefits to the City under this Agreement are adequate to provide fair and adequate consideration for use of the Licensed Property, without further compensation from UTA.

2.5 The City shall contribute \$375,000.00 towards Project costs to be used for reconstructing Simpson Ave including all associated paving, sidewalk improvements, landscaping, and utility work, and up to an additional \$20,000 for the replacement of a water meter servicing Fairmont Park.

2.6 The City shall own the Salt Lake City Street Improvements and will have no ownership interest in the UTA Facilities.

2.7 The Parties do not intend that UTA be deemed a “tenant” pursuant to Utah Code Ann. § 78B-6-801 *et seq.* Rather, the Parties intend that the Parties’ rights and remedies under this Agreement be determined solely by the express terms of this Agreement.

ARTICLE III TERM

3.1 This Agreement is executed with the anticipation that UTA and the City will be able to fund the project with local funding, sufficient to complete the Project.

3.2 The rights set forth above are for an initial term concluding on December 31, 2060. The term may automatically renew for an additional term of twenty-five (25) years unless either Party provides notice at least one hundred and eighty (180) days prior to the expiration of the initial term that it does not intend to renew the Agreement. Because the forecasted use of the S-Line Streetcar Extension is expected to exceed the initial term and subsequent renewals thereof, the Parties agree to cooperate in seeking from the City’s governing body an extended term, reserving unto the City full legislative discretion. Notwithstanding the foregoing, City may not terminate this agreement so long as UTA is providing public transit service for City residents on the Licensed Property.

3.3 Notwithstanding section 3.2, the City may terminate this Agreement prior to the expiration of the initial term if (i) UTA permanently terminates or abandons transit service on the Licensed Property, (ii) UTA does not provide transit service on the Licensed Property for a period of two (2) years, except when due to a force majeure event and any time necessary to reconstruct UTA Facilities, or (iii) UTA commits an uncured material, continuing breach of this Agreement.

3.4 Prior to terminating the Agreement for one of the reasons stated in section 3.3, the City shall provide UTA with written notice of its intent to terminate and its basis for doing so. If UTA does not recommence transit service or cure the breach, as applicable, within six (6) months from the delivery date of the City's notice to UTA, the rights granted in the Agreement will terminate.

3.5 Upon the expiration of this Agreement or earlier termination of the of this Agreement, all UTA Facilities located on the Licensed Property shall, at the option of the City, be removed, and the Licensed Property shall be restored to a condition consistent with the then current condition of adjoining streets or other public facilities with respect to grade, appearance, quality, finish and type of construction, at the sole cost and expense of UTA. Restoration shall be performed within ninety (90) days of such expiration or termination, or such longer period as shall be required by the nature of the work and agreed to by the City. If UTA fails to restore the Licensed Property, the City may perform such work after thirty (30) days prior written notice to UTA, and UTA hereby agrees to pay all costs of the City in connection with such work, including any collection costs and attorney's fees.

ARTICLE IV OPERATION AND MAINTENANCE

4.1 UTA shall operate the S-Line Streetcar Extension and provide regular service to the general public in accordance with applicable Federal and State law.

4.1.1 In further consideration of UTA's use of the Licensed Property and as part of UTA's operation and maintenance responsibilities, UTA shall pay all expenses associated with maintaining the Project in an operable condition and Licensed Property, including, but not limited to, gas, electrical, water, sewer, recycling, and trash service.

4.1.2 In recognition of the safety concerns, the Parties intend that no part of the S-Line Streetcar Extension or S-Line Streetcar Extension Trackway will be considered public forums.

4.1.3 Without the prior written approval of the City, no commercial advertising shall be allowed on UTA Facilities except that advertising for the S-Line Streetcar Extension itself shall be allowed to the extent it conforms to the Salt Lake City Code, subject to UTA approval of any advertising thereupon.

4.1.4 UTA shall obtain all required City agreements, permits, and property rights before proceeding with constructing the Project, performing any maintenance or improvement on or near City Facilities or Licensed Property, including but not limited to public way permits, Transportation permits, and Department of Public Utilities permits.

4.1.5 As part of the Project, traffic signal systems along the S-Line Streetcar Extension

alignment will be programmed to give priority to S-Line Streetcar Extension vehicles (except that the highest priority will always be given to emergency vehicles) where the Parties deem appropriate, with the intent of striking an appropriate balance between S-Line Streetcar Extension efficiency and other local and regional traffic needs. The initial signal timing will be determined by the Parties as part of the design process. Once the S-Line Streetcar Extension is operational, upon the request of one Party, the Parties shall meet to assess system performance and discuss potential adjustments to the traffic signal priority system. S-Line Extension vehicles traveling on City streets shall be subject to all generally applicable traffic control ordinances and regulations. The Parties agree to work together to attempt to implement a solution that meets each Party's needs to the greatest extent possible and to take advantage of technologies to improve system performance for both the S-Line Streetcar Extension and general traffic.

4.16 UTA shall maintain, repair, and replace the Project and Licensed Property as necessary to keep the Project in good operating condition at UTA's expense. The Project shall be maintained consistent with the Design Drawings and any other applicable law. UTA shall be responsible for all routine maintenance and long-term maintenance of the UTA Facilities and other storm drainage, facilities and in the Foul Zone. UTA shall keep the Licensed Property free of weeds, garbage, graffiti, and unsightly or deleterious objects or structures. UTA shall be responsible for the concrete associated with trackage and shall be maintained as a smooth, safe, and consistent surface, free of depression or obstructions and consistent with the grade of the public streets and the City shall be responsible for the road pavement. The City shall be responsible for all routine maintenance and long-term maintenance of the City Facilities, including City streets, sidewalks, trails, and pedestrian crossings of the S-Line Streetcar Extension Trackway outside of the Foul Zone. Notwithstanding, the City will maintain the landscape buffer within the Foul Zone so long as there is adequate separation in place to satisfy the applicable safety requirements and allow City staff to work freely.

4.17 The City shall be responsible for snow removal on City Facilities including any pedestrian crossing of the S-Line Streetcar Extension Trackway.

4.18 The City shall also be responsible for all routine and long-term maintenance of any new landscaping installed in either the City Facilities or Salt Lake City Street Improvements, including the landscape buffer and sidewalk to the north of the S-Line Extension alignment.

4.19 UTA shall repair any damage to or disturbance of the City Facilities, surface or subsurface of the Licensed Property or other City streets that may become damaged or disturbed in connection with the installation, maintenance, removal, operation, or replacement of the S-Line Streetcar Extension. Any such maintenance within the S-Line Streetcar Extension System will be coordinated between the Parties to minimize disruption to the S-Line Streetcar Extension, other traffic, and public utilities. Should any repair or maintenance work impact the City-owned canal under Highland Drive, UTA shall not schedule or conduct any repair or maintenance work without first obtaining written approval from the City's Department of Public Utilities. Prior to UTA's performance of any maintenance or repair work, UTA will obtain any permits required by the City in connection with such work including a permit to work in the right of way, and shall abide by the reasonable requirements thereof. Any work impacting the City's canal is limited to a seasonal

window from October 15th and March 1st.

4.1.10 In the event that City requires access to City Facilities for maintenance, repair, upgrades, or other work on City Facilities, UTA shall cooperate with City to ensure City has full access to the City Facilities. UTA agrees to prioritize City maintenance, repair, upgrades and other work during the City's preferred business hours of Monday through Friday from 7:00 AM to 5:00 PM. To the extent any UTA facilities or structures must be modified, relocated, or removed to permit City access or to accommodate modifications to such City Facilities, UTA shall cooperate with City to make such modifications at UTA's cost.

4.1.11 The Parties shall in good faith endeavor to conduct their maintenance, repair, replacement and other activities in a manner that will avoid disruption to other Parties' activities whenever possible. By way of example, the City shall coordinate with UTA regarding maintenance work on the City Streets, and may agree to perform such work when the Project is not operating, in order to avoid disruption. Conversely, UTA shall coordinate with the City when performing maintenance work on the Project within the City Streets, and may agree to perform such work in off-peak traffic times to minimize disruptions to residents, businesses, and other traffic. In cases of emergency or exigent circumstances, the Party effecting the repair shall immediately notify and cooperate with the other party

4.1.12 To coordinate maintenance responsibilities, the Parties shall exchange routine and emergency contact information and keep such information current on "Exhibit "C", which exhibit is intended by the Parties to be a living document to be updated periodically ("Exhibit C" is attached hereto and hereby incorporated into and made a part of this Agreement by reference).

4.2 UTA acknowledges the existence of public and private utility facilities under the S-Line Streetcar Extension. The City reserves the right to enter the S-Line Streetcar Extension, and authorize other utility owners to do the same, as and when reasonably necessary to inspect, maintain, repair, or replace facilities located on, under, or adjacent to the S-Line Streetcar Extension. The City shall coordinate such work with UTA in advance, in accordance with the terms of this Agreement, in order to ensure safety and to minimize disruption of S-Line Streetcar Extension operations and agrees wherever possible to perform such work when the Project is not operating, in order to avoid disruption.

4.2.1 The City may grant additional franchises and permits in the future for utility facilities under or over the S-Line Streetcar Extension, so long as such facilities do not unreasonably interfere with operations of the S-Line Streetcar Extension. The City shall notify UTA of (i) any requests for new crossings of the S-Line Streetcar Extension, and (ii) any applications for street cuts or work permits near the S-Line Streetcar Extension. City permits over, under, across, or parallel to the S-Line Streetcar Extension shall require a Right-of-Entry Agreement and TRAX Access Permits from UTA prior to construction or maintenance of said utilities. UTA shall have four (4) weeks to review and object to such requests or applications prior to work commencing. The Parties shall cooperate to minimize disruption to S-Line Streetcar Extension service caused by the granting of any new permits for new utility facilities.

4.3 UTA has selected and engaged a qualified firm to design and construct the S-Line Streetcar Extension.

43.1 All construction within the City streets, but outside of the S-Line Extension Trackway, shall comply with the City's currently adopted engineering standards.

43.2 Throughout the construction process, the City will have continuous access to the Project site to monitor Project construction and to ensure the construction meets applicable City specifications and is performed in accordance with the final design documents.

4.4 Except for where the bollards and chain provide a necessary buffer, including the landscape buffer, sidewalk to the north of the S-Line Extension alignment discussed herein, and adjacent utilities managed by the City, the City shall obtain a Roadway Worker Protection permit from UTA, and a Right of Entry license, if performing work within ten (10) feet of centerline of track, or within ten (10) feet of the catenary lines.

ARTICLE V WARRANTIES & INDEMNITY

5.1 UTA agrees to warrant the materials and workmanship of the Project for a minimum of one (1) year. If the Project includes work on the City canal under Highland Drive, the warranty is required to cover two full, operating irrigation seasons. The warranty period shall commence upon the acceptance of the City Facilities in writing by City Engineer. UTA's responsibility under its warranty is limited to repair or replacement of the defective condition, materials, or workmanship of the Project. The City will be beneficiary of such warranty, and each Party shall bear its own legal costs and fees incurred while enforcing such warranty. UTA will respond to any warranty request from the City within 48 hours, providing a corrective work plan to protect the Canal, if necessary.

5.2 UTA shall use the Licensed Property at its own risk and agrees to indemnify, defend, and hold harmless the City, CRA and their respective officers, officials, employees, and representatives for, from, and against all liabilities, claims, damages, losses, suits, judgments, causes of action and costs (including court costs and attorneys' fees,) of any nature, kind or description ("Losses") resulting from or by reason of UTA's use of the Licensed Property or any activities conducted thereon, including, but not limited to: (a) negligence or fault on the part of UTA or any employees, officials, agents or contractors of UTA related to the design, construction, maintenance or other work performed by or on behalf of UTA on the S-Line Streetcar Extension within the Licensed Property; (b) negligence or fault on the part of UTA or any employees, officials, agents, or contractors of UTA in the use or operation of the S-Line Streetcar Extension within the Licensed Property; or (c) UTA's breach of any provision of this Agreement. In the event any Losses are caused by the joint or concurrent negligence of UTA and the City, UTA shall indemnify the City only in proportion to UTA's own negligence and/or fault. Likewise, the City agrees to indemnify, defend, and hold harmless UTA and UTA's officers, officials, employees, and representatives for, from, and against all liabilities, claims, damages, losses, suits, judgments, causes of action and costs (including court costs and attorneys' fees,) of any nature, kind or description ("UTA Losses") resulting from negligence or fault on the part of the City or any of its employees, officials, or agents related to its involvement with the Project. In the event any UTA Losses are caused by the joint or concurrent negligence of UTA and the City, the City shall indemnify UTA only in proportion to the City's own negligence. This Section shall survive

expiration or earlier termination of this Agreement.

5.3 Governmental Immunity: UTA, City, and CRA are governmental entities under the Governmental Immunity Act of Utah, Section 63G-7-101 *et seq.* 1953 of the Utah Code (as amended) (the “Governmental Immunity Act”). Notwithstanding any provision to the contrary in this Agreement, (i) the obligations to indemnify, defend and/or hold harmless in this Agreement are limited to the dollar amounts set forth in the Governmental Immunity Act and are further limited only to the claims that arise from the negligent acts or omissions or fault of the parties, and (ii) nothing in this Agreement shall be construed to be a waiver of any Party of any defenses or limits of liability available under the Government Immunity Act.

ARTICLE VI ENTIRE AGREEMENT – COUNTERPARTS

6.1 This Agreement shall constitute the entire agreement and understanding of the Parties with respect to the subject matter hereof, and shall supersede all offers, negotiations and other agreements with respect thereto. Any amendment to this Agreement must be in writing and executed by the authorized representatives of each Party. This Agreement may be executed in any number of counterparts and by each of the Parties hereto on separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute but one and the same instrument. Any signature page of this Agreement may be detached from any counterpart and reattached to any other counterpart hereof. The facsimile transmission of a signed original of this Agreement or any counterpart hereof and the retransmission of any signed facsimile transmission hereof shall be the same as delivery of an original. To facilitate execution of this Agreement, the Parties may execute and exchange and sign this agreement through electronic or digital signatures, electronic mail or mailed counterparts of the signature pages, which shall be valid, binding and admissible as though original.

6.2 This Agreement is binding upon all of the assigns, grantees and successors in interest to each of the Parties and shall remain in full force and effect until amended as provided herein.

ARTICLE VII FORUM SELECTION AND CHOICE OF LAW

7.1 This Agreement shall be construed and interpreted under the laws of the State of Utah and the Parties agree that any action or proceeding brought concerning this Agreement may be brought only in the courts of Salt Lake County, Utah, and each Party hereto hereby consents to the jurisdiction of such courts.

ARTICLE VIII NONWAIVER

8.1 No covenant or condition of this Agreement may be waived by any Party, unless done so in writing, clearly stating such waiver. Forbearance or indulgence by any party in any regard whatsoever shall not constitute a waiver of the covenants or conditions to be performed by the other.

ARTICLE IX

SEVERABILITY

9.1 This Agreement is executed by the Parties under current interpretation of any and all applicable federal, state, county, municipal, or other local statutes, ordinances, or laws. Furthermore, each and every separate division hereof shall have independent and severable status from each other division, or combination thereof, for the determination of legality, so that if any separate division herein is determined to be unconstitutional, illegal, violative of trade or commerce, in contravention of public policy, void, invalid or unenforceable for any reason, that separate division shall be treated as a nullity but such holding or determination shall have no effect upon the validity or enforceability of each and every other division, or other combination thereof.

ARTICLE X RECORDATION OF MEMORANDUM

10.1 The Parties agree that City may record a memorandum of this Agreement against City's title in the Official Records of the Salt Lake County Recorder's Office. Such memorandum will be terminated upon expiration or earlier termination of this Agreement.

ARTICLE XI DEFAULT

11.1 The failure to perform any provision of this Agreement by any Party, if such failure is not cured within thirty (30) days after written notice specifying such failure has been given to the non-performing party by the other party, shall constitute a default by the non-performing party. Provided, if a default cannot reasonably be cured within said thirty (30) day period, the non-performing party shall not be in default of this Agreement if it commences to cure the default within the thirty (30) day period, and diligently and in good faith continues thereafter to cure the default.

11.2 Upon the occurrence of any of the aforesaid events of default, the non-defaulting party shall have the option to pursue any remedy provided by law. Pursuit of any remedy hereunder shall not preclude pursuit of any other remedy, nor shall pursuit of any remedy constitute a forfeiture or waiver of any of the damages accruing to the non-defaulting party by reason of the violation of any of the terms, provisions and covenants herein contained. The specific remedies to which the non-defaulting party may resort under the terms of this Agreement are cumulative and are not intended to be exclusive of any other remedies or means of redress to which the non-defaulting party may be lawfully entitled in case of any breach or threatened breach of any provision of this Agreement by the other party and may include termination of the Agreement consistent with Section 3. The failure of the non-defaulting party to insist in any one or more cases upon the strict performance of any of the covenants of this Agreement or to exercise any option herein contained shall not be construed as a waiver or relinquishment for the future of such covenant or option. A receipt by the non-defaulting party of any money payment with knowledge of the breach of any covenant or agreement hereof shall not be deemed a waiver of such breach. In addition to the other remedies provided in this Agreement, the non-defaulting party shall be entitled to restrain by injunction the violation or attempted or threatened violation by the defaulting party of any of the covenants, conditions or provisions of this Agreement or to a decree compelling specific performance of any of such covenants, conditions or provisions.

ARTICLE XII

INTERLOCAL PROVISIONS

12.1 In satisfaction of the Interlocal Cooperation Act and in connection with this Agreement, the Parties agree as follows:

- a. This Agreement shall be approved by each Party pursuant to § 11-13-202.5;
- b. This Agreement shall be reviewed as to the proper form and compliance with applicable law by an authorized attorney on behalf of each Party pursuant to § 11-13-202.5;
- c. An executed original counterpart shall be filed with the keeper of records for each Party pursuant to § 11-13-209;
- d. The term of this Agreement does not exceed fifty (50) years pursuant to § 11-13-216 of the Interlocal Act;
- e. No separate legal entity is created by the terms of this Agreement. No real or personal property shall be acquired jointly by the Parties as a result of this Agreement. To the extent that a Party acquires, holds, or disposes of any real or personal property for use in the joint or cooperative undertaking contemplated by this Agreement, such Party shall do so in the same manner that it deals with other property of such Party; and
- f. Except as otherwise specifically provided herein, each Party shall be responsible for its own costs of any action taken pursuant to this Agreement, and for any financing of such costs.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of the date this Agreement is signed by both Parties.

APPROVED AS TO FORM:

By: 
 Tim Merrill
 Assistant Attorney General

ATTEST AND COUNTERSIGN:

UTAH TRANSIT AUTHORITY

By: _____
 Jay Fox
 Executive Director

By: _____
 Jon Larsen
 Chief of Capital Services

By: _____
 David Osborn
 Acting Director of Capital Design & Construction

SALT LAKE CITY CORPORATION

By: _____
City Recorder

By: _____
Erin Mendenhall
Mayor

APPROVED AS TO FORM

By: _____
Allison Parks
Deputy City Attorney

**SALT LAKE CITY COMMUNITY
REINVESTMENT AGENCY**

By: _____
City Recorder


By: _____
Erin Mendenhall
Executive Director

APPROVED AS TO FORM

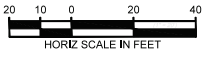
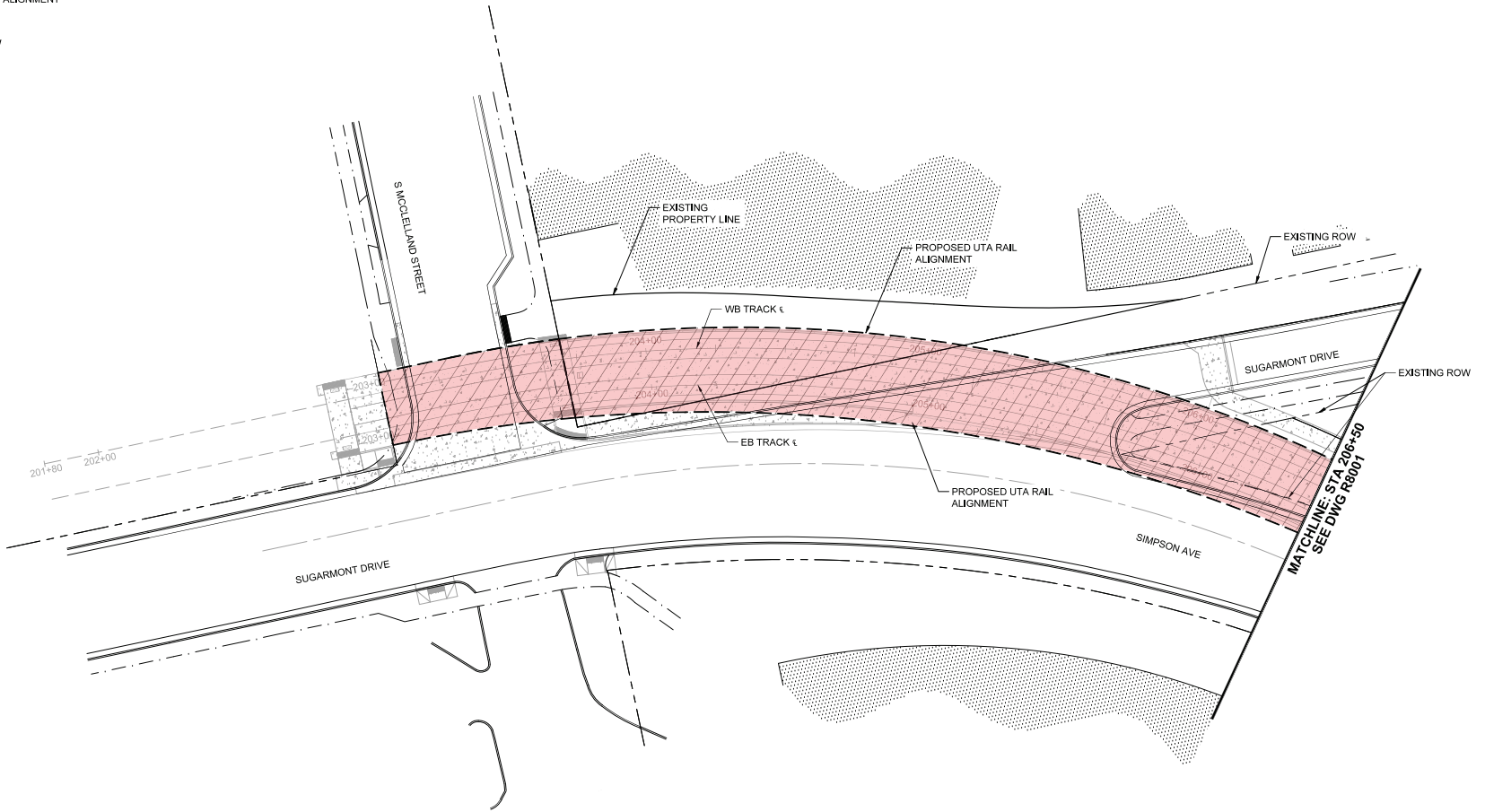
By: _____
Jennifer Huntsman

EXHIBIT A – Licensed Property Map

----- EXISTING RIGHT-OF-WAY
 - - - - - EXISTING SIDEWALK
 = = = = = EXISTING CURB AND GUTTER

 PROPOSED UTA RAIL ALIGNMENT

 SLC PROPERTY / ROW



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REV	DATE	Description	



Submitted By: _____

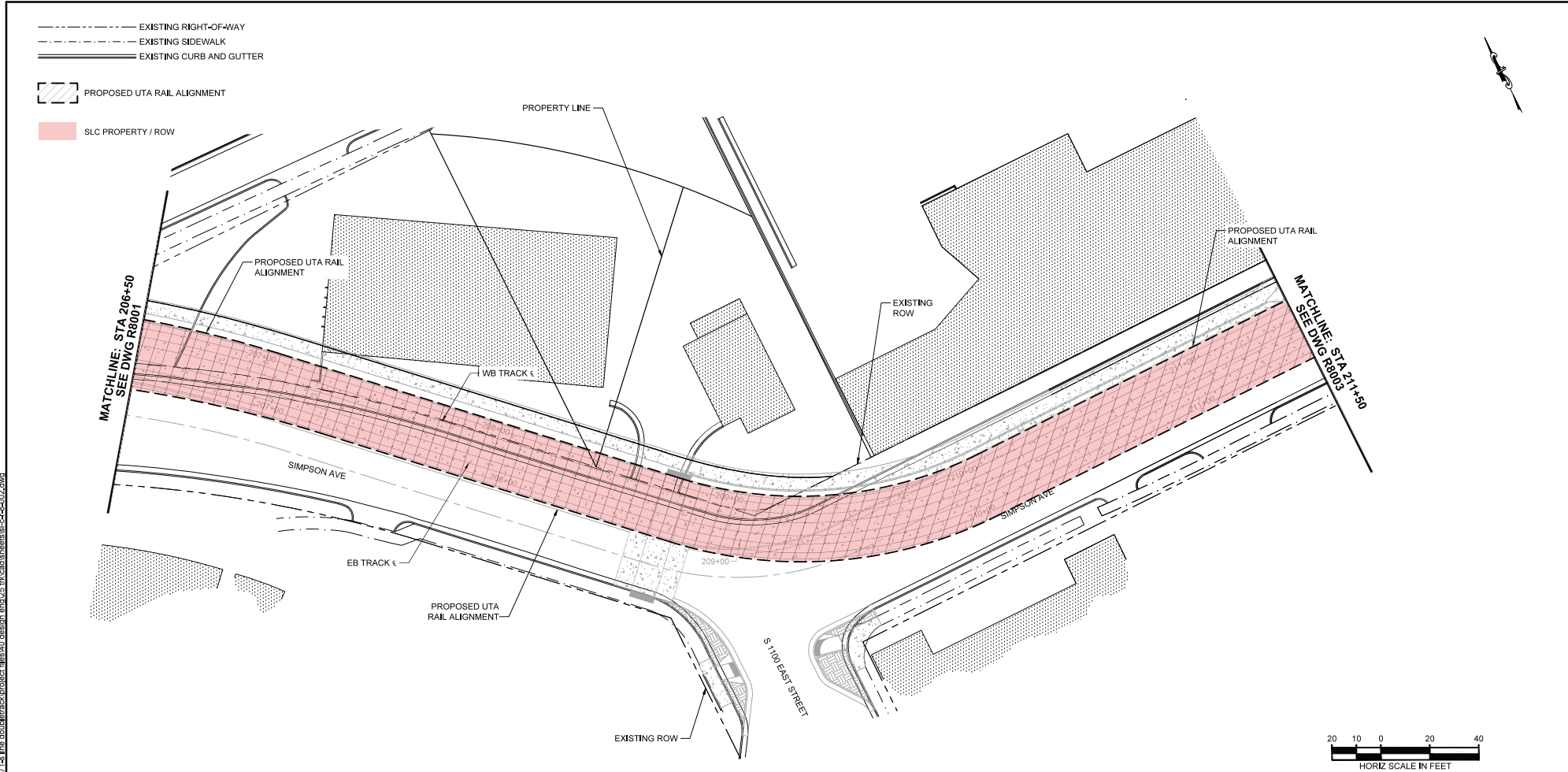
Approved By: _____

Designed By S. JOSHI
Drawn By S. JOSHI
Checked By F. NANNENGA
Approved By F. NANNENGA

S-LINE EXTENSION PROJECT

SITE PLAN
 WB STA 201+80.27 TO WB STA 206+50

Scale 1" = 20'
CADD Filename SLC-R-001.dwg
Submitted Date 03-12-26
UTA Contract No. 24-03849
Drawing No. R8001
Sheet No.



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REV	DATE	Description	



Submitted By: _____

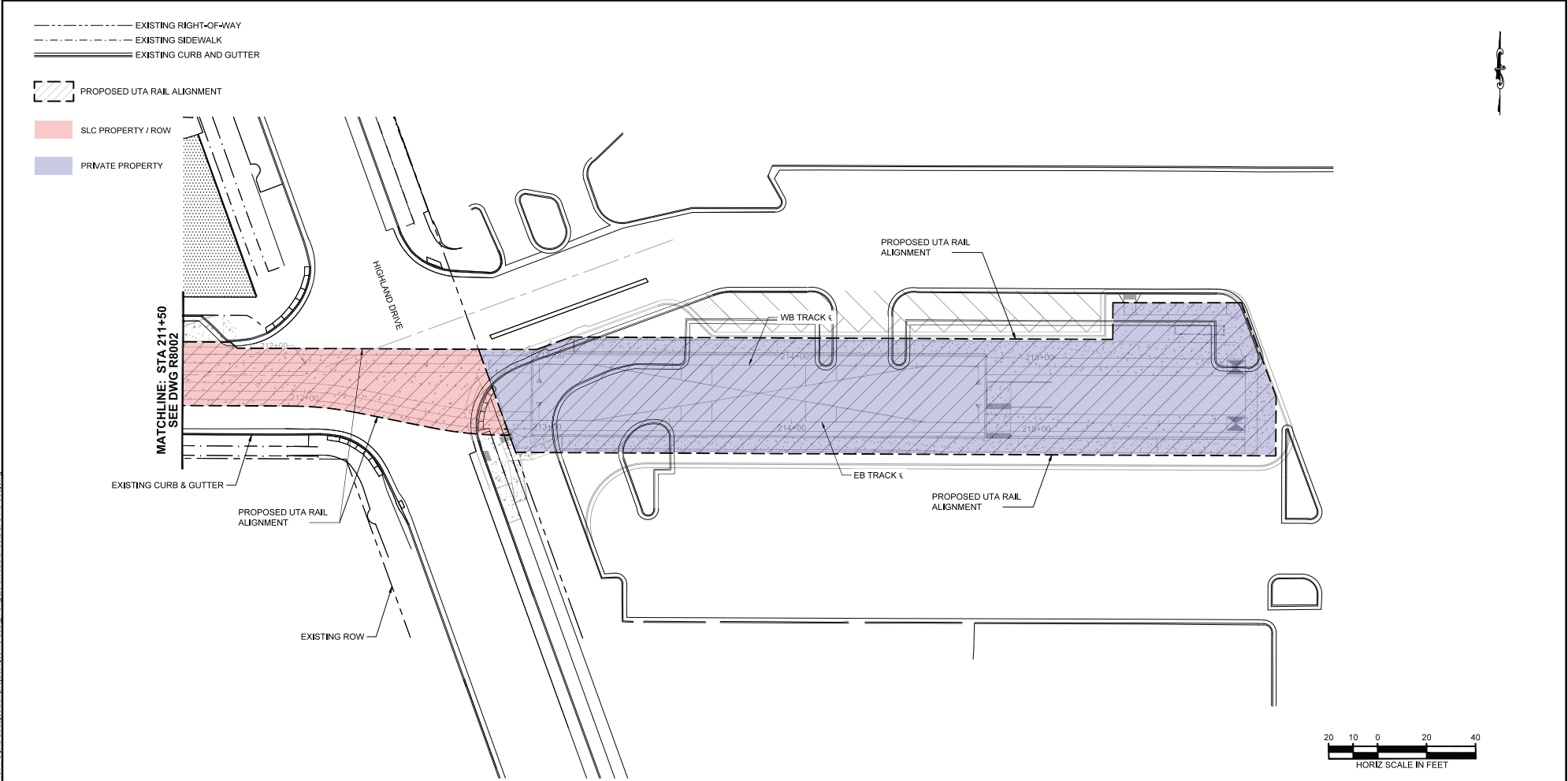
Approved By: _____

Designed By	S. JOSHI
Drawn By	S. JOSHI
Checked By	F. NANNENGA
Approved By	F. NANNENGA

S-LINE EXTENSION PROJECT

SITE PLAN
WB STA 206+50 TO WB STA 211+50

Scale	1" = 20'
CADD Filename	SL-C-R-002.dwg
Submitted Date	03-12-26
UTA Contract No.	24-03849
Drawing No.	R8002
Sheet No.	



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REV	DATE	Description



Submitted By: _____ Approved By: _____

Designed By	S. JOSHI
Drawn By	S. JOSHI
Checked By	F. NANNENGA
Approved By	F. NANNENGA

S-LINE EXTENSION PROJECT

SITE PLAN
WB STA 211+50 TO WB STA 215+84.18

Scale:	1" = 20'
CADD Filename:	SL-C-R-8-003.dwg
Submitted Date:	03-12-26
UTA Contract No.:	24-03849
Drawing No.:	R8003
Sheet No.:	

EXHIBIT B – Design Drawings

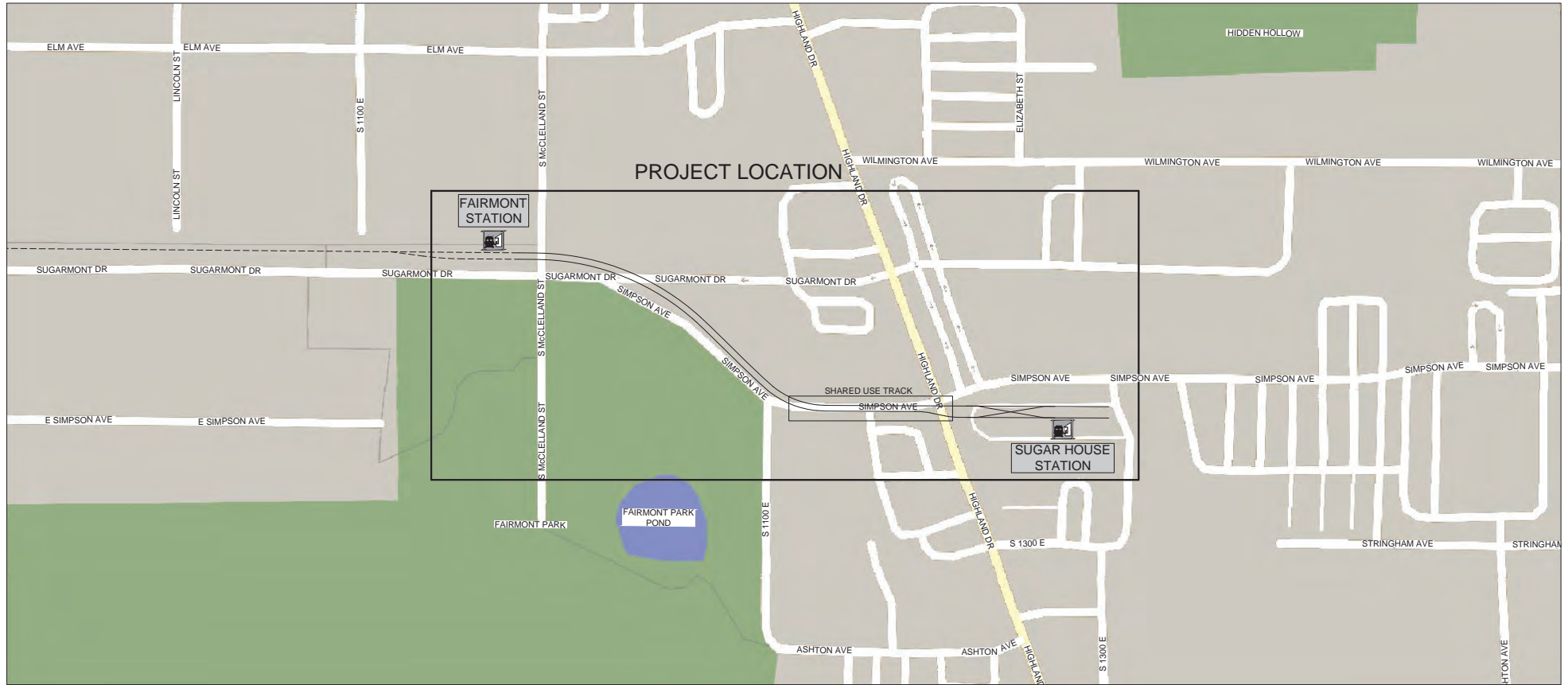
S-LINE EXTENSION PROJECT

DRAFT
Not for Construction

UTA CONTRACT NO. 24-03849

JANUARY 16, 2026

100% DESIGN SUBMITTAL - CIVIL PACKAGE



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6			



Submitted By: _____ Approved By: _____

Designed By:	S. JOSHI
Drawn By:	S. JOSHI
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT		
GENERAL		
COVER SHEET		

State:	NTS
CADD Filename:	SL-C-G-0-000.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	G0000
Sheet No.:	

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SHEET NO.	DWG NO.	TITLE	DESCRIPTION	SHEET NO.	DWG NO.	TITLE	DESCRIPTION
GENERAL							
	G0000	COVER SHEET			C1006	HIGHLAND DR	PLAN AND PROFILE STA 10+00 TO STA 11+63
	G0001	INDEX OF DRAWINGS	SHEET 1 OF 3		C1007	EMERGENCY DRIVEWAY	PLAN AND PROFILE STA 0+00 TO STA 3+50
	G0002	INDEX OF DRAWINGS	SHEET 2 OF 3		C1101	SIMPSON CURB AND GUTTER	PLAN AND PROFILE STA 0+00 TO STA 3+50
	G0003	INDEX OF DRAWINGS	SHEET 3 OF 3		C1102	SIMPSON CURB AND GUTTER	PLAN AND PROFILE STA 3+50 TO STA 7+00
	G0010	STANDARD ABBREVIATIONS	SHEET 1 OF 2		C1103	SIMPSON CURB AND GUTTER	PLAN AND PROFILE STA 7+00 TO STA 9+00
	G0011	STANDARD ABBREVIATIONS	SHEET 2 OF 2		C1104	McCLELLAND ST NW CURB AND GUTTER	PLAN AND PROFILE STA 0+00 TO STA 1+00
	G0012	STANDARD SYMBOLS			C1105	McCLELLAND ST NE CURB AND GUTTER	PLAN AND PROFILE STA 0+00 TO STA 1+00
	G0013	GENERAL NOTES			C1106	S 11TH E SW CURB AND GUTTER	PLAN AND PROFILE STA 0+00 TO STA 1+00
	K0001	TRACK KEY MAP			C1107	S 11TH E SE CURB & GUTTER	PLAN AND PROFILE STA 0+00 TO STA 1+00
	R0201	SURVEY CONTROL DATA			C1108	HIGHLAND SE CURB AND GUTTER	PLAN AND PROFILE STA 0+00 TO STA 4+50
TRACK TYPICAL SECTIONS							
	K4201	TRACK TYPICAL SECTIONS	SHEET 1 OF 4		C1109	PARKING LOT CURB AND GUTTER	PLAN AND PROFILE STA 0+00 TO STA 3+50
	K4202	TRACK TYPICAL SECTIONS	SHEET 2 OF 4		C1201	SIMPSON SIDEWALK	PLAN AND PROFILE STA 50+12 TO STA 54+00
	K4203	TRACK TYPICAL SECTIONS	SHEET 3 OF 4		C1202	SIMPSON SIDEWALK	PLAN AND PROFILE STA 54+00 TO STA 57+25
	K4204	TRACK TYPICAL SECTIONS	SHEET 4 OF 4		C3001	ROADWAY	CURB RETURN DETAILS
TRACK ALIGNMENT DATA							
	K6201	HORIZONTAL ALIGNMENT DATA			C3002	ROADWAY	CURB RETURN DETAILS
TRACK PLAN AND PROFILE							
	K1201	TRACK PLAN AND PROFILE	WB STA 201+80.27 TO WB STA 206+50		C3003	ROADWAY	CURB RETURN DETAILS
	K1202	TRACK PLAN AND PROFILE	WB STA 206+50 TO WB STA 211+50		C3004	ROADWAY	CURB RETURN DETAILS
	K1203	TRACK PLAN AND PROFILE	WB STA 211+50 TO WB STA 215+84.18		C3005	ROADWAY	CURB RETURN DETAILS
TRACK & ROADWAY CROSS SECTIONS							
	K5201	TRACK CROSS SECTIONS	WB STA 201+80.27 TO WB STA 204+50		C3006	SUGAR HOUSE PLATFORM AREA	PEDESTRIAN RAMP AND SIDEWALK PLAN
	K5202	TRACK CROSS SECTIONS	WB STA 205+00 TO WB STA 206+50		C3007	ROADWAY	EMERGENCY DRIVEWAY GRADING
	K5203	TRACK CROSS SECTIONS	WB STA 207+00 TO WB STA 208+50		CIVIL STANDARD DRAWINGS		
	K5204	TRACK CROSS SECTIONS	WB STA 209+00 TO WB STA 210+50		C3010	CIVIL	BOLLARD AND SWING GATE DETAILS
	K5205	TRACK CROSS SECTIONS	WB STA 211+00 TO WB STA 212+50		C3011	CIVIL	CURB TRANSITIONS AND DETAILS
	K5206	TRACK CROSS SECTIONS	WB STA 213+00 TO WB STA 214+50		C3013	CIVIL	GATE DETAILS
	K5207	TRACK CROSS SECTIONS	WB STA 215+00 TO WB STA 215+84		C3014	CIVIL	PEDESTRIAN SAFETY RAILING
TRACK CHART							
	K7001	TRACK CHART	WB STA 202+92.17 TO WB STA 215+84.18	DRAINAGE PLANS			
TRACKWORK STANDARD DRAWINGS							
	K3001	TRACKWORK	RAIL LUBRICATOR		D1201	DRAINAGE PLAN	WB STA 201+80.27 TO WB STA 206+50
	K3002	TRACKWORK	TRACK SLAB TYPICAL SECTION		D1202	DRAINAGE PLAN	WB STA 206+50 TO WB STA 211+50
	K3003	TRACKWORK	TRACK SLAB DETAILS		D1203	DRAINAGE PLAN	WB STA 211+50 TO WB STA 215+84.18
	K3004	TRACKWORK	MISC DETAILS	TRAFFIC AND SIGNING			
	K3005	TRACKWORK	SIGNAL TRACK CONNECTION BOX	T1201	TRAFFIC SIGNAL PLANS		WB STA 201+60 TO WB STA 206+42
	K3006	TRACKWORK	STREETCAR DYNAMIC ENVELOPE AND LOADING DIAGRAM	T1202	TRAFFIC SIGNAL PLANS		WB STA 206+42 TO WB STA 211+50
	K3007	TRACKWORK	MISC. EMBEDDED TRACK SECTIONS AND DETAILS	T1203	TRAFFIC SIGNAL PLANS		WB STA 211+50 TO WB STA 215+85
	K3008	TRACKWORK	6" INFILL SLAB DETAILS	T1204	STRIPING & SIGNING PLANS		WB STA 201+60 TO WB STA 206+42
	K3009	TRACKWORK	TRACK DRAINAGE DETAILS	T1205	STRIPING & SIGNING PLANS		WB STA 206+42 TO WB STA 211+50
	K3010	TRACKWORK	TRACK CONNECTION BOX	T1206	STRIPING & SIGNING PLANS		WB STA 211+50 TO WB STA 215+85
	K3011	TRACKWORK	DRAINAGE CATCH BASIN	T3201	MAST ARM DETAIL		
	K3012	TRACKWORK	TRACK DRAIN ARRAY AND PLATFORM DRAIN DETAILS	T3202	MAST ARM POLE DETAIL		
	K3013	TRACKWORK	INSULATED JOINT DETAILS	T3203	MAST ARM POLE FOUNDATION DETAILS		
	K3014	TRACKWORK	NO. 6 DOUBLE CROSSOVER RAIL LAYOUT	T3204	MAST ARM POLE POLE EXTENSION		FOR LUMINAIRE DETAIL
	K3015	TRACKWORK	NO. 6 DOUBLE CROSSOVER GEOMETRY AND LAYOUT 23'-0" TRACK CENTERS	T3205	SIGNAL HEAD FOR VEHICLES DETAIL		
	K3016	TRACKWORK	NO. 6 DIRECT FIXATION DOUBLE CROSSOVER LAYOUT	T3206	SIGNAL HEAD MOUNTING DETAIL		
	K3017	TRACKWORK	NO. 6 DIRECT FIXATION DOUBLE CROSSOVER BLOCKOUT DETAILS	T3207	SIGNAL POLE BREAK AWAY TYPE DETAIL		
	K3018	TRACKWORK	SPECIAL TRACKWORK M-23A SWITCH MACHINE LAYOUT	T3208	SIGNAL HEAD FOR PEDESTRIANS DETAIL		
	K3019	TRACKWORK	DF FASTENER DETAIL AND SECTION	T3209	SIGNAL PUSH BUTTON DETAIL		
	K3020	TRACKWORK	DIRECT FIXATION ON SLAB DETAILS	T3210	SIGNAL CONTROLLER FOUNDATION DETAIL		
DEMOLITION PLANS							
	C4001	DEMOLITION PLAN	WB STA 201+80.27 TO WB STA 206+50	P0201	STATION		STRUCTURAL SYMBOLS, ABBREVIATIONS, AND NOTES
	C4002	DEMOLITION PLAN	WB STA 206+50 TO WB STA 211+50	P1201	SUGAR HOUSE		PLATFORM PLAN
	C4003	DEMOLITION PLAN	WB STA 211+50 TO WB STA 215+84.18	P3201	STATION		TYPICAL STRUCTURAL DETAILS
CIVIL AND ROADWAY DETAILS							
	C1001	SIMPSON PLAN AND PROFILE	STA 100+00 TO STA 104+00	P3202	STATION		STRUCTURAL DRAWINGS 20'-0" DOUBLE CANOPY
	C1002	SIMPSON PLAN AND PROFILE	STA 104+00 TO STA 108+00	P3203	STATION		SUGAR HOUSE STATION PLATFORM ELEVATION
	C1003	SIMPSON PLAN AND PROFILE	STA 108+00 TO STA 111+00	P3204	STATION		SUGAR HOUSE STATION PLATFORM ELEVATION & SECTION
	C1004	McCLELLAND ST	PLAN AND PROFILE STA 10+00 TO STA 10+88	P3205	STATION		20 FOOT DOUBLE CANOPY ELEVATIONS
	C1005	S 11TH E PLAN AND PROFILE	STA 10+00 TO STA 11+00	P3206	STATION		20 FOOT DOUBLE CANOPY SECTION
				P3207	STATION		20 FOOT STANDARD CANOPY FLOOR PLAN
				P3208	STATION		DRILLED SHAFT FOUNDATION CANOPY DETAILS

REV	DATE	Description



Submitted By: _____

Approved By: _____

Designed By: T. COVEYOU
Drawn By: T. COVEYOU
Checked By: D. TREADWELL
Approved By: A. DIGIROLAMO

S-LINE EXTENSION PROJECT

GENERAL

INDEX OF DRAWINGS
SHEET 1 OF 3

State: NTS
CADD Filename: SL-C-G-0-001.dwg
Submitted Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: G0001
Sheet No.:

SHEET NO.	DWG NO.	TITLE	DESCRIPTION	SHEET NO.	DWG NO.	TITLE	DESCRIPTION
	P3209	STATION	20 FOOT DOUBLE CANOPY DETAILS		Y7010	OVERHEAD CONTACT SYSTEM	TECHNICAL SHEET SCAT VERTICAL, WIND & RADIAL LOADS
	P3210	STATION	STRUCTURAL DRAWINGS CANOPY DETAILS		Y7011	OCS TECHNICAL SHEET	PAINTOGRAPH SECURITY AND MAXIMUM STAGGERS FOR BALLASTLESS TRACK
	P3211	STATION	20 FOOT DOUBLE CANOPY REFLECTED CEILING & ROOF PLANS		Y7012	OVERHEAD CONTACT SYSTEM	TECHNICAL SHEET HANGER LENGTH TABLE
	P3212	STATION	MISCELLANEOUS PLATFORM DETAILS		Y7013	OVERHEAD CONTACT SYSTEM	TECHNICAL SHEET INSTALLATION TENSIONS AND SAGS
	P3213	STATION	MECHANICAL DETAILS		Y7014	OVERHEAD CONTACT SYSTEM	TECHNICAL SHEET TRACK MOVEMENT & STAGGER CHANGE
	P3214	STATION	STANDARD PLATFORM AND SNOWMELT DETAILS		Y7015	OVERHEAD CONTACT SYSTEM	CONDUCTOR PARTICULARS
	P3215	STATION	SNOWMELT DETAILS		Y7016	OCS VERTICAL	ELECTRICAL CLEARANCE REQUIREMENTS
	P3216	FREEZELESS POST HYDRANT	DETAIL		Y7100	OVERHEAD CONTACT SYSTEM	MASTER OVERLAP CHART AND SECTIONING DIAGRAM
	P3217	GRAPHIC SIGN STANDARDS	STANDARD FONTS		Y7180	OVERHEAD CONTACT SYSTEM	TYPICAL STANDARD SPANS
	P3218	GRAPHIC SIGN STANDARDS	TYPE 4 - RAIL PLATFORM SIGN DETAILS		Y7182	OVERHEAD CONTACT SYSTEM	TYPICAL ANCHOR SPANS
	P3219	GRAPHIC SIGN STANDARDS	TYPE 2B STATION IDENTIFICATION SIGN DETAILS		Y7183	OCS DIAMOND CROSSOVER	
	P3220	GRAPHIC SIGN STANDARDS	PAVEMENT MARKINGS AND PRISM		Y7190	OVERHEAD CONTACT SYSTEM	TYPICAL CENTER POLE STRUCTURES
	P4201	STATION	FOUNDATION PLAN AND SECTIONS		Y7191	OVERHEAD CONTACT SYSTEM	TYPICAL SURGE ARRESTOR STRUCTURE
	P4202	STATION	RAMP FOUNDATION SECTIONS		Y7192	OVERHEAD CONTACT SYSTEM	BYPASS DISCONNECT SWITCH STRUCTURE
PLATFORM ELECTRICAL							
	E0202	PLATFORM ELECTRICAL	LEGENDS, NOTES AND ABBREVIATIONS		Y7201	TAPERED TUBULAR STEEL POLE	ASSEMBLIES, TYPE PA, PB, PC, PD, & PE
	E0208	SUGAR HOUSE STATION PLATFORM	JUNCTION BOX AND TRENCH DETAILS		Y7202	OVERHEAD CONTACT SYSTEM	OCS POLE ID NUMBER ASSEMBLY SD-01 AND SCHEDULE
	E0209	PLATFORM ELECTRICAL	SUGAR HOUSE STATION PLATFORM TVM BASE, CALL BOX, AND CARD READER DETAILS		Y7203	OVERHEAD CONTACT SYSTEM	
	E0210	PLATFORM ELECTRICAL	PLATFORM LIGHT INSTALLATION AND POLE FOUNDATION DETAILS		Y7207	OCS POLE BRACKET ASSEMBLIES	FOR TUBULAR POLES TYPES BC-XX AND TB-02-XX
	E1205	SUGAR HOUSE STATION PLATFORM	ELECTRICAL PLAN		Y7210	OVERHEAD CONTACT SYSTEM	HEADSPAN ASSEMBLIES HS-1, HS-1A, HS-2, AND HS-2AX
	E3207	SUGAR HOUSE STATION PLATFORM	PCC DETAILS		Y7211	OVERHEAD CONTACT SYSTEM	CANTILEVER ASSEMBLY PULL-OFF TYPES CA-01L, CA-01M AND CA-01H
	E7203	SUGAR HOUSE STATION PLATFORM	ONE-LINE AND LIGHTING CONTROL DIAGRAMS		Y7212	OVERHEAD CONTACT SYSTEM	CONFIGURATION AND LOADING DIAGRAM TYPES CA-01L, CA-01M, AND CA-01H
	E8204	PLATFORM ELECTRICAL	SUGAR HOUSE STATION PLATFORM PANEL SCHEDULE		Y7213	OVERHEAD CONTACT SYSTEM	CANTILEVER ASSEMBLY PULL-OFF CA-03L, CA-03M, AND CA-03H
RETAINING WALL PLAN AND PROFILE							
	W0001	GENERAL NOTES, STANDARD SYMBOLS AND ABBREVIATIONS			Y7214	OVERHEAD CONTACT SYSTEM	CONFIGURATION AND LOADING DIAGRAM TYPES CA-03L, CA-03M, AND CA-03H
	W1201	RETAINING WALL 1	SITUATION AND LAYOUT		Y7215	OVERHEAD CONTACT SYSTEM	CANTILEVER ASSEMBLY OUT-OF-RUNNING TYPES CA-05AM, AH AND CA-05BM, BH
	W1202	RETAINING WALL 2	SITUATION AND LAYOUT		Y7216	OVERHEAD CONTACT SYSTEM	CONFIGURATION AND LOADING DIAGRAM TYPES CA-05AM, AH AND CA-05BM, BH
	W3001	WALL DETAILS			Y7220	OVERHEAD CONTACT SYSTEM	TWO TRACK PULL-OFF PO-2 AND PO-2A
UTILITIES							
	U0100	UTILITIES	GENERAL NOTES		Y7221	OVERHEAD CONTACT SYSTEM	CATENARY BRIDLE ASSEMBLY PULL-OFF TYPE BB-02D
	U1201	EXISTING UTILITY PLAN	WB STA 201+80.27 TO WB STA 206+50		Y7222	OVERHEAD CONTACT SYSTEM	CONFIGURATION AND LOADING DIAGRAM TYPE BB-02D
	U1202	EXISTING UTILITY PLAN	WB STA 206+50 TO WB STA 211+50		Y7223	OVERHEAD CONTACT SYSTEM	SECTION INSULATOR ASSEMBLY TYPE MLSI-01
	U1203	EXISTING UTILITY PLAN	WB STA 211+50 TO WB STA 215+84.18		Y7224	OVERHEAD CONTACT SYSTEM	FIXED TERMINATION ASSEMBLY TYPE FT-01
	U1204	EXISTING UTILITY PLAN	SUGARMONT AVENUE AND CRA PROPERTIES		Y7225	OVERHEAD CONTACT SYSTEM	CATENARY BRIDLE TERMINATION ASSEMBLIES BT-01, BT-02 & BT-03
	U1205	EXISTING UTILITY MATRIX	SHEET 1 OF 4		Y7226	OVERHEAD CONTACT SYSTEM	MIDPOINT ANCHOR ASSEMBLY TYPE MP-01
	U1206	EXISTING UTILITY MATRIX	SHEET 2 OF 4		Y7227	OVERHEAD CONTACT SYSTEM	BALANCE WEIGHT FOR TUBULAR POLE TYPE BW-04
	U1207	EXISTING UTILITY MATRIX	SHEET 3 OF 4		Y7228	OVERHEAD CONTACT SYSTEM	SPRING TENSIONER
	U1208	EXISTING UTILITY MATRIX	SHEET 4 OF 4		Y7231	OVERHEAD CONTACT SYSTEM	FEEDER CONNECTION ASSEMBLY TYPE FR-04
	U1209	EXISTING UTILITY	TEST HOLE DATA		Y7233	OVERHEAD CONTACT SYSTEM	JUMPER ASSEMBLIES TYPES JF-1, JP-1 AND JS-1
	U1210	UTILITY RELOCATION PLAN	STA 203+00 TO STA 205+00		Y7235	OVERHEAD CONTACT SYSTEM	HANGER ASSEMBLIES TYPES HA-1 THROUGH HA-7
	U1211	UTILITY RELOCATION PLAN	STA 205+00 TO STA 208+00		Y7236	OCS CUT-IN INSULATOR AND	CONTACT BRIDGE ASSEMBLIES TYPE CI-01, CI-02, CC-01
	U1212	UTILITY RELOCATION PLAN	STA 208+00 TO STA 210+00		Y7237	OVERHEAD CONTACT SYSTEM	MULTI-CANTILEVER BRACKETS
	U1213	UTILITY RELOCATION PLAN	STA 210+00 TO STA 212+00		Y7303	OVERHEAD CONTACT SYSTEM	WIRING LAYOUT & ALLOCATION SCHEDULE WB STA 201+00 TO WB STA 207+00
	U1214	UTILITY RELOCATION PLAN	STA 212+00 TO STA 215+84.18		Y7304	OVERHEAD CONTACT SYSTEM	WIRING LAYOUT & ALLOCATION SCHEDULE WB STA 207+00 TO WB STA 211+17
	U1220	PROPOSED SEWER	HIGHLAND DRIVE SEWER BY-PASS		Y7305	OVERHEAD CONTACT SYSTEM	WIRING LAYOUT & ALLOCATION SCHEDULE WB STA 212+00 TO WB STA 215+84.33
	U1221	PROPOSED GAS LINE	SUGAR HOUSE STATION		COMMUNICATIONS		
	U1222	PROPOSED WATER LINE	HIGHLAND DRIVE STATION		Y0800	COMMUNICATIONS	SYMBOLS, ABBREVIATIONS AND GENERAL NOTES
	U1225	PROPOSED GAS LINE PLAN	SIMPSON AVENUE		Y1801	COMMUNICATIONS	SYSTEMWIDE SINGLE LINE DIAGRAM
	U1226	PROPOSED WATER LINE PLAN	HIGHLAND DRIVE		Y1802	COMMUNICATIONS	SIGNAL FIBER OPTIC CABLE PLAN
	U1227	PROPOSED WATER LINE PROFILE	HIGHLAND DRIVE		Y3803	COMMUNICATIONS	SIGNAL BETA INTERLOCKING FIBER ALLOCATION TABLE
	U1231	PROPOSED WATER LINE PLAN	SIMPSON AVENUE		Y3804	COMMUNICATIONS	SIGNAL HIGHLAND DRIVE FIBER ALLOCATION TABLE
	U1232	PROPOSED WATER LINE PROFILE	SIMPSON AVENUE		Y1810	COMMUNICATIONS	IT FIBER OPTIC CABLE PLAN
	U1233	WATERLINE	CATHODIC PROTECTION		Y3811	COMMUNICATIONS	FAIRMONT PCC IT FIBER ALLOCATION TABLE
	U1234	CATHODIC PROTECTION	DETAILS 1 OF 2		Y3812	COMMUNICATIONS	SUGAR HOUSE PCC IT FIBER ALLOCATION TABLE
	U1235	CATHODIC PROTECTION	DETAILS 2 OF 2		Y8813	COMMUNICATIONS	SUGAR HOUSE STATION RISER DIAGRAM
					Y8814	SUGAR HOUSE STATION	PCC COMM CABINET RACK ELEVATION
					Y3815	COMMUNICATIONS	SUGAR HOUSE STATION CABLE SCHEDULE
OVERHEAD CONTACT SYSTEM							
	Y0001	OVERHEAD CONTACT SYSTEM	ABBREVIATIONS AND GENERAL NOTES		Y1235	DUCTBANK PLAN	WB STA 201+00 TO WB STA 207+00
	Y0002	OVERHEAD CONTACT SYSTEM	STANDARD SYMBOLS AND STRUCTURAL NOTES		Y1236	DUCTBANK PLAN	WB STA 207+00 TO WB STA 212+00
	Y3002	OCS POLE FOUNDATIONS			Y1237	DUCTBANK PLAN	WB STA 212+00 TO WB STA 215+88.5
	Y7005	OCS TECHNICAL SHEET	UNIVERSAL PANTOGRAPH CLEARANCE ENVELOPE		Y1238	ELECTRICAL PLAN	STA 201+00 TO STA 207+00
	Y7006	OVERHEAD CONTACT SYSTEM	DRAWING HIERARCHY AND CONTENT REQUIREMENTS		Y1239	ELECTRICAL PLAN	STA 207+00 TO STA 212+00
	Y7009	OCS TECHNICAL SHEET	MAX PERMISSIBLE MIDSPAN OFFSET, BLOW-OFF AND CATENARY DROOP		Y1240	ELECTRICAL PLAN	WB STA 212+00 TO WB STA 215+85.29
SYSTEMWIDE ELECTRICAL							

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S-LINE EXTENSION PROJECT
GENERAL
INDEX OF DRAWINGS
SHEET 2 OF 3

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SHEET NO.	DWG NO.	TITLE	DESCRIPTION	SHEET NO.	DWG NO.	TITLE	DESCRIPTION
	Y3215	SYSTEMWIDE ELECTRICAL	PULLBOXES DETAILS AND SCHEDULE				
	Y3216	SYSTEMWIDE RACEWAY	DETAILS AND SCHEDULE				
	Y4217	SYSTEMWIDE ELECTRICAL	RACEWAY SECTIONS SHEET-1				
	Y4218	SYSTEMWIDE ELECTRICAL	RACEWAY SECTIONS SHEET-2				
	Y7314	TRACTION POWER SYSTEM	RACEWAY SECTIONS				
	Y1241	RMP UTILITY RELOCATION PLAN					
	Y1242	STREET LIGHTING PLAN					
	Y1243	TRENCH SECTION					
SIGNALS							
	Z0001	SIGNALS SYMBOLS					
	Z0002	SIGNALS ABBREVIATIONS					
	Z7001	SIGNALS SYSTEM	OVERALL SCHEMATIC WB STA 196+00 TO WB STA 207+65				
	Z7002	SIGNALS SYSTEM	OVERALL SCHEMATIC WB STA 207+65 TO WB STA 216+00				
	Z7003	EASTBOUND CONTROL LINE PLAN	STA. 186+00 TO STA. 203+00				
	Z7004	EASTBOUND CONTROL LINE PLAN	STA. 203+00 TO STA. 215+85				
	Z7005	WESTBOUND CONTROL LINE PLAN	STA. 186+00 TO STA. 203+00				
	Z7006	WESTBOUND CONTROL LINE PLAN	STA. 203+00 TO STA. 215+85				
	Z7007	SIGNALS	TRACK CIRCUIT ARRANGEMENT				
	Z7008	SIGNALS	ROUTE AND ASPECT CHART BETA INTERLOCKING				
	Z7009	SIGNALS	ROUTE AND ASPECT CHART HIGHLAND DRIVE INTERLOCKING				
	Z8001	SIGNALS TRACK AND CABLE PLAN	1 OF 2				
	Z8002	SIGNALS TRACK AND CABLE PLAN	2 OF 2				
SIGNALS STANDARD DRAWINGS							
	Z3001	SIGNALS WAYSIDE	SIGNALING DETAILS 1 OF 2				
	Z3002	SIGNALS WAYSIDE	SIGNALING DETAILS 2 OF 2				
	Z3003	SIGNALS	SWITCH HEATER LAYOUT				
	Z3004	SIGNAL TYPICAL BONDING DETAILS					
	Z3005	SIGNALS	HOUSE INSTALLATION DETAILS				
	Z3006	SIGNALS	TYPICAL WHEEL SENSOR INSTALLATION				
	Z3007	SIGNALS	TYPICAL WHEEL SENSOR EMBEDDED TRACK INSTALLATION				
	Z3008	SIGNALS	TYPICAL VEHICLE DETECTOR LOOP INSTALLATION				
	Z3009	SIGNALS	PEDESTRIAN CROSSING BLANK OUT SIGN				

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S-LINE EXTENSION PROJECT

 GENERAL

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Scale:	NTS
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STANDARD ABBREVIATIONS

TRACK AND ROAD ALIGNMENT

HORIZONTAL

CS	POINT OF CHANGE FROM CIRCULAR CURVE TO SPIRAL
D, Dc	DEGREE OF CURVE (CURVATURE BY ARC DEFINITION)
Δ	DELTA or DEFLECTION ANGLE (SPIRAL CURVE)
DIA	DIAMOND (CROSSOVER)
ES	EXTERNAL DISTANCE
Ea	SUPERELEVATION, ACTUAL
Eq	SUPERELEVATION, TOTAL
Eu	SUPERELEVATION, UNBALANCED
I	TOTAL INTERSECTION ANGLE or TOTAL CENTRAL ANGLE
L	TOTAL CURVE LENGTH
Lc	TOTAL LENGTH OF CHORD
Ls1	TOTAL LENGTH OF SPIRAL CURVE
Ls2	SUFFIX (1) AT THE SYMBOL DENOTES THE DATA FOR THE FIRST SPIRAL ON AN UNSYMMETRICAL SPIRALIZED CURVE
Ls2	SUFFIX (2) - SAME AS ABOVE, SECOND SPIRAL
Ls IN	SUFFIX (IN) AT THE SYMBOL DENOTES THE DATA FOR THE LEADING SPIRAL OF A SPIRALIZED CURVE
Ls OUT	SUFFIX (OUT) AT THE SYMBOL DENOTES THE DATA FOR THE TRAILING SPIRALIZED CURVE
L.T.	LONG TANGENT
P	THROW
PC	POINT OF CURVATURE or POINT OF CHANGE FROM TANGENT TO CIRCULAR CURVE
PCC	POINT OF COMPOUND CIRCULAR CURVES
PI	POINT OF INTERSECTION OF TWO TANGENTS
PITO	POINT OF INTERSECTION, TURNOUT
(PO)	POWER OPERATED (REFERS TO TURNOUT)
POB	POINT OF BEGINNING
POC	POINT ON CIRCULAR CURVE
POE	POINT OF ENDING
POS	POINT ON SPIRAL
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CIRCULAR CURVE
PT	POINT OF TANGENCY or POINT OF CHANGE FROM CIRCULAR CURVE TO TANGENT
PS	POINT OF SWITCH
Qs	CENTRAL ANGLE OF SPIRAL or SPIRAL ANGLE
R	RADIUS OF CIRCULAR CURVE
SC	POINT OF CHANGE FROM SPIRAL TO CIRCULAR CURVE
SS	POINT OF CHANGE FROM SPIRAL TO SPIRAL
ST	POINT OF SPIRAL TO TANGENT
S.T.	SHORT TANGENT
T	TOTAL CURVE TANGENT LENGTH OF COMPLETE CURVE
Tc	TANGENT LENGTH FROM PC or PT TO PI
T/O	TURNOUT
Ts	TANGENT DISTANCE FROM TS or ST TO PI
TL	TOTAL LENGTH OF CURVE (SPIRAL & CIRCULAR PORTIONS)
TS	POINT OF CHANGE FROM TANGENT TO SPIRAL
TTL	TOTAL TANGENT LENGTH (SPIRALS & CIRCULAR PORTIONS)
XO	CROSSOVER
Xs	TANGENT DISTANCE AT SC or CS
Ys	TANGENT OFFSET AT SC or CS

VERTICAL

K	RATE OF VERTICAL CURVATURE OR LENGTH OF CURVE
L	PER CENT DIFFERENCE IN TWO ALGEBRAIC GRADES
PVCC	LENGTH OF VERTICAL CURVE
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION or POINT OF INTERSECTION OF TWO PROFILE TANGENTS
R	RATE OF CHANGE IN CURVATURE
PRVC	POINT OF REVERSE VERTICAL CURVE
PVT	POINT OF VERTICAL TANGENCY
VC	VERTICAL CURVE
ELEV	ELEVATION

AASHTO

ABC	AGGREGATE BASE COURSE
ABND	ABANDONED
ABUT	ABUTMENT
AC	AND
AC or A.C.	ASBESTOS CEMENT
ACC.	ACCESS
ADA	AMERICANS WITH DISABILITIES ACT
AGS	AGGREGATE
ALIGN	ALIGNMENT
Aj	AREA INLET
APPROX	APPROXIMATE
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
A.R.E.M.A.	AMERICAN RAILWAY ENGINEERING & MAINTENANCE OF WAY ASSOCIATION
AS	AS REQUIRED
A/R	AS SHOWN
A.S.	AS SHOWN
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
@	AT
ATC	AUTOMATIC TRAIN CONTROL
ATMS	ADVANCED TRAFFIC MANAGEMENT SYSTEM
AVE	AVENUE
AWG	AMERICAN WIRE GAGE

C

C	CUT (WALL)
CAS	CASING
CTV	CABLE TV LINE
CB	CATCH BASIN
CBX	CONCRETE BOX CULVERT
c-c	CENTER TO CENTER
CD	CHECK DAM
CFS	CUBIC FEET PER SECOND
C&G	CURB AND GUTTER
CI or C.I.	CAST IRON
QIP	CAST IRON PIPE
CJ	CONSTRUCTION JOINT or CONTROL JOINT
± or CL	CENTER LINE
CLG	CEILING
CLR	CLEARANCE or CLEAR
CMP	CORRUGATED METAL PIPE
C/O	CARE OF
CO	CLEANOUT, COUNTY or COMPANY
COL	COLUMN
CONC	CONCRETE
CONN	CONNECT or CONNECTION
CONST or CONSTR	CONSTRUCT or CONSTRUCTION
CONT	CONTINUED, CONTINUOUS or CONTINUATION
CSP	CORRUGATED STEEL PIPE
CNL	CANAL
COORD	COORDINATE
CORR	CORRUGATE or CORRUGATED
CP	CLAY PIPE or CONTROL POINT
CRK	CREEK
CRV	CURVE
C/S	COMMUNICATION/SIGNAL
CSW	CONCRETE SIDEWALK
CT	COURT
CULV or CUL	CULVERT
CU YD or C.Y. or CY	CUBIC YARD
CWR	CONTINUOUS WELDED RAIL

D

D, d	DEPTH
DB	DIVERSION BOX
DE	DRAGGING EQUIPMENT

GENERAL ABBREVIATIONS

DEB	DETENTION BASIN
DED	DECK DRAIN
DEF or DEFL	DEFLECTION
DEPT	DEPARTMENT
DF	DIRECT FIXATION
DG	DIESEL GAS or DRY GAS
DI or D.I.	DUCTILE IRON
DIP	DUCTILE IRON PIPE
DIA or Ø	DIAMETER
DIAG	DIAGRAM or DIAGONAL
DIM	DIMENSION
DIST	DISTRICT or DISTANCE
DIT	OPEN DITCH
DPSS	DOUBLE POINT SPLIT SWITCH
DRGW	DENVER AND RIO GRANDE WESTERN RAILROAD
DRTK	DRILL TRACK
DW	DOMESTIC WATER
DWG	DRAWING
DWY	DRIVEWAY

E

E	EAST or ELECTRIC
EA	EACH
EB	EASTBOUND or END OF BRIDGE
E/E	EAST OF EAST RIGHT-OF-WAY LINE
EJ	EXPANSION JOINT
ELEV	ELEVATION
EMH	ELECTRICAL MANHOLE
E/O	EAST OF
E/OA	EDGE OF ASPHALT
E/OH	OVERHEAD ELECTRIC
EOP	EDGE OF PAVEMENT
EQ	EQUAL or EQUATION
EQN	EQUATION
ES	EXTRA STRENGTH
ET	END TRACK
ETCETERA	ETCETERA
EW	EAST OF WEST RIGHT-OF-WAY LINE
EXIST or EX	EXISTING
EXT	EXTERIOR

F

F	FILL (WALL) or FIBER
(F)	FREIGHT
FB	FREEBOARD
FES	FLARED END SECTION
FF	FINISHED FLOOR or FAR FACE or FRONT FACE
FFE	FINISHED FLOOR ELEVATION
FG	FROG GAUGE PLATE or FINISH GRADE
FH	FIRE HYDRANT
FIN	FINISH
F/L	FLOWLINE
FLG	FLANGE
FLR	FLOOR
FO	FIBER OPTIC LINE
FOC	FACE OF CURB
FPS	FOOT PER SECOND
FREWY	FREIGHTWAY
FS	FLAGSTONE or FINISHED SURFACE
FAM	FOUND ALUMINUM MONUMENT
FBC	FOUND BRASS CAP
FIP	FOUND IRON PIN
FT or FT.	FOOT or FEET
FHWA	FEDERAL HIGHWAY ADMINISTRATION
FRA	FEDERAL RAILROAD ADMINISTRATION
FTA	FEDERAL TRANSIT ADMINISTRATION
FTG	FOOTING

G

G	GAS
GA	GAUGE (GAGE)
GAL(S)	GALLON (GALLONS)
GALV	GALVANIZED
GM	GAS METER
GND	GROUND
GR	GRADE, GROUND or GUARD RAIL PLATE
G/SB	GROUTED SLOPING BOLLER
G/SC	GALVANIZED STEEL CONDUIT
GV	GATE VALVE
GRS	GALVANIZED RIGID STEEL CONDUIT

H

H or HT	HEIGHT
HCL	HORIZONTAL CONTROL LINE
HD	HEAD
HDPE	HIGH DENSITY POLYETHYLENE
HF	HEEL OF FROG
HG	HEAD GATE
HL	HEEL LENGTH

HP	HIGH PRESSURE or HEEL PLATE
Hp	HORSEPOWER
HS	HIGH STRENGTH STEEL
HW	HEAD WALL
HWY	HIGHWAY
HORIZ	HORIZONTAL
HGL	HYDRAULIC GRADE LINE
HH	HAND HOLE

I	INSIDE DIAMETER or IDENTIFICATION
ID	INTERMEDIATE HIGH PRESSURE
IHP	INDIVIDUAL HIGH RAIL LEVEL
IHLR	INSULATED JOINT
IJ	INCH or INCHES
INC.	INCORPORATED
INV	INVERT
IP	IRON PIPE
IRB	IRRIGATION JUNCTION or DIVERSION BOX
IRC	IRRIGATION CULVERT
IRD	IRRIGATION DITCH
IRP	IRRIGATION PIPE

J	JUNCTION BOX
JB	JOINT
JT	JACK & BORE
J&B	

K	KIP, 1000 POUNDS
KF	KIP-FOOT
KLF	KIPS PER LINEAR FOOT
KSF	KIPS PER SQUARE FOOT
KV	KILOVOLTS

L	LINE or LENGTH
LT	LEFT
LB	POUND
LF	LINEAR FOOT (FEET)
LH	LEFT HAND
LLC	LIMITED LIABILITY CORPORATION
LOC	LOCATE, LOCATED or LOCATION
LP	LOW PRESSURE or LIGHT POLE
LPT	LOW POINT
LRT	LIGHT RAIL TRANSIT
LTD	LIMITED
LTG	LIGHTING

M	MAINTENANCE
MAINT	MAXIMUM
MAX or MAX.	MAXIMUM
MDPE	MEDIUM DENSITY POLYETHYLENE
MECH	MECHANICAL
MH	MANHOLE
MIL	0.001 INCH
MIN or MIN.	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
ML	MATCH LINE
ML	MAINLINE
MON	MONUMENT
MP	MEDIUM PRESSURE/MILE POST
MPH	MILES PER HOUR
MSE	MECHANICALLY STABILIZED EARTH
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

N	NORTH
N	NOT APPLICABLE
N/B	NORTHBOUND
NF	NEAR FACE
NIC	NOT IN CONTRACT
NN	NORTH OF NORTH RIGHT-OF-WAY LINE
N/O	NORTH OF
NO, or #	NUMBER
NRCP	NON-REINFORCED CONCRETE PIPE
NS	NORTH OF SOUTH RIGHT-OF-WAY LINE
NTS	NOT TO SCALE

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STANDARD ABBREVIATIONS

GENERAL ABBREVIATIONS

O
 OC ON CENTER or ON CENTERS
 OD or O.D. OUTSIDE DIAMETER
 OFO OVERHEAD FIBER OPTIC
 OHC OVERHEAD COAXIAL
 OHP OVERHEAD POWER
 OHT OVERHEAD TELEPHONE
 OPP OPPOSITE

P
 P PIPE
 (P) PASSENGER
 PB PULL BOX
 PCC PORTLAND CEMENT CONCRETE
 PCCP PORTLAND CEMENT CONCRETE PAVEMENT
 PCL PROJECT CONTROL LINE
 PD PLATFORM DRAIN
 PE POLYETHYLENE
 PED PEDESTRIAN
 PF POINT OF FROG
 PGL PROFILE GRADE LINE
 PKG PARKING
 PL PROPERTY LINE
 POL POINT ON LINE
 PP POWER POLE
 PROP PROPERTY
 PR PROPOSED
 PEP POLYETHYLENE PIPE
 (PO) POWER OPERATED
 PSF POUNDS PER SQUARE FOOT
 PSI POUNDS PER SQUARE INCH
 PET PETROLEUM
 PVC POLYVINYL CHLORIDE
 PVMT PAVEMENT

Q
 QTY QUANTITY
 QUAD QUADRANT

R
 R RADIUS
 RCB REINFORCED CONCRETE BOX
 RCH REINFORCED CONCRETE PIPE
 RD ROAD
 RECT RECTANGLE or RECTIFIER
 REF REFERENCE
 REINF REINFORCE, REINFORCED or REINFORCEMENT
 RET RETAINING
 REV REVISE, REVISED or REVISION
 REQD REQUIRED
 RH RIGHT HAND
 RMP ROCKY MOUNTAIN POWER
 RR RAILROAD
 RRS or RS RAILROAD SIGNAL
 RSC RAILROAD SIGNAL & COMMUNICATION
 RT RIGHT
 RTS RETENTION SWALE
 RET W OR RW RETAINING WALL
 ROW or RW RIGHT OF WAY
 RVR RIVER
 RY RAILWAY

S
 S SOUTH or SLOPE
 SB SOUTHBOUND
 SC STREET CAR
 SD STORM DRAIN
 SDC STORM DRAIN CULVERT
 SDCB STORM DRAIN CATCH BASIN
 SDCO STORM DRAIN CLEAN OUT
 SDD STORM DRAIN DITCH
 SDMH STORM DRAIN MANHOLE
 SDP STORM DRAIN PIPE
 SDPS STORM DRAIN PUMP STATION
 SDS STORM DRAIN SWALE
 SDV STORM DRAIN VAULT
 SECT SECTION
 SGL SUB-GRADE LINE
 SH SUGAR HOUSE
 SHT SHEET
 SIG SIGNAL
 SIM SIMILAR
 SL SEWER LATERAL
 SLC SALT LAKE CITY
 SLP SLOPE
 SMH SEWER MANHOLE

S
 S SOUTH OF NORTH RIGHT-OF-WAY LINE
 S/O SOUTH OF
 SP SPACE or SPACING or SIGNAL POLE or STATION POINT
 SPEC SPECIFICATIONS
 SQ SQUARE
 S/S SOUTH OF SOUTH RIGHT-OF-WAY LINE
 SSP SMOOTH STEEL PIPE
 ST STREET
 STA STATION
 STD STANDARD
 STL STEEL
 STR STORAGE
 STR OR STRUCT STRUCTURE
 SW SWITCH or SIDEWALK
 SWR OR SS SANITARY SEWER
 SYM SYMMETRICAL

T
 T or TEL TELEPHONE
 TAN TANGENT
 TB TOP OF BALLAST
 TBC TOP BACK OF CURB
 TBD TO BE DETERMINED
 TBS TO BE SURVEYED
 TCB TRAFFIC CONTROL BOX
 TD TRACK DRAIN
 TEMP TEMPERATURE or TEMPORARY
 TERM TERMINAL
 TF TRACK FOOT
 TG TOP OF GRADE or TOP OF GRATE
 TH TEST HOLE
 THK THICK or THICKNESS
 THRU THROUGH
 TI TRACK INLET
 TL TRAFFIC LIGHT or TOE LENGTH
 TMH TELEPHONE MANHOLE
 TOC TRAFFIC OPERATIONS CENTER
 TOD TRANSIT ORIENTED DEVELOPMENT
 TOP TOP OF PIPE
 TOR TOP OF RAIL
 TOS TOE OF SLOPE
 TPSS TRACTION POWER SUBSTATION
 TRK TRACK
 TS TRAFFIC SIGNAL
 T.S. TYPICAL SECTION
 TSB TOP OF SUB-BALLAST
 TSC TRAFFIC SIGNAL CONDUIT
 TV TELEVISION
 T/W TOP OF WALL
 TYP TYPICAL

U
 UD UNDERDRAIN
 UDOT UTAH DEPARTMENT OF TRANSPORTATION
 UR UNDERGROUND FIBER OPTIC
 UG UNDERGROUND
 UGC UNDERGROUND COAXIAL
 UGP UNDERGROUND POWER
 UGT UNDERGROUND TELEPHONE
 UNO UNLESS NOTED OTHERWISE
 UNK UNKNOWN
 UPRR UNION PACIFIC RAILROAD
 URC UNREINFORCED CONCRETE
 US UNITED STATES
 UTA UTAH TRANSIT AUTHORITY
 UTBC UNTREATED BASE COURSE

V
 V VALVE or VELOCITY
 VAR VARIES or VARIABLE
 VC VERTICAL CURVE
 VCP VITRIFIED CLAY PIPE
 VERT VERTICAL
 VLT VAULT

W
 W WEST or WATER or WIDTH
 W/ WITH
 WB WESTBOUND
 W/E WEST OF EAST RIGHT-OF-WAY LINE
 WIP WROUGHT IRON PIPE
 WL WATER LEVEL
 WM WATER METER
 W/O WITHOUT or WEST OF
 WS STEEL
 WSP WELDED STEEL PIPE
 WTR WATER
 WV WATER VALVE
 W/W WEST OF WEST RIGHT-OF-WAY LINE
 WSE WATER SURFACE ELEVATION
 WW WING WALL

X
 X-DRAIN CROSS DRAIN
 X-ING CROSSING
 X-SECT CROSS SECTION
 > GREATER THAN
 ≥ GREATER THAN OR EQUAL TO
 < LESS THAN
 ≤ LESS THAN OR EQUAL TO

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S-LINE EXTENSION PROJECT

GENERAL

STANDARD ABBREVIATIONS
SHEET 2 OF 2

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STANDARD SYMBOLS

EXISTING		PROPOSED		EXISTING		PROPOSED		EXISTING		PROPOSED	
	RETAINING WALL				EXISTING TRACK				AREA LIGHT		
	DRAINAGE DITCH OR SWALE				PROPOSED UTA TRACK				STREET LIGHT		
	CULVERT				ABANDONED WATER				STREET LIGHT		
	RIGHT-OF-WAY LINE				SEWER				LIGHT VAULT: E-ELECTRIC, T-TELEPHONE, W-WATER		
	EASEMENT LINE				STORM DRAIN				TREE		
	CITY BOUNDARY				WATER				VEGETATION		
	BUILDING LINE				UNDERGROUND POWER				EXISTING GROUND (SECTIONS) RR SWITCH		
	FENCE				GAS				BUSH		
	CURB AND GUTTER				FIBER OPTIC				GAS PIPELINE MARKER		
	CURB/WALL				OVERHEAD POWER				MARSH		
	BARRIER				TELEPHONE				PERMANENT MONUMENT		
	SPOT ELEVATION (PHOTOGRAMMETRIC)				OVERHEAD FIBER OPTIC				SECTION CORNER		
	EDGE OF PAVEMENT				CABLE T.V. BOX				STATION PLATFORM		
	ACCESS ROAD				ELECTRIC BOX				PLATFORM WALKWAY		
	TOP OF CUT				GAS METER				IMPACTED BUILDING, ROADWAY, PARKING LOT		
	TOP OF FILL				STREET LIGHT BOX				FUTURE ROAD CROSSING		
	BUMPING POST				WATER METER				ROAD CROSSING		
	HIGH POINT				TRAFFIC SIGNAL BOX				CHECK-IN LOOP		
	LOW POINT				TELEPHONE BOX				CHECK-OUT LOOP		
	FLOW DIRECTION				WATER BOX				LOOP NOT USED		
	AERIAL CONTROL POINT				FIBER OPTIC BOX				MATRIX DETECTION ZONE		
	TRAFFIC SIGNAL MAST ARM AND POLE				UTILITY BOX				PEER CALL (DELAY SHOWN IF ANY)		
	TRAFFIC SIGNAL HEAD				IRRIGATION BOX				TRACK DRAIN		
	UTA SIGNAL HOUSE				CLEANOUT				OCS FOUNDATION		
	COMMUNICATION/SIGNAL BOX				STORM DRAIN MANHOLE						
	LH TURNOUT				ELECTRIC MANHOLE						
	RH TURNOUT				UTILITY MANHOLE						
	SINGLE CROSSOVER				SANITARY SEWER MANHOLE						
	DIAMOND CROSSOVER				INTERCEPTOR MANHOLE						
	POINT OF SWITCH (MANUALLY OPERATED)				TELEPHONE MANHOLE						
	POINT OF SWITCH (POWER OPERATED)				WATER MANHOLE						
	LH DOUBLE POINT SPLIT SWITCH (DPSS) DERAIL				FIBER OPTIC MANHOLE						
	RH DOUBLE POINT SPLIT SWITCH (DPSS) DERAIL				MONITORING WELL						
	RAIL LUBRICATOR INFRASTRUCTURE				WATER VALVE						
	CURVE NUMBER:				GAS TEST VALVE						
	CROSSOVER NUMBER:				FIRE HYDRANT						
	WB TRACK				STAND PIPE						
	EB TRACK				DROP INLET						
	CROSSOVERS BY UTA				LARGE SIGN						
					SIGN						
					BOLLARD POST						
					FLAG POLE						
					POWER POLE						
					GUY						

NOTE: SOME SYMBOLS/LINES MAY BE SHOWN ENLARGED FOR CLARITY.

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REV	DATE	Description



Designed By:
T. COVEYOU

Drawn By:
T. COVEYOU

Checked By:
A. DIGIROLAMO

Approved By:
A. DIGIROLAMO

S-LINE EXTENSION PROJECT
GENERAL
STANDARD SYMBOLS

State: NTS

CADD Filename: SL-C-G-0-012.dwg

Submitted Date: 01-16-26

UTA Contract No.: 24-03849

Drawing No.: G0012

Sheet No.:

Submitted By: _____ Approved By: _____

GENERAL NOTES - S-LINE EXTENSION

1. ALL MATERIALS AND WORK REQUIRED WITHIN UTA RIGHT-OF-WAY SHALL CONFORM TO UTA SPECIFICATIONS.
2. RIGHT-OF-WAY LINES SHOWN ARE BASED ON RECORDED SURVEY INFORMATION ON RECORD WITH SALT LAKE CITY AND SALT LAKE COUNTY.
3. CONTRACTOR TO VERIFY VERTICAL CLEARANCES FROM THE PROPOSED TRACKS TO OVERHEAD FACILITIES (ELECTRIC, CABLE, TELEPHONE).
4. EXISTING TOPOGRAPHY AND PLANIMETRICS ARE PRODUCED FROM AERIAL SURVEY AND TOPOGRAPHIC FIELD SURVEY. TOPOGRAPHY BELOW VEGETATION OR TREE COVERAGE AND UNDER STRUCTURES IS APPROXIMATE AND REQUIRES CONFIRMATION.
5. "ORIGINAL GROUND" OR "EXISTING GROUND" SHOWN ON PROFILES REFERS TO THE APPROXIMATE EXISTING GROUND LINE AT THE DESIGNATED CENTERLINE OR CONTROL LINE.
6. SEE SURVEY CONTROL DATA SHEETS FOR PROJECT HORIZONTAL CONTROL, VERTICAL DATUM, AND MONUMENT INFORMATION.
7. ALL HORIZONTAL AND VERTICAL DISTANCES ARE IN FEET AND/OR DECIMALS OF A FOOT UNLESS NOTED OTHERWISE.
8. ALL GRADIENTS ARE IN PERCENT UNLESS NOTED OTHERWISE.
9. THE UTA STREETCAR TRACK IS DESIGNED PER THE UTA STREETCAR DESIGN CRITERIA, REVISION, NO. 1 APPROVED SEPTEMBER 2024.
10. STATIONING SHOWN ON TYPICAL SECTIONS IS APPROXIMATE. ALL STATIONING REFERS TO WB TRACK, UNLESS NOTED OTHERWISE.
11. GUIDELINES FROM THE AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION'S (AREMA) "MANUAL FOR TRACK ENGINEERING", 2025 EDITION, ARE USED FOR VARIOUS ASPECTS OF THE DESIGN.
12. GUIDELINES FROM THE FHWA "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), 2023, 11th EDITION, AND UTAH DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS, LATEST REVISION, ARE USED FOR VARIOUS ASPECTS OF THE DESIGN.
13. UTA TRACK PROFILES REPRESENT TOP OF RAIL PROFILE UNLESS NOTED OTHERWISE.
14. THE RAIL PROFILE IS ALWAYS CARRIED ON THE LOW RAIL THROUGH SUPERELEVATED HORIZONTAL CURVES AND SPIRALS.
15. SUPERELEVATION IS ACCOMPLISHED BY MAINTAINING TOP OF INSIDE (LOW) RAIL AT PROFILE GRADE AND BY RAISING OUTSIDE (HIGH) RAIL AN AMOUNT EQUAL TO THE SUPERELEVATION.
16. UTILITIES SHOWN ON THE PLAN SHEETS ARE BASED ON INFORMATION RECEIVED FROM MUNICIPALITIES, AGENCIES, AND PRIVATE COMPANIES. ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION THROUGH POTHOLING AND FIELD SURVEY.
17. TRACKS ON PLAN AND PROFILE DRAWINGS ARE INDICATED BY CENTERLINE OF TRACK. EXCEPT WHERE INDICATED, OFFSET DISTANCES FROM TRACK TO OTHER FACILITIES ARE MEASURED FROM CENTERLINE OF TRACK.
18. STATIONING THROUGH DIVERGING LEGS OF TURNOUTS IS MEASURED ON THE CENTERLINE OF TRACK AND ALONG THE TANGENT EXTENSION LINES OF THE TURNOUT. TRACK LENGTHS THROUGH THE TURNOUT RUN FROM THE POINT OF SWITCH (PT_SW) TO THE POINT OF INTERSECTION OF THE TURNOUT (PITO) AND ALONG THE TANGENT OF THE TURNOUT CLOSURE CURVE TO THE END OF THE TURNOUT CURVE AND BEYOND.
19. TURNOUT HEADBLOCK TIES AND SWITCH MACHINES SHALL BE INSTALLED ON THE SIDE OF TRACK INDICATED ON THE PLANS BY THE TRIANGLE SWITCH TARGET SYMBOL.
20. THE TOP OF RAIL ELEVATIONS OF THE EASTBOUND TRACK SHALL BE EQUAL TO THE ADJACENT WESTBOUND TRACK TOP OF RAIL, EXCEPT AS NOTED. THE PROFILE GRADE OF THE EASTBOUND TRACK IS PROJECTED RADIALLY IN CURVED SECTIONS AND PERPENDICULARLY IN TANGENT SECTIONS FROM THE PROFILE GRADE OF WESTBOUND TRACK.

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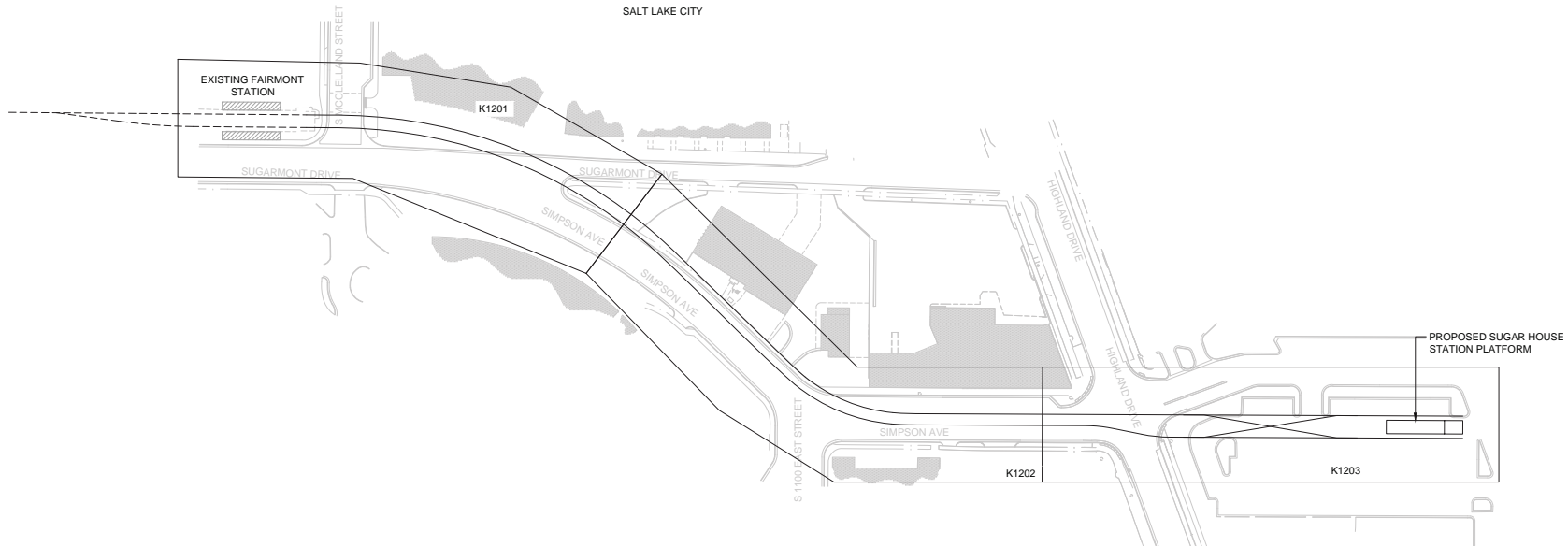
Submitted By: _____

Approved By: _____

Designed By:	T. COVEYOU
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT
 GENERAL
 GENERAL NOTES

State:	NTS
CADD Filename:	SL-C-G-0-013.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	G0013
Sheet No.:	



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Submitted By: _____ Approved By: _____

Designed By: S. JOSHI
Drawn By: S. JOSHI
Checked By: A. DIGIROLAMO
Approved By: A. DIGIROLAMO

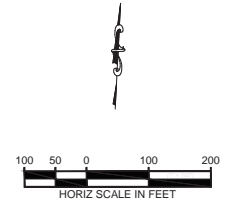
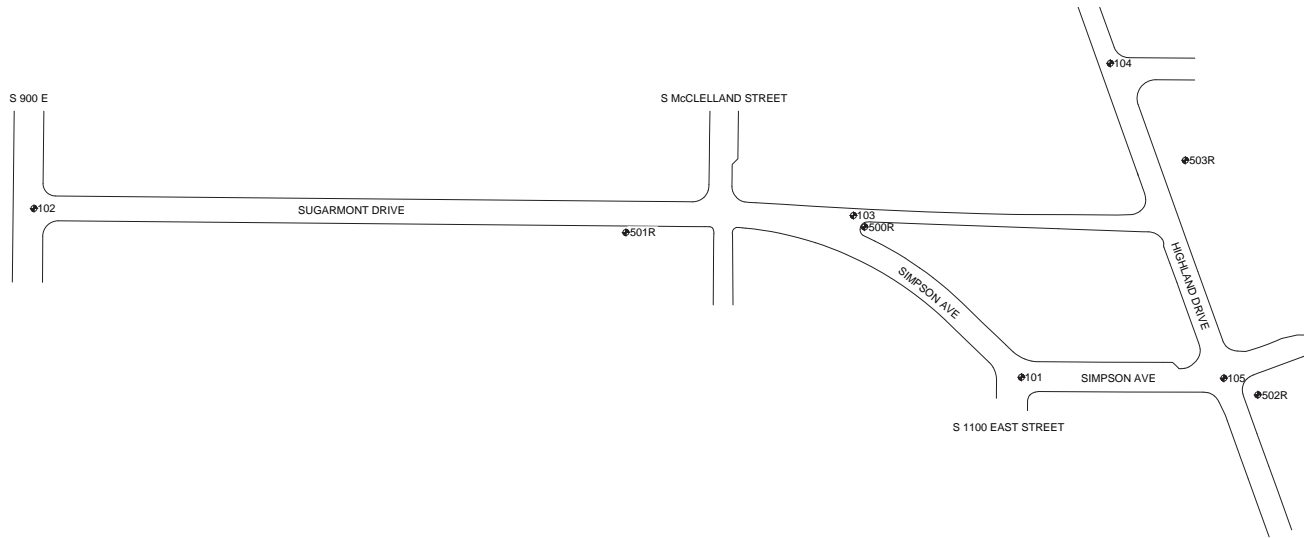
S-LINE EXTENSION PROJECT

TRACK KEY MAP

Scale: NTS
CADD Filename: SL-C-K-0-001.dwg
Submitted Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: K0001
Sheet No.:

TOPOGRAPHIC SURVEY

TAX ID NO: (REFER TO RECORD OF SURVEY)
 LYING WITHIN THE SOUTHEAST QUARTER (SE ¼) OF SECTION 17,
 TOWNSHIP 1 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN



△ PROJECT CONTROL (SPC)

HORIZONTAL AND VERTICAL DATA WAS COLLECTED BY GPS AND CONVENTIONAL METHODS REFERENCING UTAHS TURN GPS (VRS) NETWORK. MAP SCALING PARAMETERS ARE DEFINED AS FOLLOWS:

- PROJECT DATUM = NORTH AMERICAN DATUM OF 1983 (N.A.D. 83)
- VERTICAL DATUM = N.A.V.D. 88 (REFERENCING GEOID MODEL 18)
- COORDINATE SYSTEM = U.S. STATE PLANE 1983, UTAH CENTRAL ZONE (4302) PROJECTED TO GROUND COORDINATES.
- UNITS = US SURVEY FOOT
- FALSE NORTHING = 0000.00
- FALSE EASTING = 0000.00
- GROUND SCALE FACTOR = 1.0001871262
- ELIPSOID HEIGHT = 4312.98'
- SCALING LATITUDE = N 40°43'18.87249"
- SCALING LONGITUDE = W 111°51'34.59096"

SURVEY CONTROL COORDINATES WERE OBTAINED USING STANDARD RTK (RVS) OBSERVATION METHODS.

CONTROL POINTS ARE SUBJECT TO THE EFFECTS OF SURFACE ACTIVITY AND SEASONAL MOVEMENTS. POINTS MAY BE SUBJECT TO INTENTIONAL OR UNINTENTIONAL DAMAGE OR REMOVAL. CONTROL POINT POSITIONS SHOULD BE FIELD VERIFIED PRIOR TO ANY SUBSEQUENT SURVEY OR CONSTRUCTION ACTIVITIES.

POINT	LATITUDE (N)	LONGITUDE (W)	NORTHING	EASTING	ELEVATION	DESCRIPTION
101	40°43'18.87267"	111°51'34.59132"	7431908.164	1540734.983	4360.771'	1.5" BC MON
102	40°43'21.49277"	111°51'55.24684"	7432179.826	1539145.332	4333.117'	3.5" BC MON
103	40°43'21.43367"	111°51'38.11544"	7432168.490	1540464.627	4356.140'	1.5" BC MON
104	40°43'23.87051"	111°51'32.76021"	7432143.495	1540878.033	4364.330'	1.5" BC MON
105	40°43'18.87060"	111°51'30.35942"	7431906.647	1541060.892	4370.235'	1.5" BC MON
500R	40°43'21.25256"	111°51'37.88085"	7432150.084	1540482.619	4357.911'	REDCON SCRIBE
501R	40°43'21.14992"	111°51'42.87099"	7432141.247	1540098.277	4351.920'	REDCON SCRIBE
502R	40°43'18.60183"	111°51'29.64744"	7431879.859	1541115.617	4374.707'	REDCON R/C
503R	40°43'22.33323"	111°51'31.18303"	7432257.400	1540998.869	4369.340'	REDCON MAG NAIL

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Designed By:	S. JOSHI
Drawn By:	T. COVEYOU
Checked By:	A. DIGRIOLAMO
Approved By:	A. DIGRIOLAMO

S-LINE EXTENSION PROJECT

SURVEY CONTROL DATA

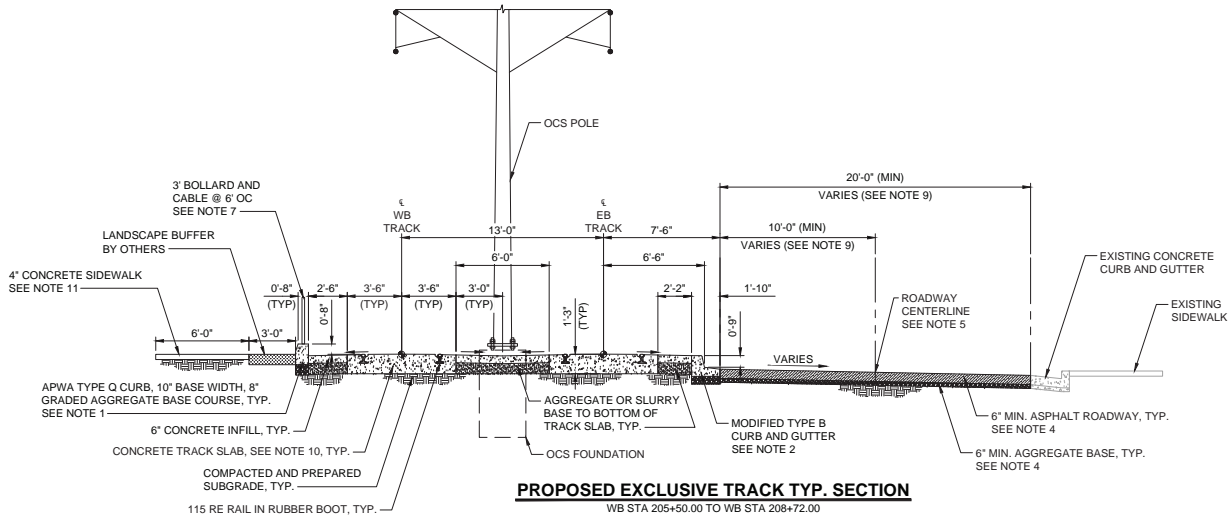
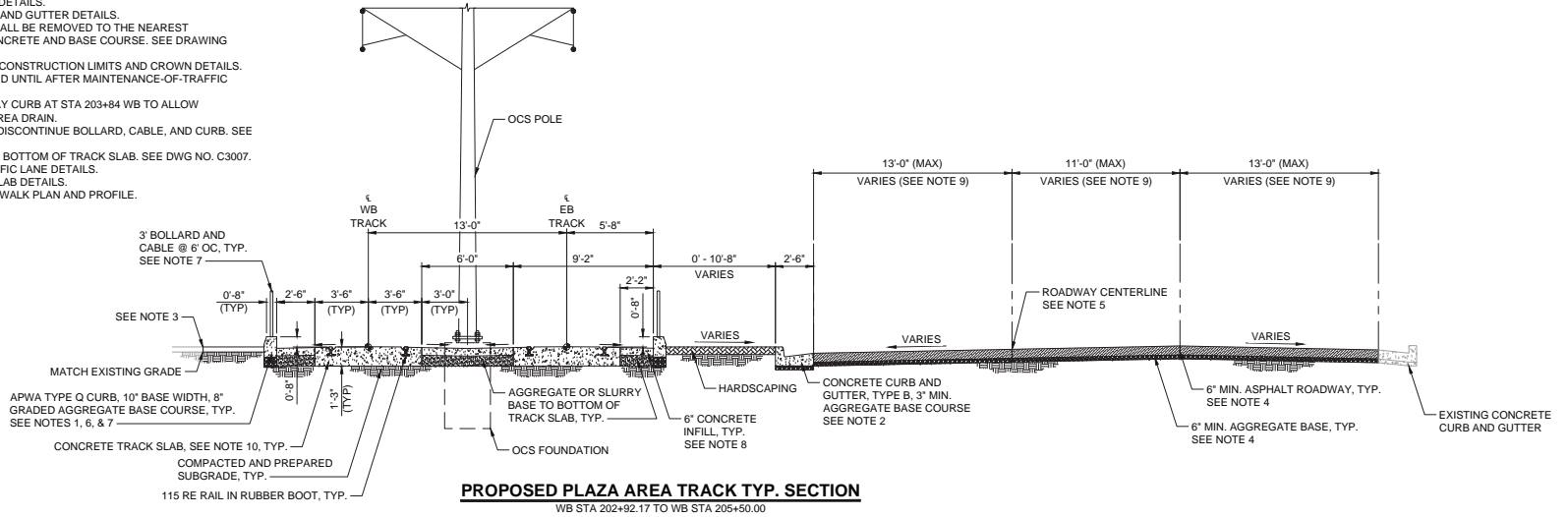
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CADD Filename:	SL-C-R-0-201.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	R0201
Sheet No.:	

Submitted By: _____

Approved By: _____

NOTES:

1. SEE DWG NO. C3011 FOR GUIDEWAY CURB DETAILS.
2. SEE DWG NO. C3011 FOR CONCRETE CURB AND GUTTER DETAILS.
3. IN APARTMENT PLAZA AREA, CONCRETE SHALL BE REMOVED TO THE NEAREST CONTRACTION JOINT. MATCH EXISTING CONCRETE AND BASE COURSE. SEE DRAWING C4001 FOR DETAILS.
4. SEE ROADWAY SHEETS FOR PAVEMENT RECONSTRUCTION LIMITS AND CROWN DETAILS.
5. FINAL LIFT OF AC PAVEMENT TO BE DELAYED UNTIL AFTER MAINTENANCE-OF-TRAFFIC STRIPING IS REMOVED.
6. PROVIDE A 6" WIDE BREAK IN THE GUIDEWAY CURB AT STA 203+84 WB TO ALLOW SIDEWALK DRAINAGE TO ACCESS TRACK AREA DRAIN.
7. BETWEEN STA 205+42.10 TO STA 205+83.50 DISCONTINUE BOLLARD, CABLE, AND CURB. SEE DWG NO. K1201 FOR MORE DETAILS.
8. PROVIDE FULL DEPTH INFILL CONCRETE TO BOTTOM OF TRACK SLAB. SEE DWG NO. C3007.
9. SEE DRAWINGS T1201 AND T1202 FOR TRAFFIC LANE DETAILS.
10. SEE DWG NO. K3002 FOR TYPICAL TRACK SLAB DETAILS.
11. SEE DRAWINGS C1201 AND C1202 FOR SIDEWALK PLAN AND PROFILE.



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Designed By:	T. COVEYOU
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

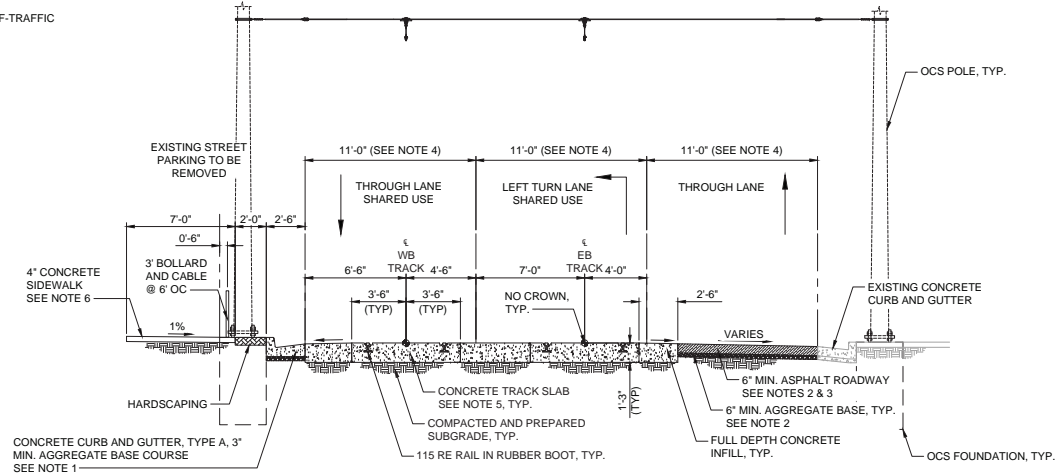
S-LINE EXTENSION PROJECT
TRACK TYPICAL SECTIONS
SHEET 1 OF 4

Scale:	1/4"=1'-0"
CADD Filename:	SL-C-K-4-201.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K4201
Sheet No.:	

Submitted By: _____ Approved By: _____

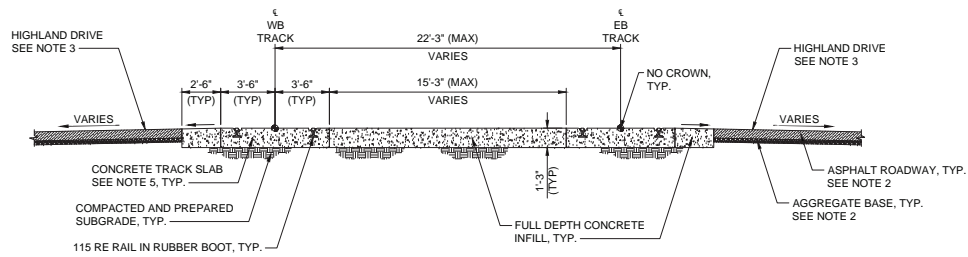
NOTES:

1. SEE DWG NO. C3011 FOR CONCRETE CURB AND GUTTER DETAILS.
2. SEE ROADWAY SHEETS FOR PAVEMENT RECONSTRUCTION LIMITS.
3. FINAL LIFT OF AC PAVEMENT TO BE DELAYED UNTIL AFTER MAINTENANCE-OF-TRAFFIC STRIPING IS REMOVED.
4. SEE DRAWINGS T1202 AND T1203 FOR TRAFFIC LANE DETAILS.
5. SEE DWG NO. K3002 FOR TYPICAL TRACK SLAB DETAILS.
6. SEE DRAWINGS C1201 AND C1202 FOR SIDEWALK PLAN AND PROFILE.



PROPOSED SHARED USE TRACK TYP. SECTION

WB STA 208+72.00 TO WB STA 211+94.07



HIGHLAND INTERSECTION TRACK TYP. SECTION

WB 211+94.07 TO WB STA 212+92.38

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Designed By:	T. COVEYOU
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT

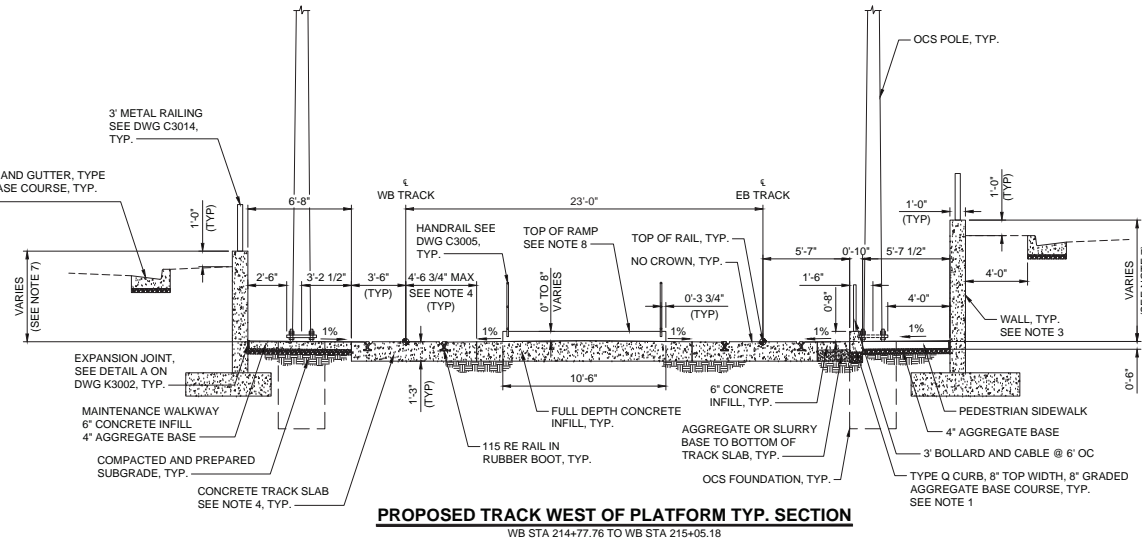
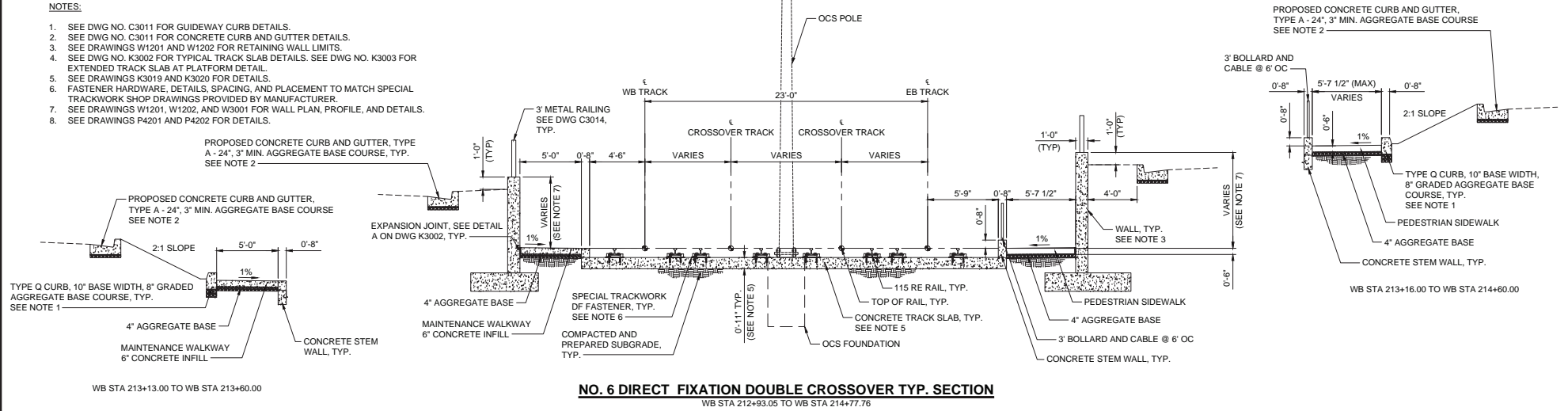
TRACK TYPICAL SECTIONS
SHEET 2 OF 4

Scale:	1/4"=1'-0"
CADD Filename:	SL-C-K-4-202.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K4202
Sheet No.:	

Submitted By: _____ Approved By: _____

NOTES:

1. SEE DWG NO. C3011 FOR GUIDEWAY CURB DETAILS.
2. SEE DWG NO. C3011 FOR CONCRETE CURB AND GUTTER DETAILS.
3. SEE DRAWINGS W1201 AND W1202 FOR RETAINING WALL LIMITS.
4. SEE DWG NO. K3002 FOR TYPICAL TRACK SLAB DETAILS. SEE DWG NO. K3003 FOR EXTENDED TRACK SLAB AT PLATFORM DETAIL.
5. SEE DRAWINGS K3019 AND K3020 FOR DETAILS.
6. FASTENER HARDWARE, DETAILS, SPACING, AND PLACEMENT TO MATCH SPECIAL TRACKWORK SHOP DRAWINGS PROVIDED BY MANUFACTURER.
7. SEE DRAWINGS W1201, W1202, AND W3001 FOR WALL PLAN, PROFILE, AND DETAILS.
8. SEE DRAWINGS P4201 AND P4202 FOR DETAILS.



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Submitted By: _____ Approved By: _____

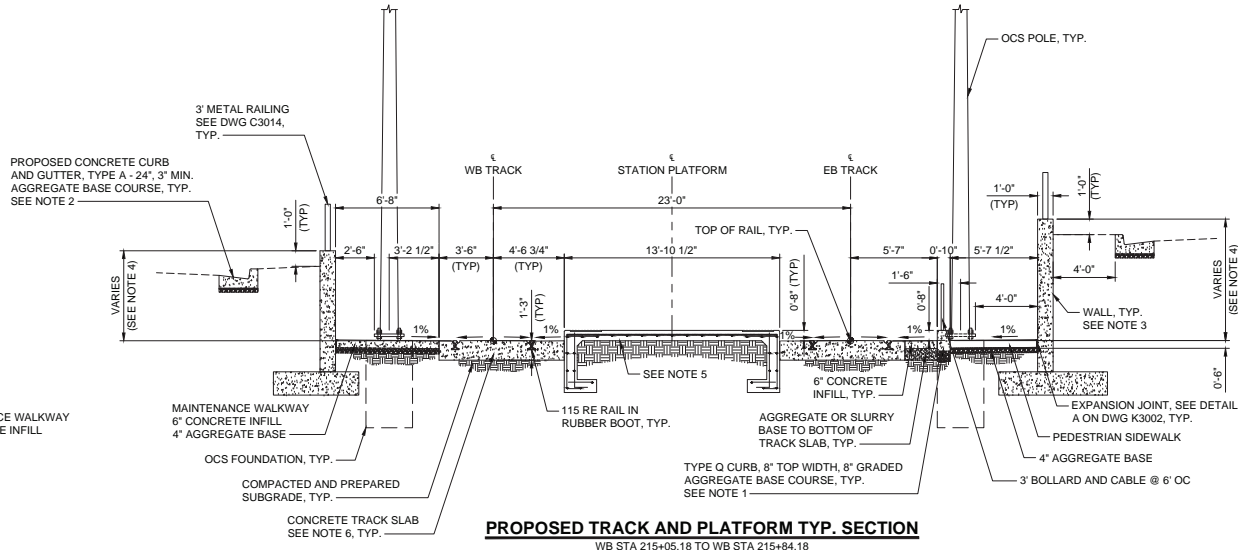
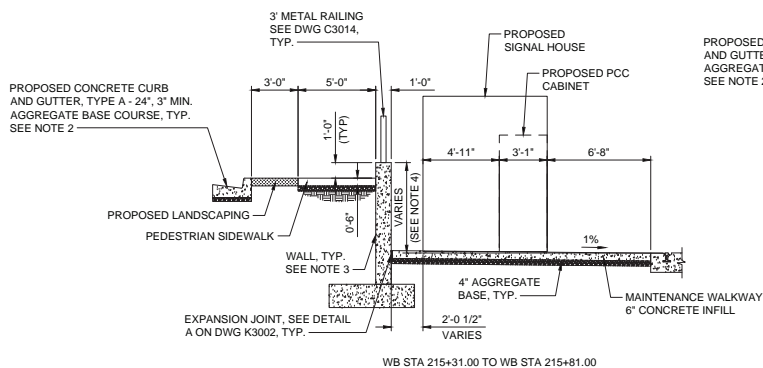
Designed By:	T. COVEYOU
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT
TRACK TYPICAL SECTIONS
SHEET 3 OF 4

Scale:	1/4"=1'-0"
CADD Filename:	SL-C-K-4-203.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K4203
Sheet No.:	

NOTES:

1. SEE DWG NO. C3011 FOR GUIDEWAY CURB DETAILS.
2. SEE DWG NO. C3011 FOR CONCRETE CURB AND GUTTER DETAILS.
3. SEE DRAWINGS W1201 AND W1202 FOR RETAINING WALL LIMITS.
4. SEE DRAWINGS W1201, W1202, AND W3001 FOR WALL PLAN, PROFILE, AND DETAILS.
5. SEE DRAWINGS P4201 AND P4202 FOR DETAILS.
6. SEE DWG NO. K3002 FOR TYPICAL TRACK SLAB DETAILS. SEE DWG NO. K3003 FOR EXTENDED TRACK SLAB AT PLATFORM DETAIL.



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Submitted By: _____ Approved By: _____

Designed By: T. COVEYOU
Drawn By: T. COVEYOU
Checked By: A. DIGRIOLAMO
Approved By: A. DIGRIOLAMO

S-LINE EXTENSION PROJECT

TRACK TYPICAL SECTIONS
SHEET 4 OF 4

Scale:	1/4"=1'-0"
CADD Filename:	SL-C-K-4-204.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K4204
Sheet No.:	

EXTENSION - WB TRACK																
CURVE / XO / TO NUMBER	DESCRIPTION	STATION	DEGREE OF CURVE (ARC)	RADIUS (FT)	Lc (FT)	LS IN (FT)	LS OUT (FT)	Eq (IN)	Ea (IN)	Eu (IN)	DESIGN V (MPH)	CURVE DELTA	NORTHING	EASTING	TANGENT LENGTH (FT)	BEARING
	POB	202+92.17											7432222.415	1540210.550		
	TS	203+13.05											7432222.235	1540231.431	20.88	S 89° 30' 24" E
	SC	203+44.05											7432221.648	1540262.424		
C240	PI	205+28.47	11°27'33"	500.00	349.31	31.00	31.00	1.78	0.00	1.78	15	40° 01' 41" RT	7432220.381	1540446.841		
	CS	206+93.36											7432091.871	1540579.114		
	ST	207+24.36											7432070.540	1540601.607		
	TS	208+65.33											7431972.488	1540702.882	140.96	S 45° 55' 35" E
	SC	208+96.33											7431951.619	1540725.791		
C250	PI	209+49.29	33°42'12"	170.00	99.01	31.00	31.00	2.33	0.00	2.33	10	33° 22' 09" LT	7431914.087	1540763.203		
	CS	209+95.34											7431914.792	1540816.192		
	ST	210+26.34											7431913.712	1540847.162		
	PS	212+95.63											7431912.507	1541116.456	557.84	S 89° 44' 37" E
X130	PITO	213+16.88											7431912.412	1541137.706		S 89° 44' 37" E
	PITO	214+53.93											7431911.799	1541274.747	137.05	S 89° 44' 37" E
X140	PS	214+75.18											7431911.704	1541295.997		S 89° 44' 37" E
	POE	215+84.18											7431911.216	1541404.996	109.00	S 89° 44' 37" E

EXTENSION - EB TRACK																
CURVE / XO / TO NUMBER	DESCRIPTION	STATION	DEGREE OF CURVE (ARC)	RADIUS (FT)	Lc (FT)	LS IN (FT)	LS OUT (FT)	Eq (IN)	Ea (IN)	Eu (IN)	DESIGN V (MPH)	CURVE DELTA	NORTHING	EASTING	TANGENT LENGTH (FT)	BEARING
	POB	202+92.88											7432209.415	1540210.438		
	TS	203+13.76											7432209.236	1540231.318	20.88	S 89° 30' 24" E
	SC	203+44.76											7432208.640	1540262.311		
S240	PI	205+23.98	11°45'54"	487.00	339.42	31.00	31.00	1.83	0.00	1.83	15		7432207.426	1540441.532		
	CS	206+84.18											7432082.524	1540570.067		
	ST	207+15.18											7432061.200	1540592.565		
	TS	208+53.99											7431964.651	1540692.288	138.80	S 45° 55' 35" E
	SC	208+84.99											7431943.732	1540715.152		
S250	PI	209+43.17	31°18'33"	183.00	108.95	31.00	31.00	2.16	0.00	2.16	10		7431902.618	1540756.360		
	CS	209+93.94											7431903.232	1540814.567		
	ST	210+24.94											7431902.219	1540845.541		
	PC	211+94.24											7431901.461	1541014.843	169.30	S 89° 44' 37" E
S260	PI	212+08.91	38°11'50"	150.00	29.25	0.00	0.00	2.64	0.00	2.64	10		7431901.396	1541029.516		
	PT	212+23.49											7431898.488	1541043.897		
	PC	212+53.49											7431892.543	1541073.302	30.00	S 78° 34' 12" E
S270	PI	212+68.17	38°11'50"	150.00	29.25	0.00	0.00	2.64	0.00	2.64	10		7431889.635	1541087.684		
	PT	212+82.75											7431889.57	1541102.357		
	PS	212+96.74											7431889.507	1541116.353	13.99	S 89° 44' 37" E
X140	PITO	213+17.99											7431889.412	1541137.603		S 89° 44' 37" E
	PITO	214+55.04											7431888.799	1541274.644	137.05	S 89° 44' 37" E
X130	PS	214+76.29											7431888.704	1541295.894		S 89° 44' 37" E
	POE	215+85.29											7431888.216	1541404.893	109.00	S 89° 44' 37" E

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REV	DATE	Description	



Designed By:	S. JOSHI
Drawn By:	S. JOSHI
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT

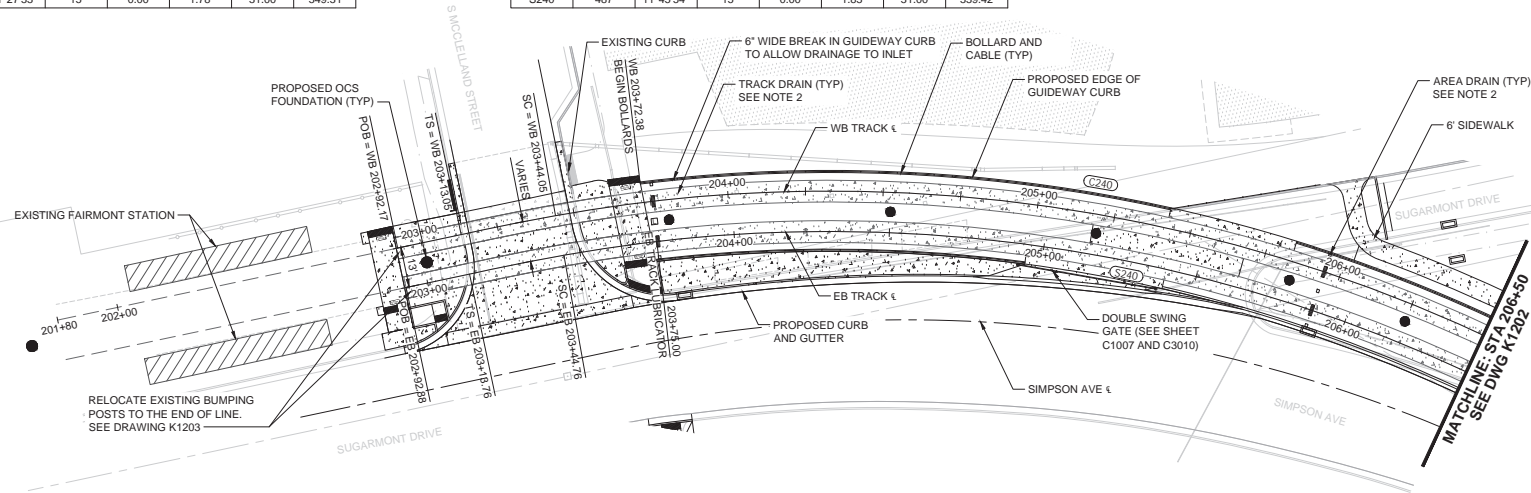
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Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K6201
Sheet No.:	

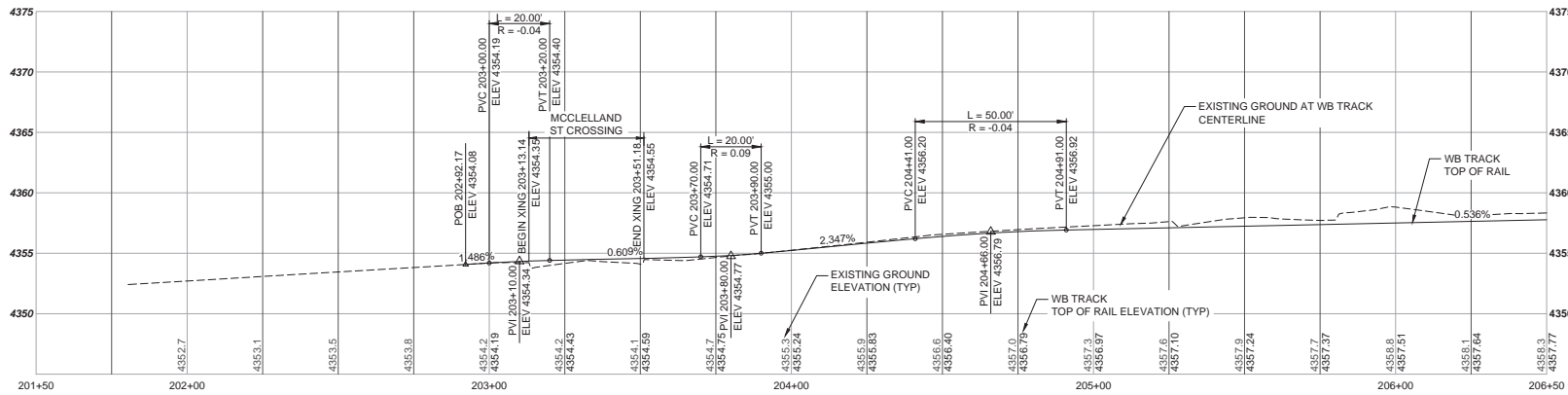
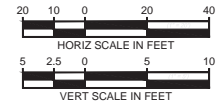
Submitted By: _____ Approved By: _____

CURVE DATA - WB TRACK							
ID NO.	R (FT)	D (ARC)	V (MPH)	Ea (IN)	Eu (IN)	Ls (FT)	Lc (FT)
C240	500	11°27'33"	15	0.00	1.78	31.00	349.31

CURVE DATA - EB TRACK							
ID NO.	R (FT)	D (ARC)	V (MPH)	Ea (IN)	Eu (IN)	Ls (FT)	Lc (FT)
S240	487	11°45'54"	15	0.00	1.83	31.00	339.42



- NOTES:
- SEE DRAWING G0013 NOTE 20 FOR EB PROFILE INFORMATION.
 - SEE DRAWINGS D1201-D1203 FOR DRAINAGE PLAN AND PROFILES.
 - SEE DRAWING C1204 FOR McCLELLAND ST CROSSING PLAN AND PROFILE.



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1/2/2025		
REV	DATE	Description



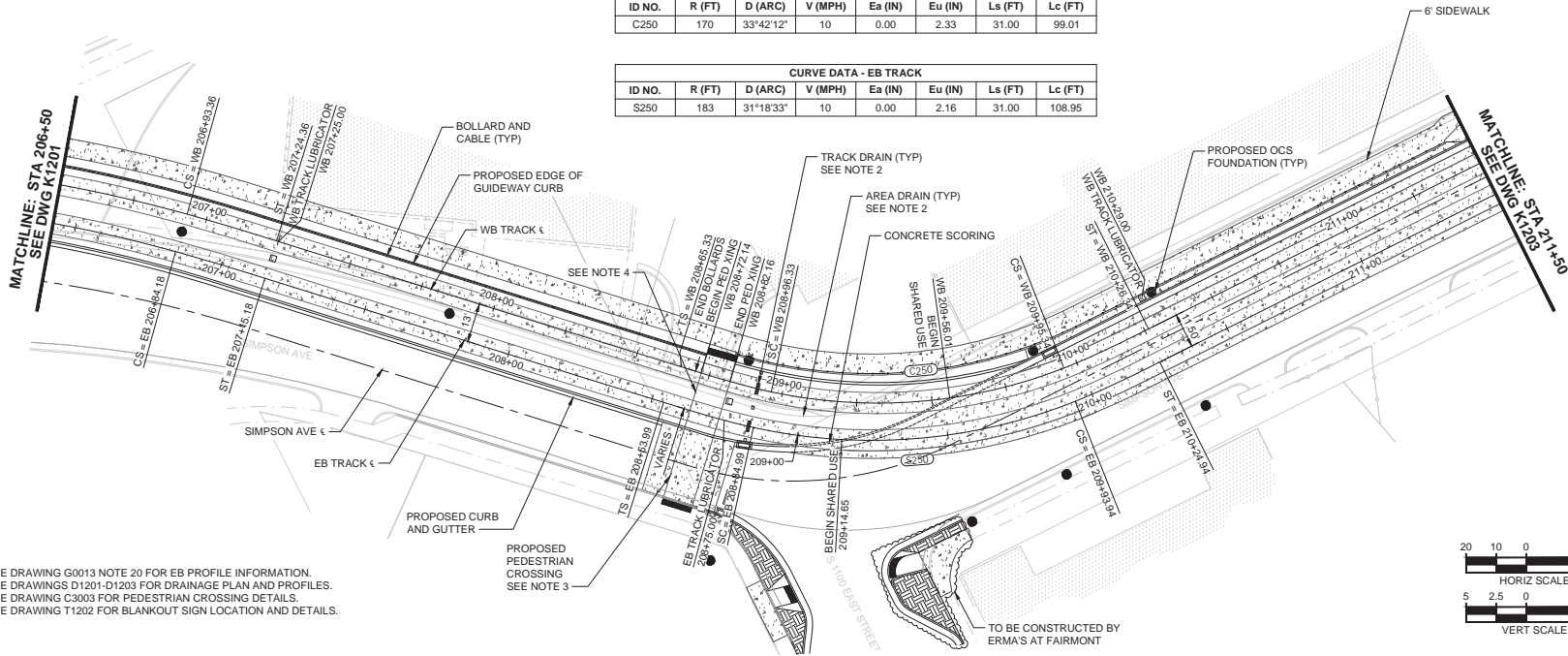
Designed By:	S. JOSHI
Drawn By:	S. JOSHI
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT
 TRACK PLAN AND PROFILE
 WB STA 201+80.27 TO WB STA 206+50

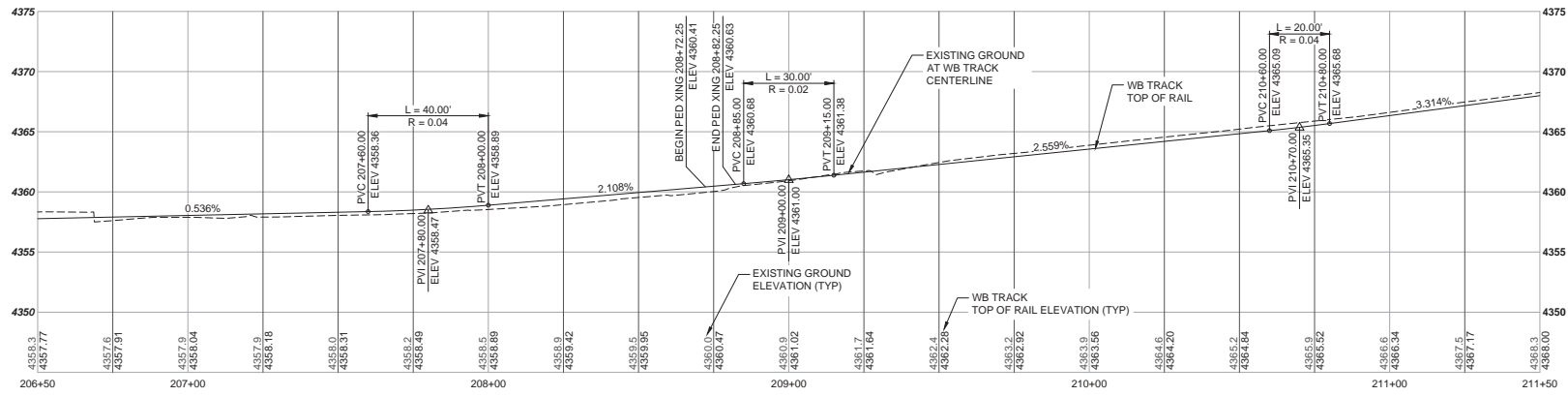
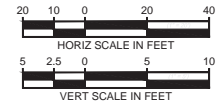
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Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K1201
Sheet No.:	

CURVE DATA - WB TRACK							
ID NO.	R (FT)	D (ARC)	V (MPH)	Ea (IN)	Eu (IN)	Ls (FT)	Lc (FT)
C250	170	33°42'12"	10	0.00	2.33	31.00	99.01

CURVE DATA - EB TRACK							
ID NO.	R (FT)	D (ARC)	V (MPH)	Ea (IN)	Eu (IN)	Ls (FT)	Lc (FT)
S250	183	31°18'33"	10	0.00	2.16	31.00	108.95



- NOTES:**
1. SEE DRAWING G0013 NOTE 20 FOR EB PROFILE INFORMATION.
 2. SEE DRAWINGS D1201-D1203 FOR DRAINAGE PLAN AND PROFILES.
 3. SEE DRAWING C3003 FOR PEDESTRIAN CROSSING DETAILS.
 4. SEE DRAWING T1202 FOR BLANKOUT SIGN LOCATION AND DETAILS.



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REV	DATE	Description



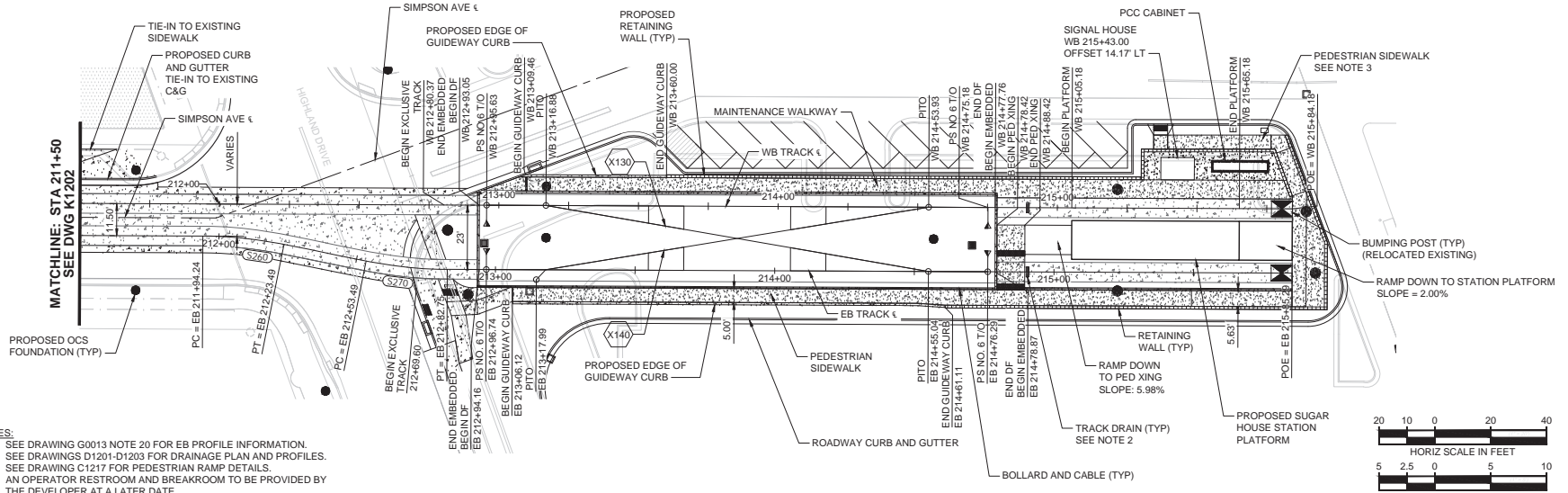
Designed By:	S. JOSHI
Drawn By:	S. JOSHI
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT

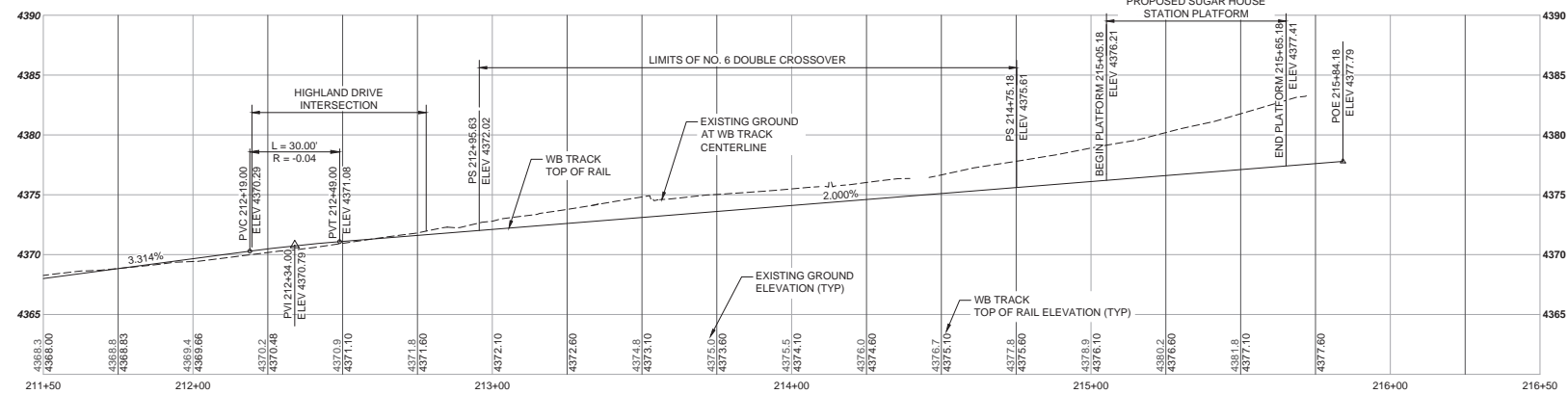
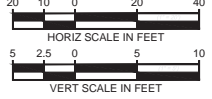
TRACK PLAN AND PROFILE
WB STA 206+50 TO WB STA 211+50

State:	H: 1" = 20' V: 1" = 5'
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Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K1202
Sheet No.:	

ID NO.	R (FT)	D (ARC)	V (MPH)	Ea (IN)	Eu (IN)	Ls (FT)	Lc (FT)
S260	150	38°11'50"	10	0.00	2.64	0.00	29.25
S270	150	38°11'50"	10	0.00	2.64	0.00	29.25



- NOTES:
- SEE DRAWING G0013 NOTE 20 FOR EB PROFILE INFORMATION.
 - SEE DRAWINGS D1201-D1203 FOR DRAINAGE PLAN AND PROFILES.
 - SEE DRAWING C1217 FOR PEDESTRIAN RAMP DETAILS.
 - AN OPERATOR RESTROOM AND BREAKROOM TO BE PROVIDED BY THE DEVELOPER AT A LATER DATE.



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REV	DATE	Description

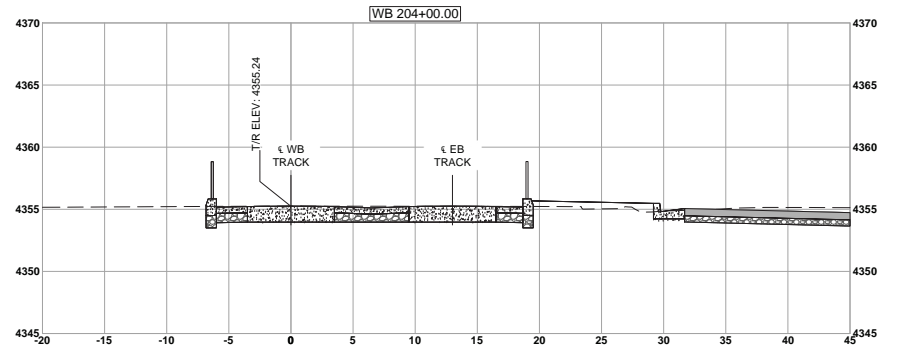
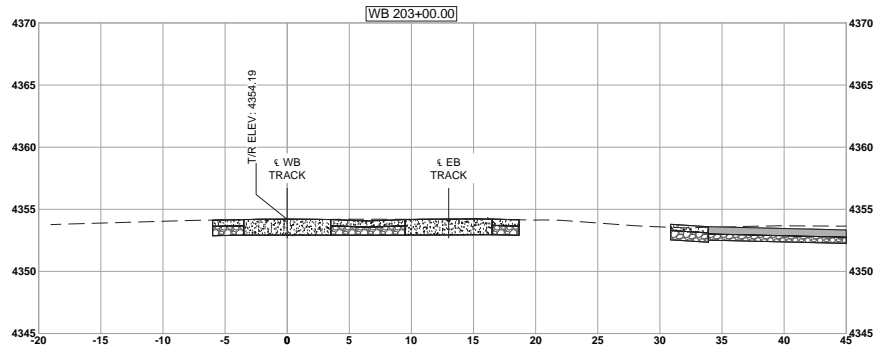
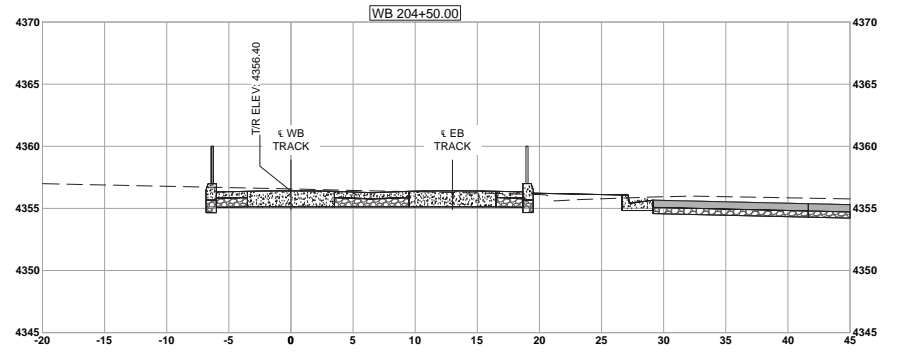
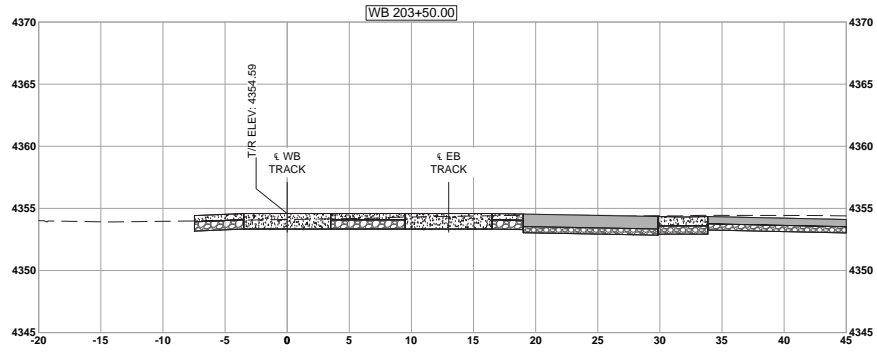


Designed By: S. JOSHI
 Drawn By: S. JOSHI
 Checked By: A. DIGIROLAMO
 Approved By: A. DIGIROLAMO

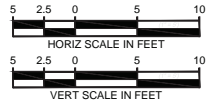
S-LINE EXTENSION PROJECT
 TRACK PLAN AND PROFILE
 WB STA 211+50 TO WB STA 215+84.18

Scale: H: 1" = 20' V: 1" = 5'
CADD Filename: SL-K-1-203.dwg
Submitted Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: K1203

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NOTES:
 1. ALL STATIONING AND TOP OF RAIL (T/R) ELEVATIONS REFERENCED HEREIN ARE BASED ON WB TRACK.



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REV	DATE	Description



Designed By:
S. JOSHI
 Drawn By:
S. JOSHI
 Checked By:
A. DIGRIOLAMO
 Approved By:
A. DIGRIOLAMO

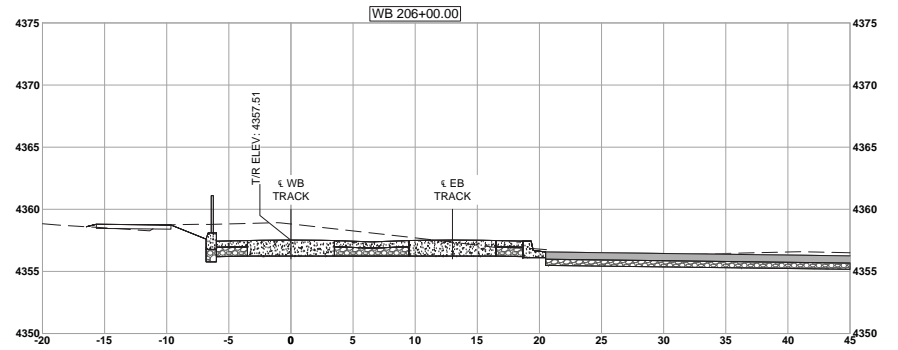
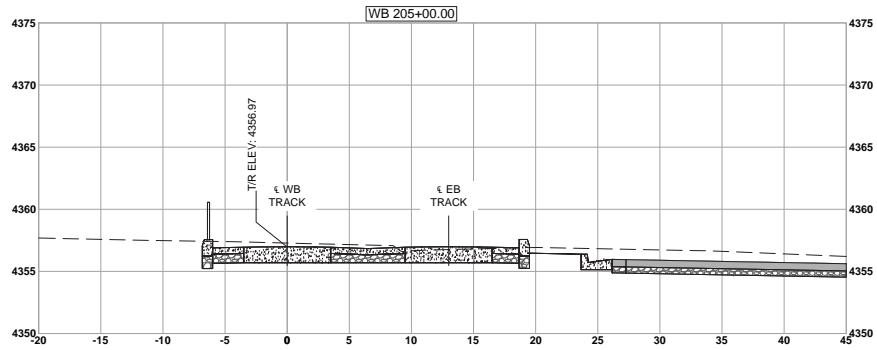
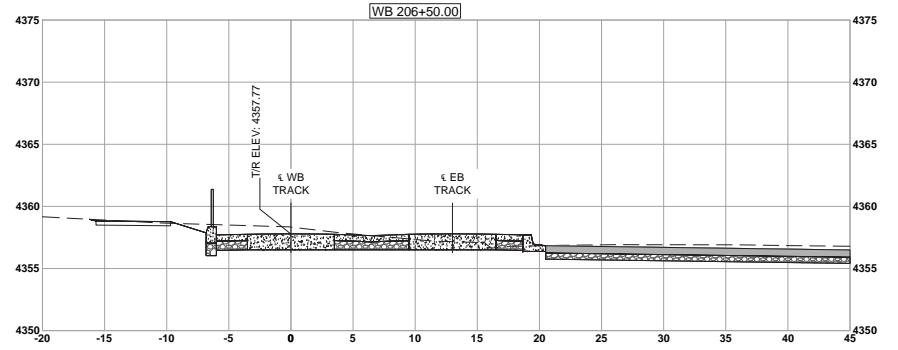
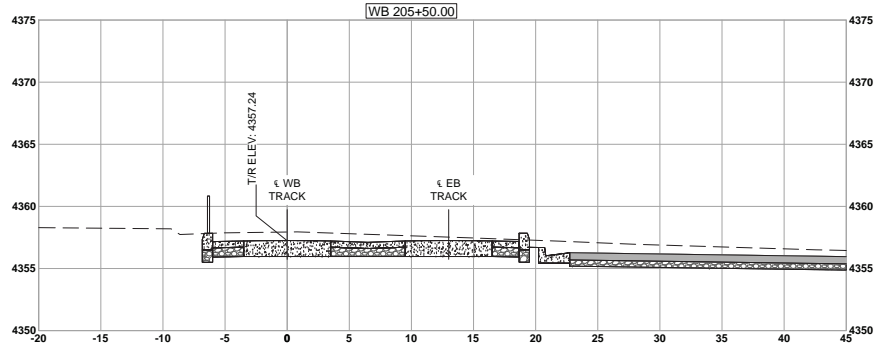
S-LINE EXTENSION PROJECT
 TRACK CROSS SECTIONS
 WB STA 201+80.27 TO WB STA 204+50

State: H: 1" = 5' V: 1" = 5'
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 Submitted Date: 01-16-26
 UTA Contract No.: 24-03849
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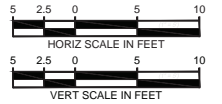
Submitted By: _____

Approved By: _____

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NOTES:
1. ALL STATIONING AND TOP OF RAIL (T/R) ELEVATIONS REFERENCED HEREIN ARE BASED ON WB TRACK.



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REV	DATE	Description



Designed By:	S. JOSHI
Drawn By:	S. JOSHI
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

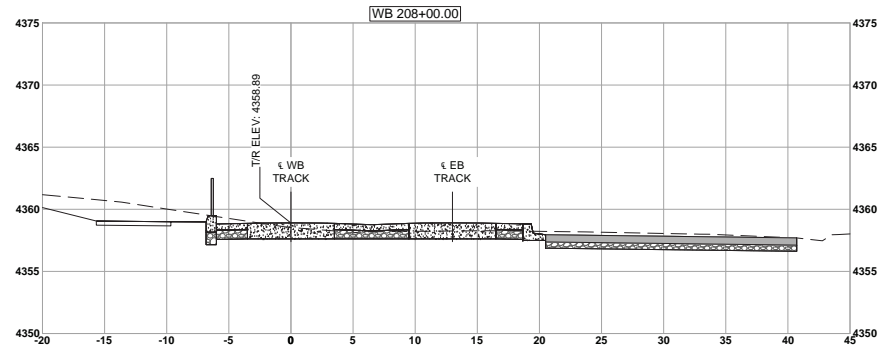
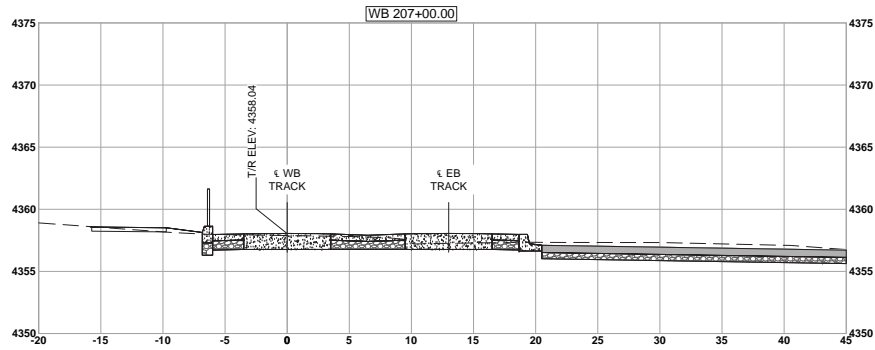
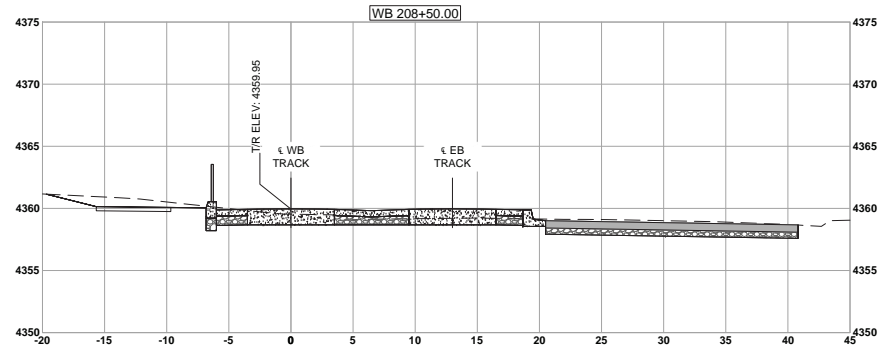
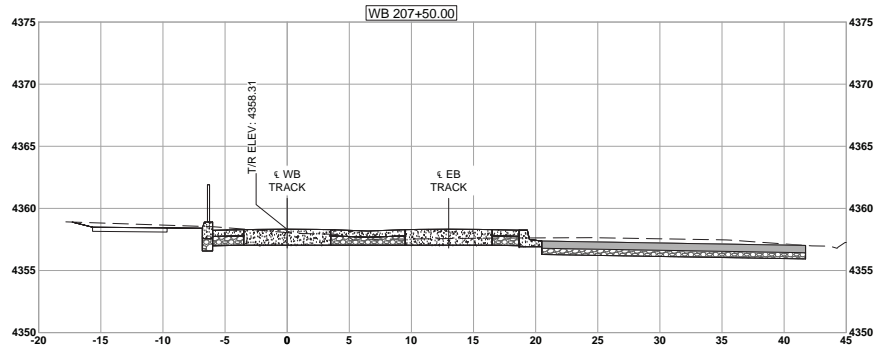
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TRACK CROSS SECTIONS
WB STA 205+00 TO WB STA 206+50

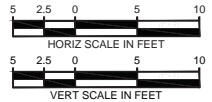
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UTA Contract No.:	24-03849
Drawing No.:	K5202
Sheet No.:	

Submitted By: _____

Approved By: _____



NOTES:
1. ALL STATIONING AND TOP OF RAIL (T/R) ELEVATIONS REFERENCED HEREIN ARE BASED ON WB TRACK.



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Designed By:
S. JOSHI

Drawn By:
S. JOSHI

Checked By:
A. DIGIROLAMO

Approved By:
A. DIGIROLAMO

S-LINE EXTENSION PROJECT

TRACK CROSS SECTIONS
WB STA 207+00 TO WB STA 208+50

State: H: 1" = 5' V: 1" = 5'

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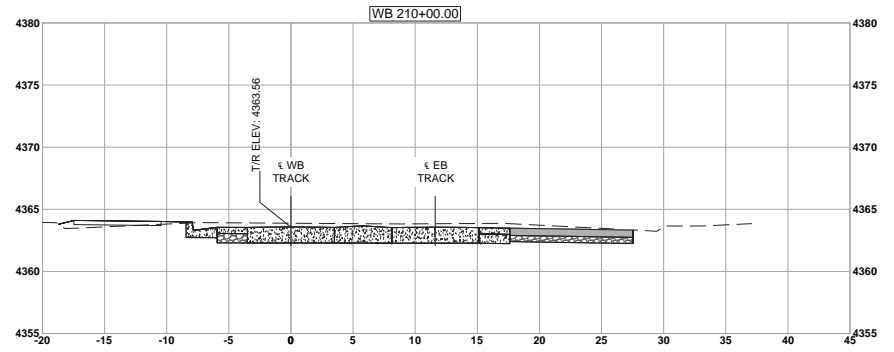
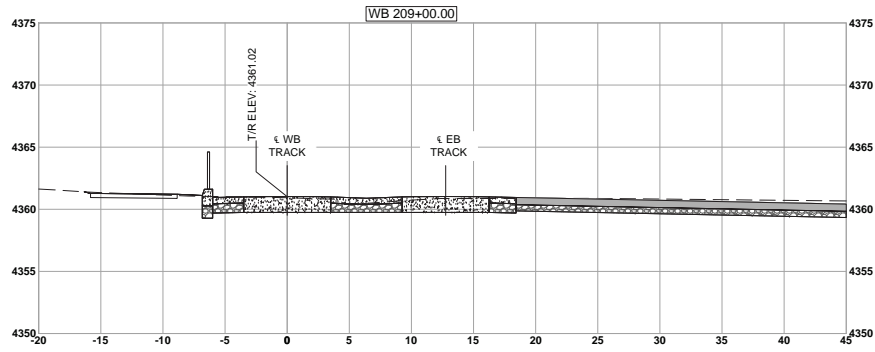
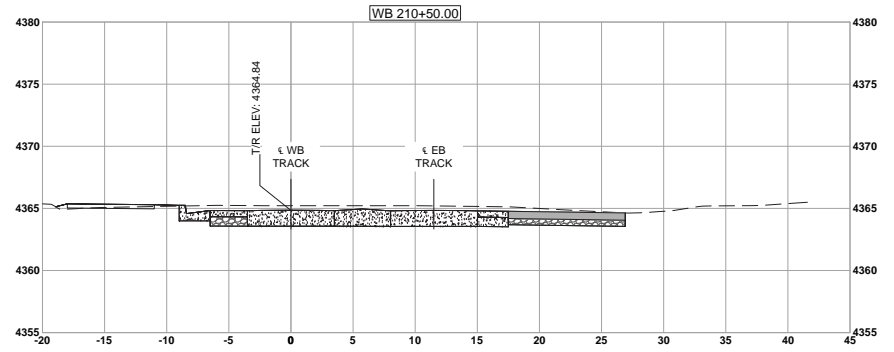
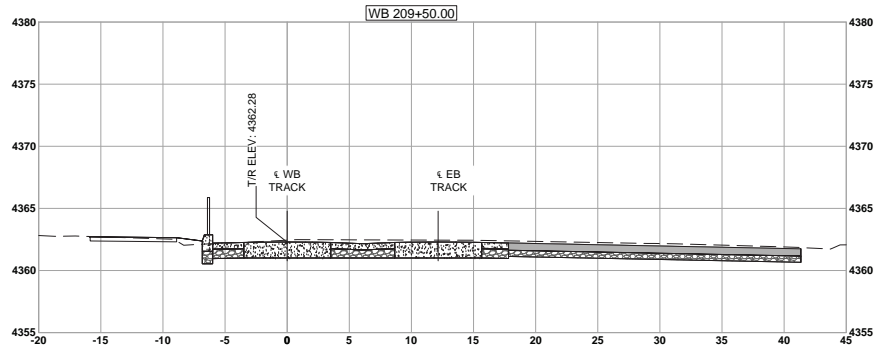
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UTA Contract No.: 24-03849

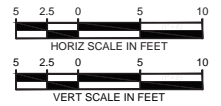
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Sheet No.:

Submitted By: _____ Approved By: _____



NOTES:
1. ALL STATIONING AND TOP OF RAIL (T/R) ELEVATIONS REFERENCED HEREIN ARE BASED ON WB TRACK.



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REV	DATE	Description



Designed By: S. JOSHI
 Drawn By: S. JOSHI
 Checked By: A. DIGIROLAMO
 Approved By: A. DIGIROLAMO

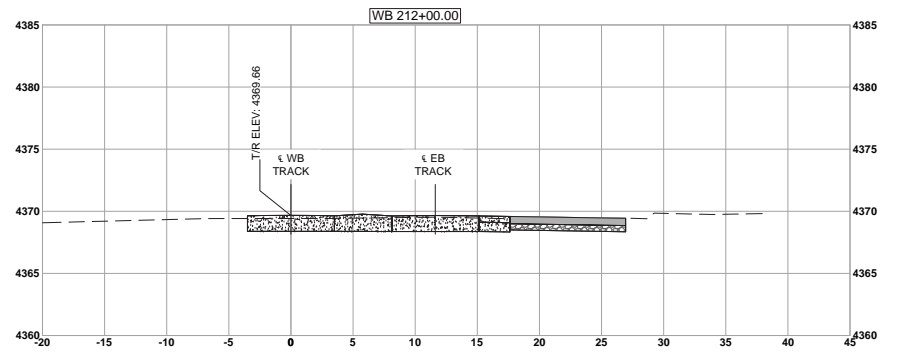
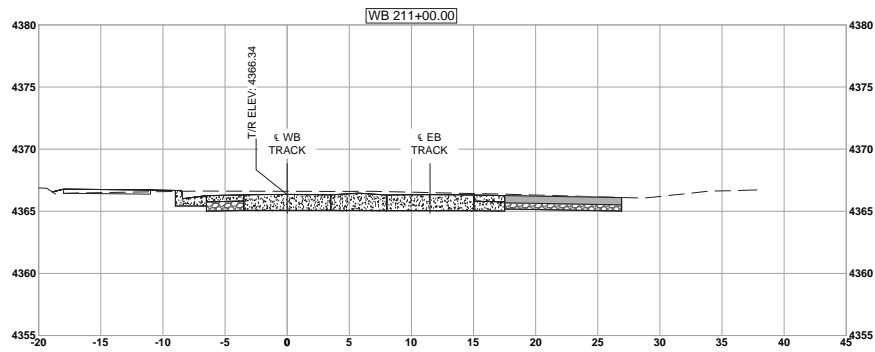
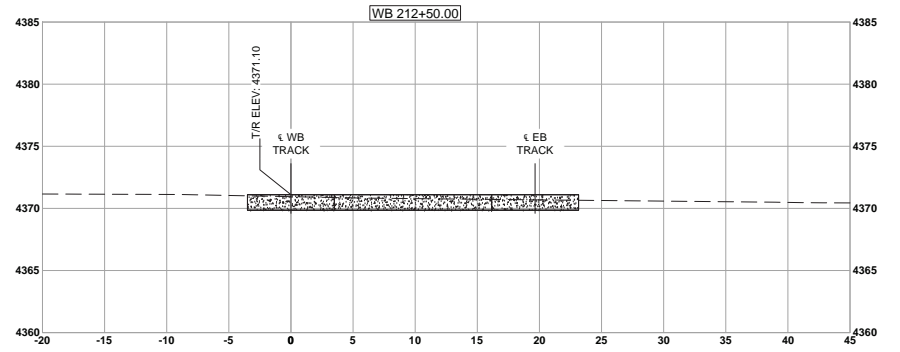
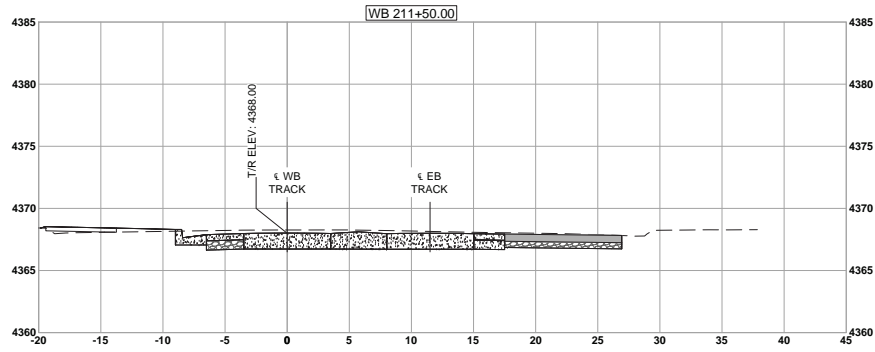
S-LINE EXTENSION PROJECT

TRACK CROSS SECTIONS
 WB STA 209+00 TO WB STA 210+50

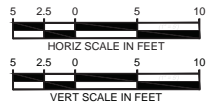
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Drawing No.: K5204	Sheet No.

Submitted By: _____

Approved By: _____



- NOTES:
1. ALL STATIONING AND TOP OF RAIL (T/R) ELEVATIONS REFERENCED HEREIN ARE BASED ON WB TRACK.



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Designed By:
S. JOSHI

Drawn By:
S. JOSHI

Checked By:
A. DIGIROLAMO

Approved By:
A. DIGIROLAMO

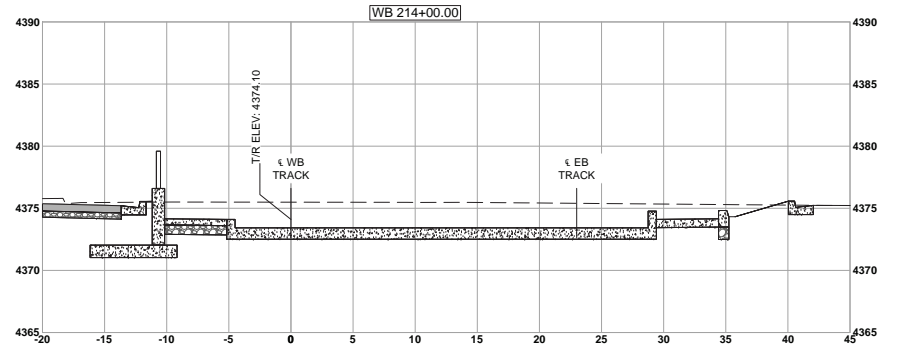
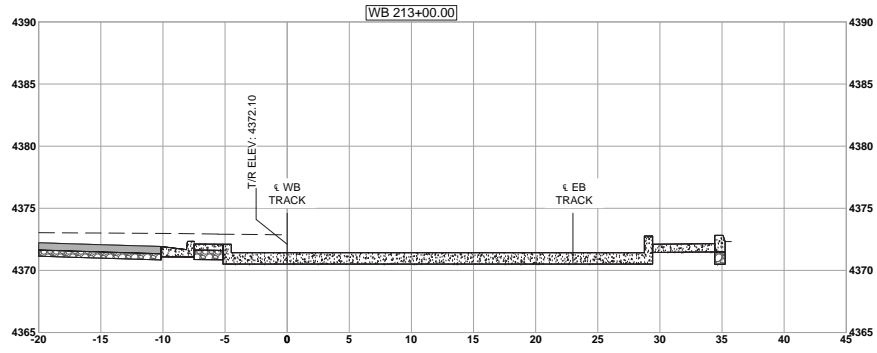
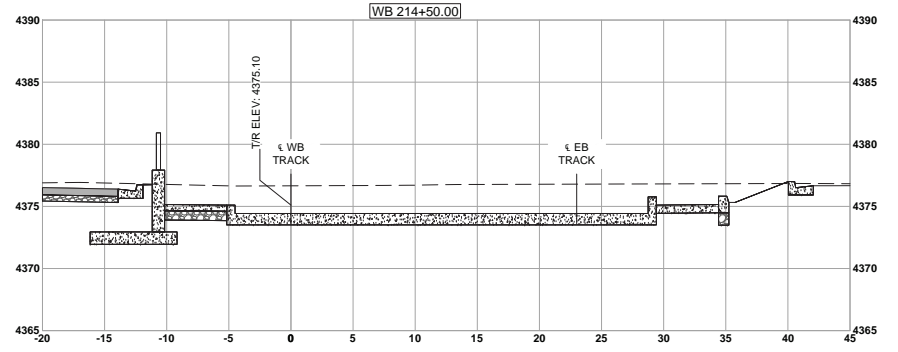
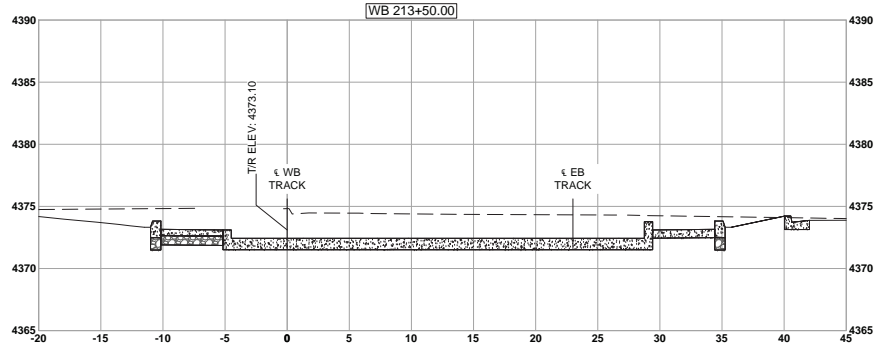
S-LINE EXTENSION PROJECT

TRACK CROSS SECTIONS
WB STA 211+00 TO WB STA 212+50

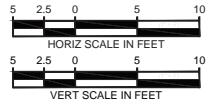
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Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K5205
Sheet No.:	

Submitted By: _____ Approved By: _____

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NOTES:
 1. ALL STATIONING AND TOP OF RAIL (T/R) ELEVATIONS REFERENCED HEREIN ARE BASED ON WB TRACK.



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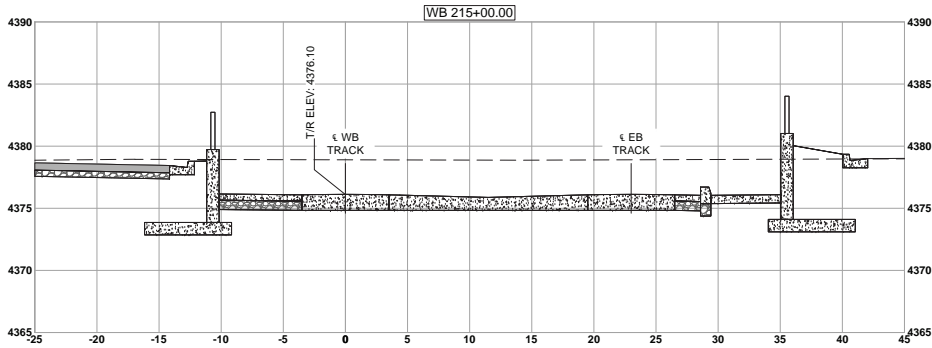
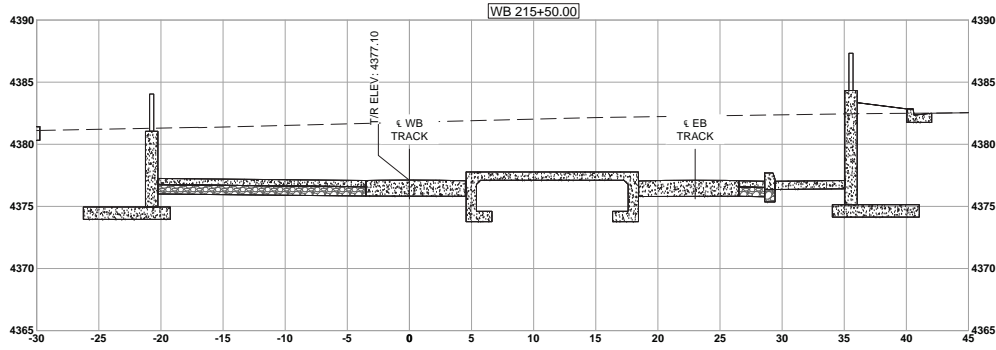


Designed By:
S. JOSHI
 Drawn By:
S. JOSHI
 Checked By:
A. DIGIROLAMO
 Approved By:
A. DIGIROLAMO

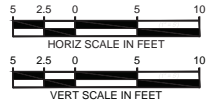
S-LINE EXTENSION PROJECT
 TRACK CROSS SECTIONS
 WB STA 213+00 TO WB STA 214+50

State: H: 1" = 5' V: 1" = 5'
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 Submitted Date: 01-16-26
 UTA Contract No.: 24-03849
 Drawing No.: K5206
 Sheet No.:

Submitted By: _____ Approved By: _____



NOTES:
 1. ALL STATIONING AND TOP OF RAIL (T/R) ELEVATIONS REFERENCED HEREIN ARE BASED ON WB TRACK.



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Submitted By: _____ Approved By: _____

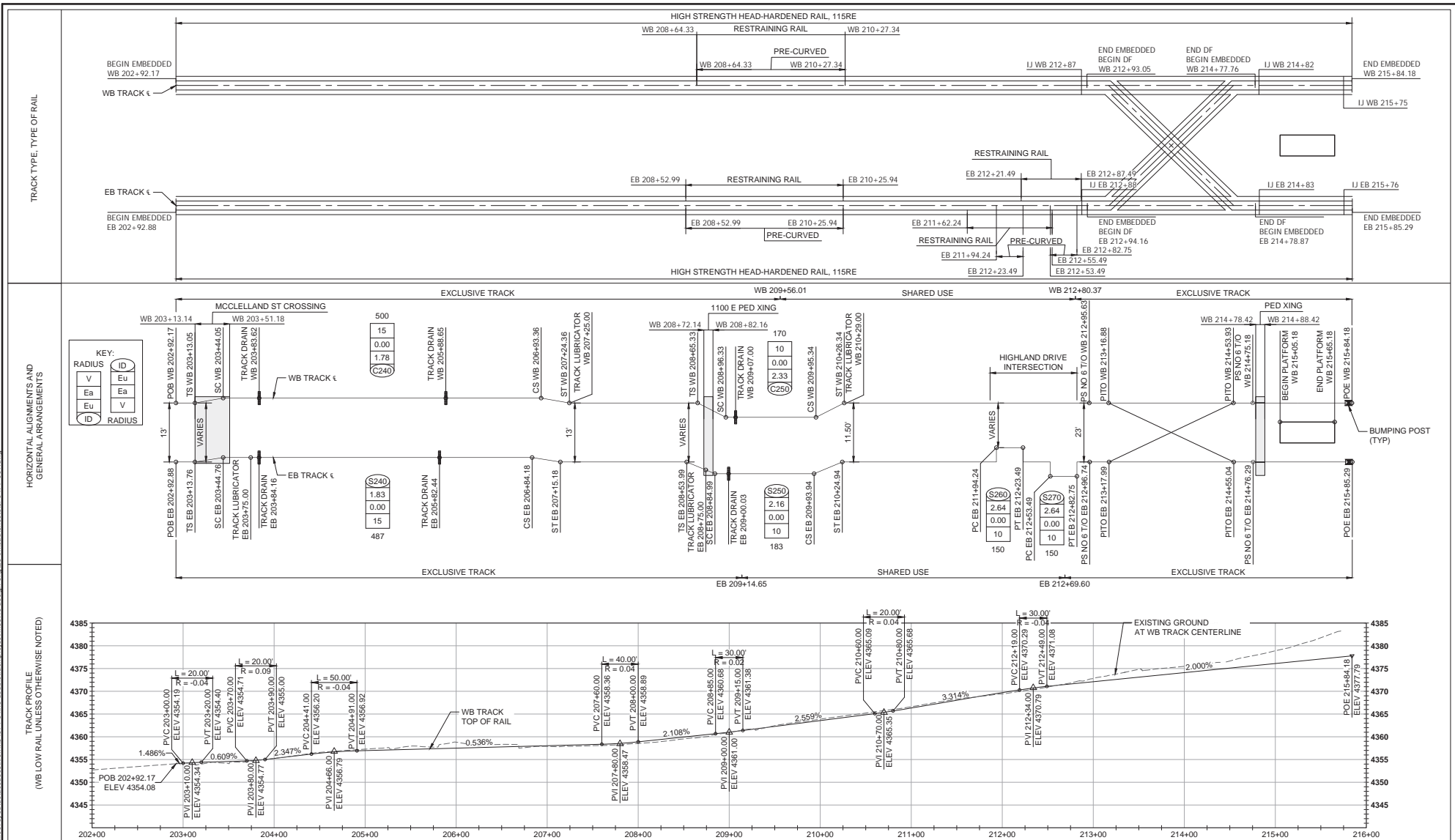
Designed By:	S. JOSHI
Drawn By:	S. JOSHI
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT

TRACK CROSS SECTIONS
 WB STA 215+00 TO WB STA 215+84

Scale:	H: 1" = 5' V: 1" = 5'
CADD Filename:	SL-C-K-5-207.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K5207
Sheet No.:	

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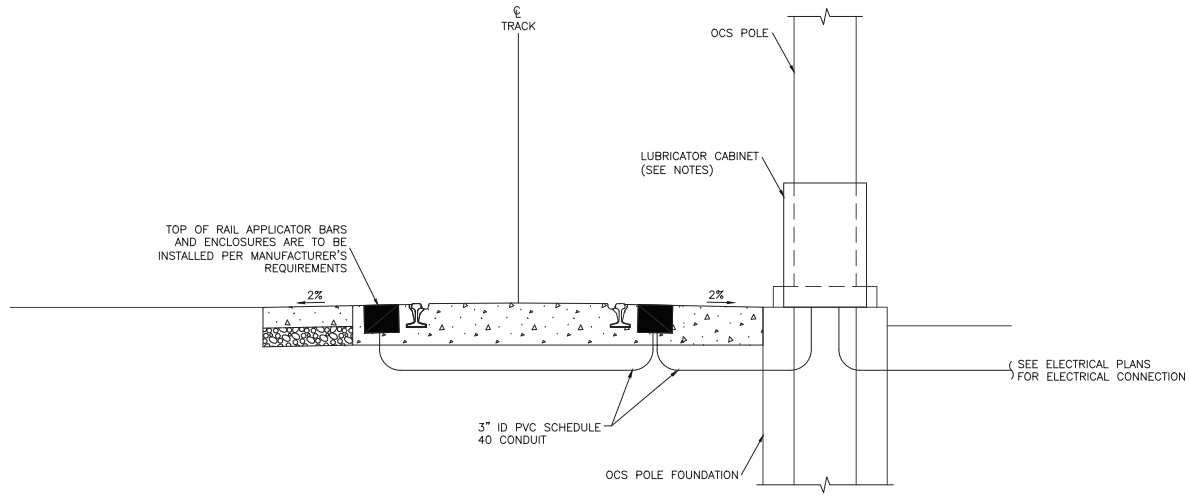


Designed by: S. JOSHI
 Drawn by: S. JOSHI
 Checked by: A. DIGIROLAMO
 Approved by: A. DIGIROLAMO

S-LINE EXTENSION PROJECT

TRACK CHART
 WB STA 202+92.17 TO WB STA 215+84.18

Scale: H: 1" = 50' V: 1" = 10'
CADD Filename: SL-C-K7-001.dwg
Submitted Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: K7001
Sheet No.:



RAIL LUBRICATORS DETAIL
SCALE: NTS

NOTES:

1. REFER TO DWG. K1201-K1203 FOR LOCATION OF LUBRICATOR CABINETS AND TRACK BOXES.
2. LUBRICATOR CABINETS, TOP OF RAIL APPLICATOR BARS, SENSORS, AND ENCLOSURES ARE TO BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.

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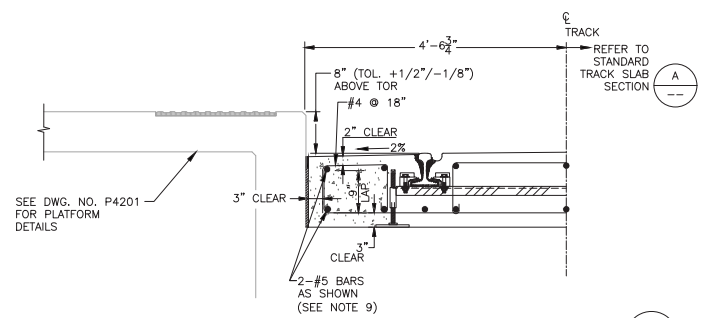
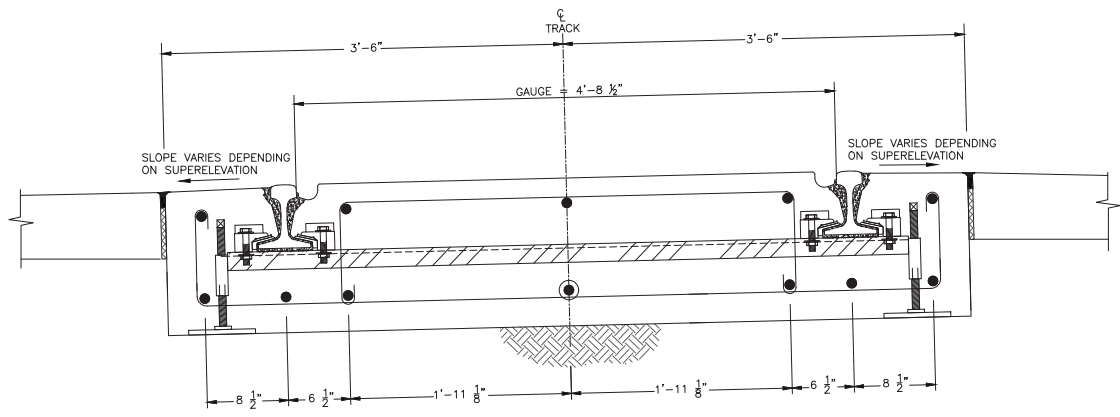
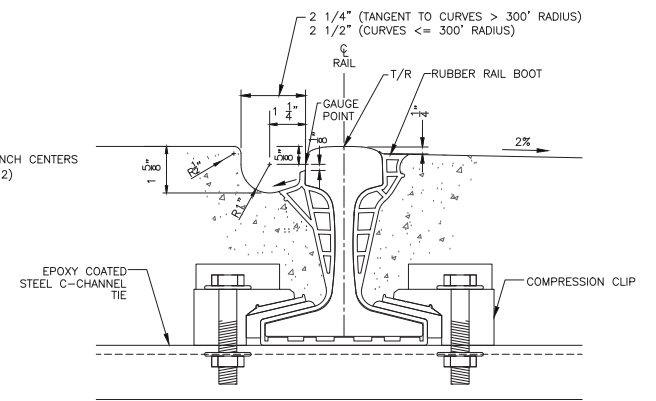
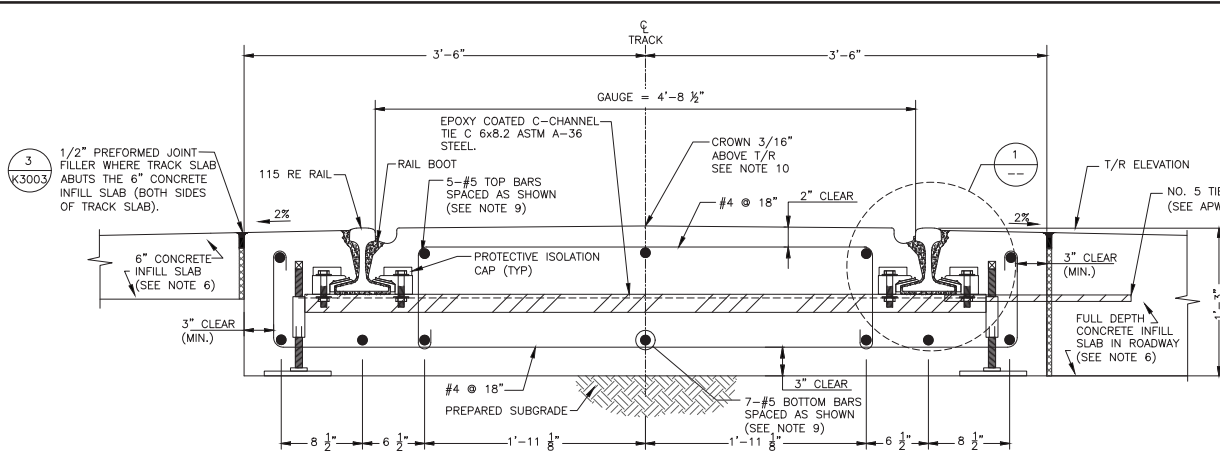
Submitted By: _____

Approved By: _____

Designed By:
F. NANNENGA
Drawn By:
T. COVEYOU
Checked By:
A. DIGIROLAMO
Approved By:
A. DIGIROLAMO

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
TRACKWORK
RAIL LUBRICATOR

State:	NTS
CADD Filename:	SL-C-K-3-001.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K3001
Sheet No.:	



- THE SHAPE OF THE TRACK SLAB SHALL BE MAINTAINED AS SHOWN, BUT ROTATED AS A UNIT IN AREAS OF SUPERELEVATION.
- ROUND ALL CORNERS ALONG THE TOP SURFACE OF SLAB TO 1/2" RADIUS.
- ALL REBAR IN TRACK SLAB SHALL BE EPOXY COATED AND SHALL HAVE A TENSILE STRENGTH OF 60 KSI.
- ALL CONCRETE IS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
- SHOULD THE CONTRACTOR ENCOUNTER UNSUITABLE OR SOFT MATERIAL DURING TRACK SLAB EXCAVATION, SEE SPECIFICATION 02225 SECTION 3.1.D.
- A HOT POURED JOINT SEALANT IS TO BE PLACE FOR THE TOP 2 INCHES OF THE PREFORMED JOINTS ACCORDING TO ASTM D-3405 OR APPROVED EQUAL. SEE DETAIL 3 ON DWG K3003.
- PROVIDE EXPANSION JOINTS EVERY 60' MAXIMUM IN THE CONCRETE INFILL. SEE NOTES ON JOINT DETAIL 1 ON DWG K3003.
- TRACK GAUGE SHALL BE THE STANDARD GAUGE OF 4'-8.5", MEASURED BETWEEN THE INNER (GAUGE) SIDES OF THE HEADS OF THE RAILS AT A DISTANCE OF 5/8" BELOW THE TOP OF THE RAILS.
- LAP LENGTH FOR #5 LONGITUDINAL BARS SHALL BE 1'-6"
- THE TRACK SLAB'S SURFACE THROUGH INTERSECTIONS SHALL BE FINISHED TO TOP OF RAIL AND SHOULD NOT INCLUDE A CROWN AND 2% SIDE SLOPES AS SHOWN IN SECTION A. ALSO, THE TRACK SLAB SHALL BE FINISHED TO TOP OF RAIL AND NOT 1/4" LOW AS DEPICTED IN DETAIL 1.
- SEE SPECIFICATIONS 02462 - EMBEDDED TRACK CONSTRUCTION AND 03310 - CONCRETE WORK FOR CONCRETE FINISH REQUIREMENTS.

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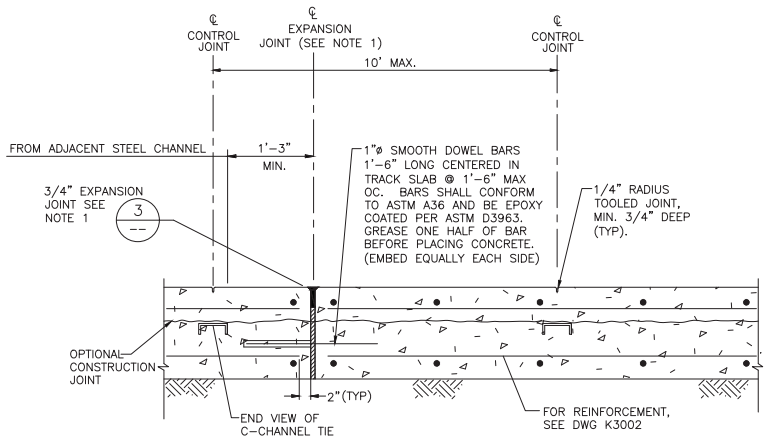
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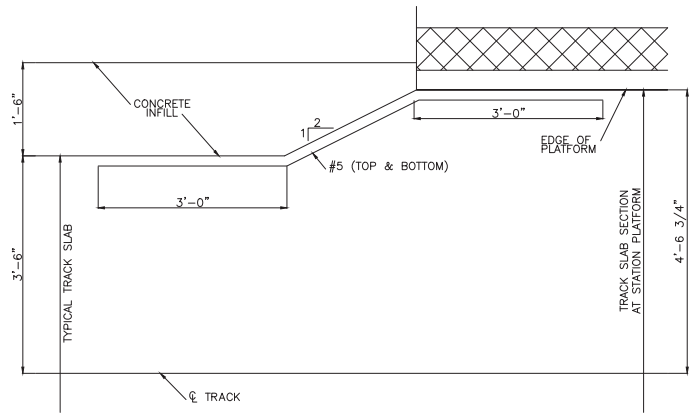
Designed By:	F. NANNENGA
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT	
STANDARD DRAWINGS	
TRACKWORK	
TRACK SLAB TYPICAL SECTION	
State:	NTS
CADD Filename:	SL-C-K-3-002.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K3002
Sheet No.:	

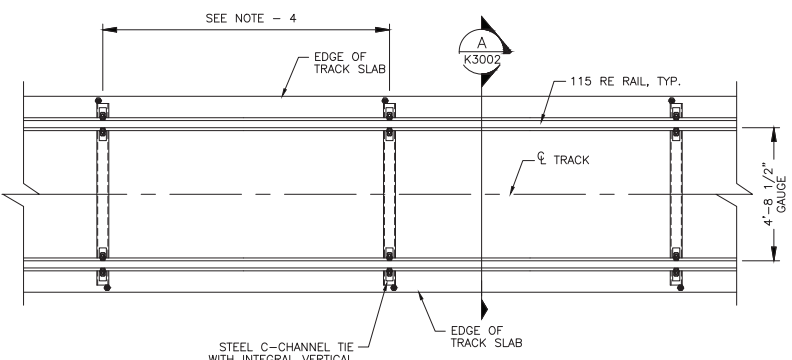
Submitted By: _____ Approved By: _____



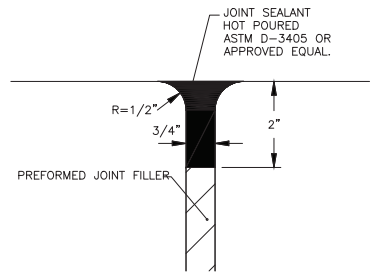
TRACK SLAB EXPANSION JOINT DETAIL (1)
SCALE: NTS



EXTENDED WIDTH TRACK SLAB AT PLATFORMS - PLAN (4)
SCALE: NTS



TRACK SLAB FASTENING SYSTEM - PLAN (2)
SCALE: NTS



JOINT SEALANT DETAIL (3)
SCALE: NTS

NOTES:

1. EXPANSION JOINT SPACING 60' MAXIMUM.
2. CONTROL JOINTS TO BE SPACED EVENLY BETWEEN EXPANSION JOINTS AND SHALL BE NO FURTHER APART THAN 10 FEET. CONTROL JOINT SHALL BE LOCATED OVER C-CHANNEL CROSS-TIES.
3. FOR TRACK SLAB SECTION, SEE DWG. K3002.
4. C-CHANNEL TIES ARE TO BE SPACED AT 10'-0" O.C. IN TANGENT AND CURVES > 500 FT. RADIUS OR AS REQUIRED FOR PROPER SETTING OF LINE, GAUGE, AND GRADE, PRIOR TO AND DURING PLACEMENT OF CONCRETE. SPACING SHALL BE 5'-0" O.C. 10'-0" PRIOR TO TS AND END 10'-0" AFTER ST FOR CURVES <= 500 FT. RADIUS.
5. STEEL TIE SHALL BE FABRICATED FROM C 6X8.2# WITH 3/16" THICK WEB AND WITH TWO 3/8" HOLES FOR TRAPPED AIR TO ESCAPE. TIES SHALL BE COATED WITH EPOXY COATING.

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Drawn By: T. COVEYOU
Checked By: A. DIGIROLAMO
Approved By: A. DIGIROLAMO

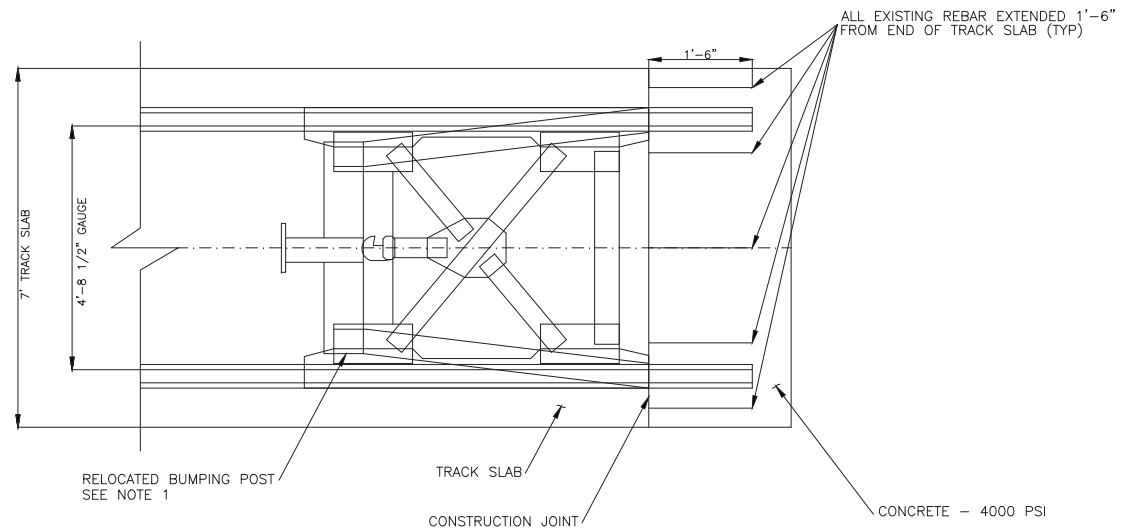
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
TRACKWORK
TRACK SLAB DETAILS

State: NTS
CADD Filename: SL-C-K-3-003.dwg
Submitted Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: K3003
Sheet No.:

Submitted By: _____

Approved By: _____

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RAIL END DETAIL
SCALE: NTS

- NOTES:
1. ATTACH TO RAIL BEFORE POURING TRACK SLAB

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REV	DATE	Description

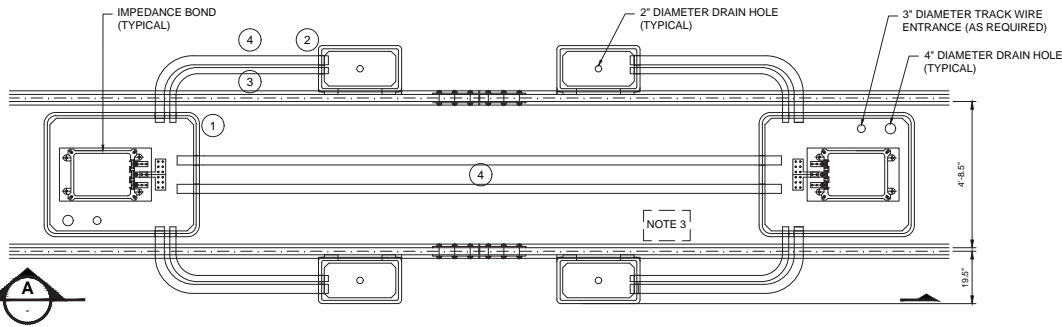


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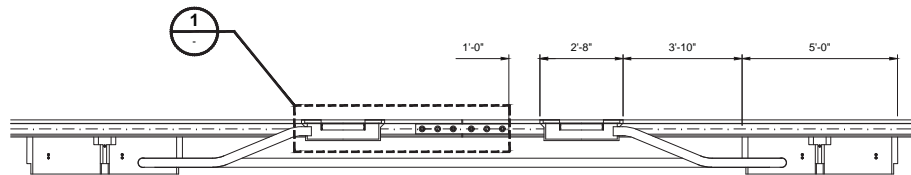
Designed By: F. NANNENGA
 Drawn By: T. COVEYOU
 Checked By: A. DIGIROLAMO
 Approved By: A. DIGIROLAMO

S-LINE EXTENSION PROJECT
 STANDARD DRAWINGS
 TRACKWORK
 MISC DETAILS

State:	NTS
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Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K3004
Sheet No.:	



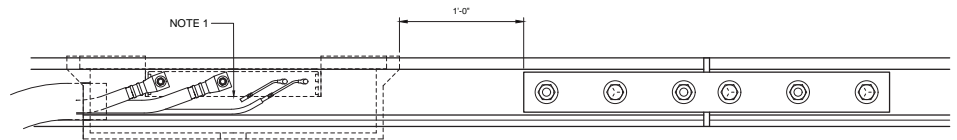
TRACK AND IMPEDANCE BOND BOX ARRANGEMENT
SCALE: 1" = 1'-0"



SIGNAL TRACK CONNECTION BOX
SCALE: 1" = 1'-0"

TRACK BOX AND CONDUIT MATERIAL SUMMARY			
REF	DESCRIPTION	MANUFACTURER*	MANUFACTURER PART NUMBER*
1	60" x 48" x 20" EMBEDDED TRACK BOX ASSEMBLY	ARMORCAST PRODUCTS CO.	A6004860A-S
2	32" x 15" x 8" EMBEDDED TRACK BOX ASSEMBLY	ARMORCAST PRODUCTS CO.	A6003014A
3	2" PVC CONDUIT SCH. 40	VARIOUS	VARIOUS
4	3" PVC CONDUIT SCH. 40	VARIOUS	VARIOUS

* SUGGESTED



PIN BRAZED TRACK CIRCUIT CONNECTIONS
BOLTED POWER RETURN CONNECTIONS
SCALE: NTS

NOTES:

1. INCREASE CUT-OUT SIZE TO ACCOMMODATE POWER RETURN CONNECTIONS. ENLARGED CUT-OUT PART OF PURCHASED BOX OR MODIFY BOX IN FIELD.
2. TRACK CONNECTIONS SPACING BASED ON AREMA AND MANUFACTURER RECOMMENDATIONS AND ADJUSTED TO FIT TRACK CONNECTION ACCESS CUTOUT IN TRACK BOX.
3. AXLE COUNTER WHEEL SENSOR BOX AS REQUIRED BY DESIGN. LOCATION MAY DIFFER FROM THAT SHOWN ON THIS DRAWING.
4. IMPEDANCE BOND BOX MAY BE LOCATED OUTSIDE OF TRACK AREA AS REQUIRED BY DESIGN.

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REV	DATE	Description	

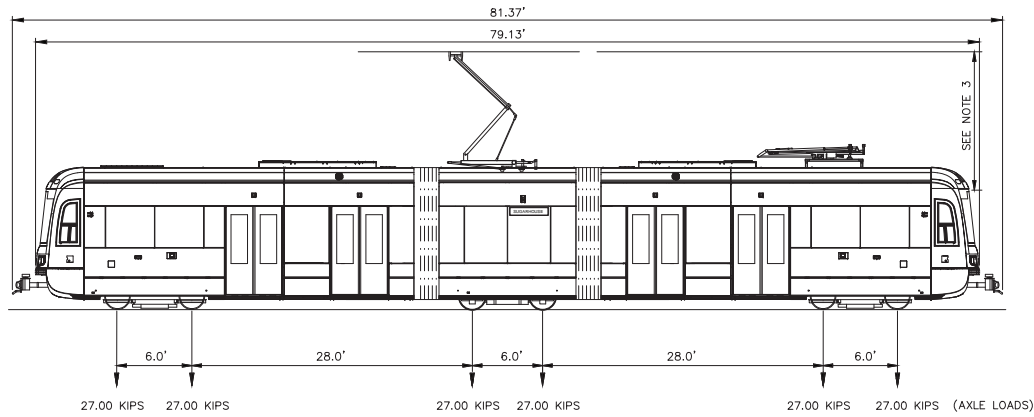


Designed By: J. MITCHELL
Drawn By: J. MITCHELL
Checked By: D. NGUYEN
Approved By: F. NANNENGA

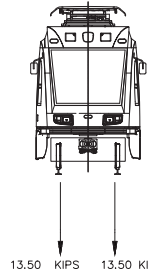
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
TRACKWORK
SIGNAL TRACK CONNECTION BOX

State: AS NOTED
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Submitted Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: K3005
Sheet No.:

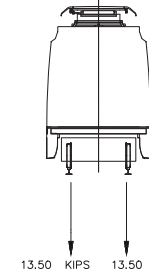
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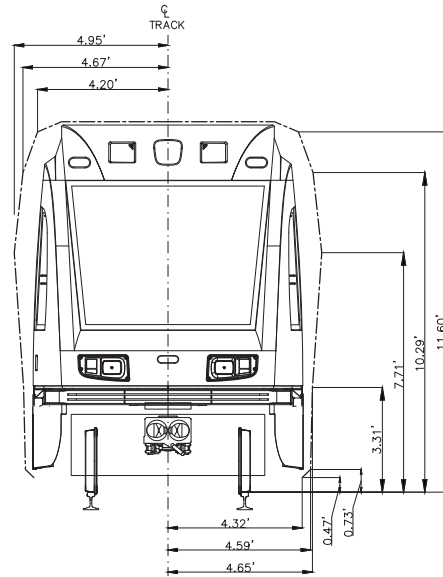
LRV LENGTH AND LOADING DIAGRAM



WHEEL LOADS (END TRUCKS)



WHEEL LOADS (CENTER TRUCKS)



STREET CAR DYNAMIC CLEARANCE ENVELOPE

Radius (ft)	Mid-Overhang (ft)	End Overhang (ft)
82	5.62	6.13
100	5.50	5.89
150	5.31	5.53
200	5.22	5.35
250	5.16	5.27
300	5.13	5.21
350	5.10	5.18
400	5.08	5.15
450	5.06	5.12
500	5.06	5.11
600	5.03	5.08
700	5.02	5.06
800	5.01	5.05
900	5.00	5.03
1000	5.00	5.02
2000	4.97	4.98
3000	4.96	4.97
4000	4.96	4.96
5000	4.95	4.96
10000	4.95	4.95

STREET CAR DYNAMIC CLEARANCE TABLE

- NOTES:
- TOTAL VEHICLE LOAD - 162.00 KIPS = 81.00 TONS.
 - SIEMENS S70 LRV SHOWN WITH UTA LRT DESIGN CRITERIA REVISION 5 LOADING INFORMATION.
 - CLEARANCE ENVELOPE IS FOR TANGENT TRACK ONLY.

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REV	DATE	Description



Designed By:
F. NANNENGA

Drawn By:
T. COVEYOU

Checked By:
A. DIGIROLAMO

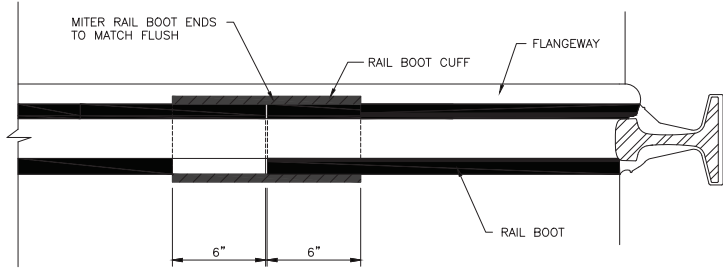
Approved By:
A. DIGIROLAMO

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS
TRACKWORK
STREETCAR DYNAMIC ENVELOPE
AND LOADING DIAGRAM

State:	NTS
CADD Filename:	SL-C-K-3-006.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K3006
Sheet No.:	

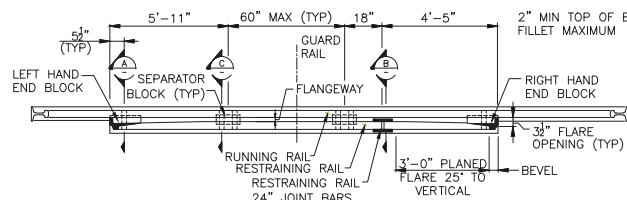
Submitted By: _____ Approved By: _____



RAIL BOOT SPLICE
NTS

NOTES:

1. INSTALL CUFF IN ACCORDANCE WITH MANUFACTURER'S PROCEDURES. ENSURE CONTINUOUS ELECTRICAL ISOLATION IS ACHIEVED ACROSS THE SPLICE.
2. THE SPLICE SHALL BE INSTALLED IN A MANNER THAT PERMITS ANY WATER FLOWING IN THE BOOT TO PASS THROUGH SPLICE.

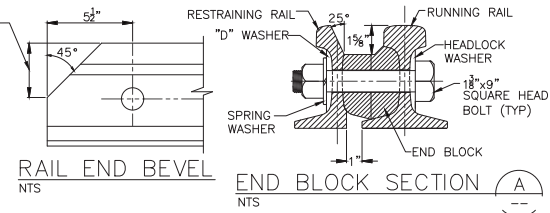


SCHEMATIC RESTRAINING RAIL
NTS

RESTRAINING RAILS COMPLETE	
BILL OF MATERIAL	
QUANTITY	DESCRIPTION
1	TEE RESTRAINING RAIL, USED 115RE RAIL
1 EA	END BLOCKS, LEFT AND RIGHT HAND
AS REQ'D	ADJUSTABLE SEPARATOR BLOCK
AS REQ'D	BOLTS 1 3/8" DIA X 9" GRADE 8 WITH SQUARE HEAD, SQUARE NUTS, SPRING WASHERS, HEADLOCKS, AND "D" WASHERS
AS REQ'D	RESTRAINING RAIL PLATES COMPLETE WITH ADJUSTABLE SPRING CLIP SHOULDERS

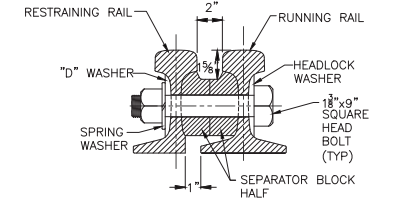
NOTES:

1. ENDS OF RESTRAINING RAIL AND END OF BLOCKS SHALL BE BEVELLED AT A 45° ANGLE PER AREMA PLAN 504-89.
2. END AND SEPARATOR BLOCKS MAY BE OF STEEL, CAST IRON OR DUCTILE IRON.

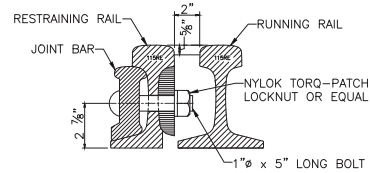


RAIL END BEVEL
NTS

END BLOCK SECTION (A)
NTS



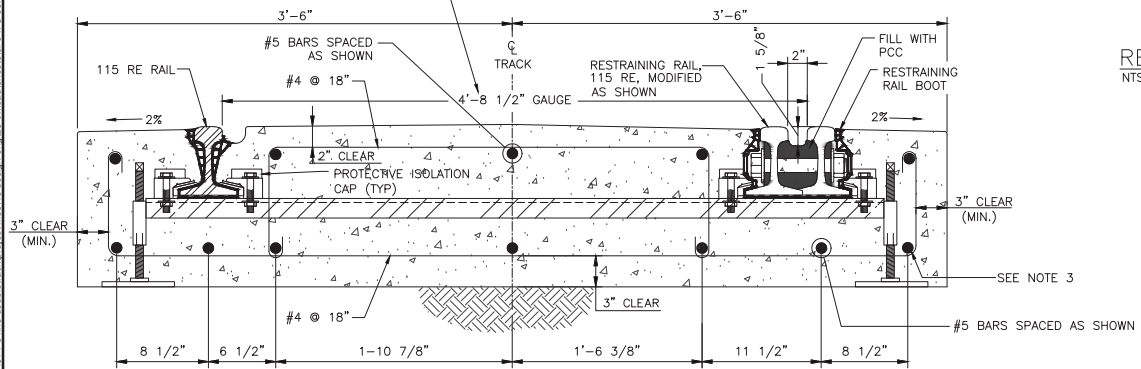
SEPARATOR BLOCK SECTION (C)
NTS



RESTRAINING RAIL JOINT ASSEMBLY (B)
NTS

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4'-8 1/2" GAUGE (TANGENT AND RADIUS >= 280')
4'-8 3/4" GAUGE (200' < RADIUS < 280')
4'-9" GAUGE (82' <= RADIUS < 200')



RESTRAINING RAIL (2)
NTS

NOTES:

1. AT ALL RESTRAINING RAIL APPLICATIONS, PROVIDE FLANGEWAY OF 2" BETWEEN RUNNING RAIL AND RESTRAINING RAIL, AND INDICATED TRACK GAUGE, AS SHOWN.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS SHOWING MODIFIED BOOT DETAILS, PRIOR TO INSTALLATION.

NOTES:

1. PROVIDE EXPANSION JOINTS EVERY 60' MAXIMUM IN THE CONCRETE INFILL PER APWA 231 (SIDEWALK SPECIFICATIONS). SEE DETAIL 3 ON DWG K3003.
2. PROVIDE CONTROL JOINTS AT 10'-0" MAX.
3. A TRACK SLAB ANALYSIS IS BEING PERFORMED TO DETERMINE IF ANY REBAR IS NEEDED.

REV	DATE	Description



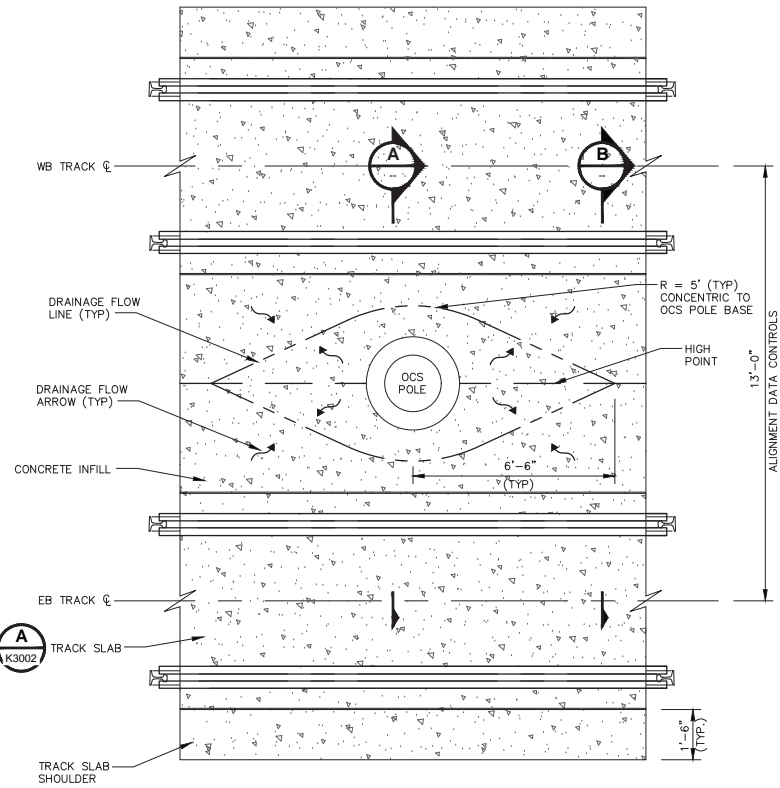
Designed By:	F. NANNENGA
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT

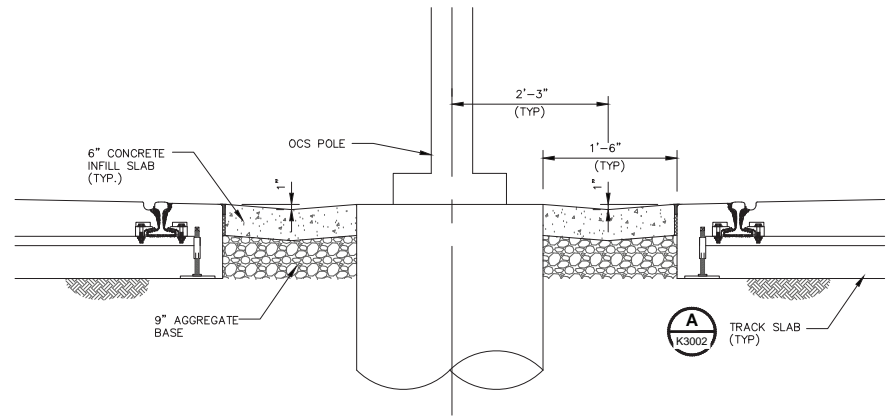
STANDARD DRAWINGS
TRACKWORK
MISC. EMBEDDED TRACK
SECTIONS AND DETAILS

State:	NTS
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Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Sheet No.:	K3007

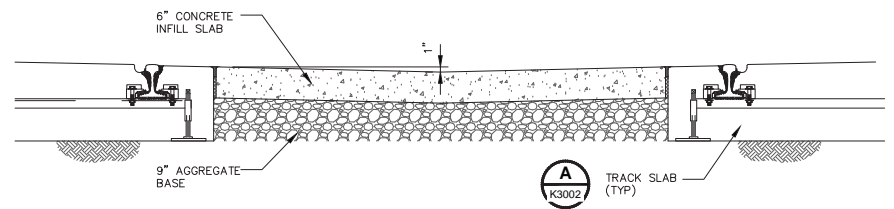
Submitted By: _____ Approved By: _____



TYPICAL INFILL SLAB GRADING 1



TYPICAL INFILL SLAB SECTION @ OCS POLE A



TYPICAL INFILL SLAB SECTION B

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REV	DATE	Description

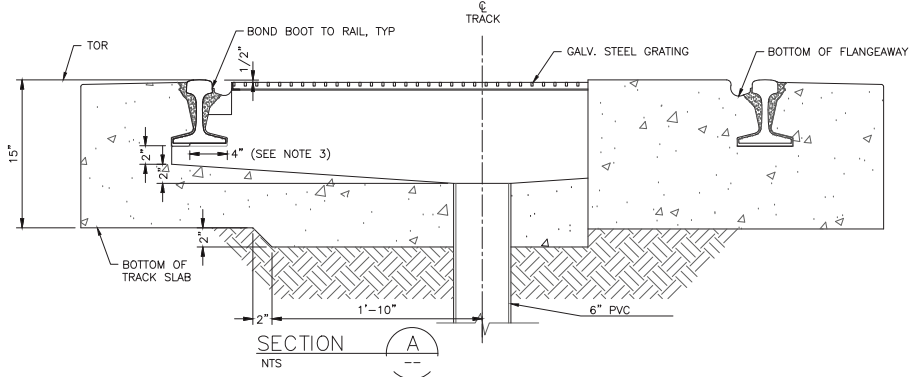
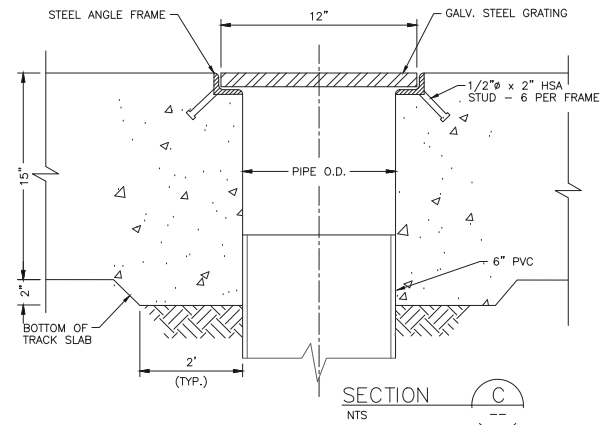
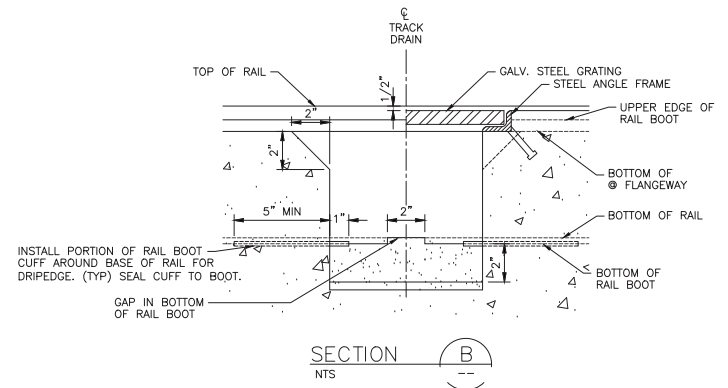
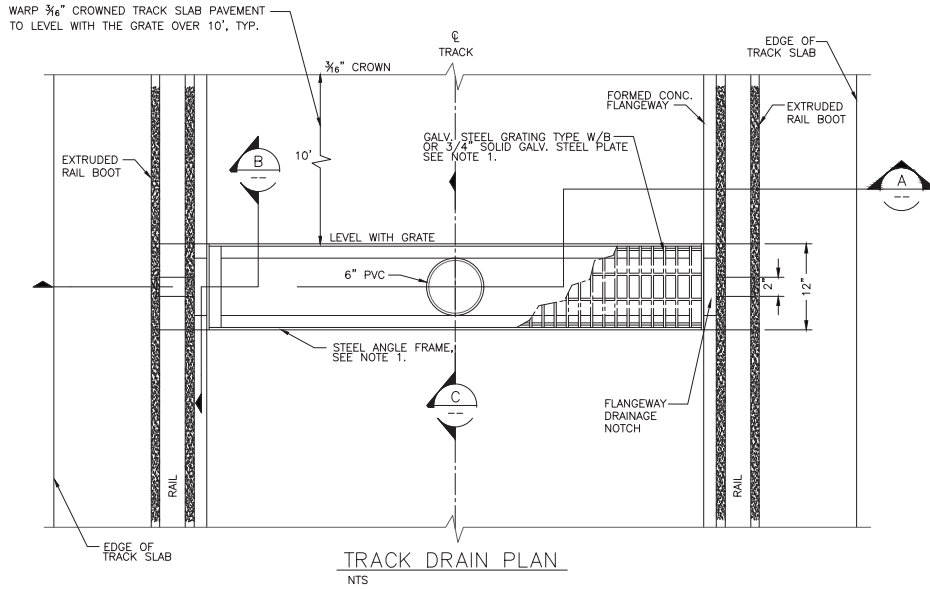


Designed By: F. NANNENGA
Drawn By: T. COVEYOU
Checked By: A. DIGIROLAMO
Approved By: A. DIGIROLAMO

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
TRACKWORK
6" INFILL SLAB DETAILS

State: NTS
CADD Filename: SL-C-K-3-008.dwg
Submit Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: K3008

Submitted By: _____ Approved By: _____



- NOTES:
1. SUBMIT STEEL ANGLE FRAME AND GALVANIZED STEEL GRATING SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION. GRATING SHALL BE BOLTED TO THE STEEL ANGLE FRAME AT SIX (MIN) LOCATIONS. STEEL ANGLE FRAME SHALL BE HOT DIPPED GALVANIZED. FRAME AND GRATE SHALL BE DESIGNED TO MEET AASHTO HS-20 LOADING.
 2. INFILL CONCRETE SURFACE WITHIN 18" SHALL BE GRADED TO MATCH TOP OF STEEL GRATING.
 3. REMOVE SOME OF THE BOTTOM OF BOOT AT CENTER OF DRAIN TO ALLOW BOOT DRAINAGE. REMOVED PORTION SHALL BE 2" WIDE.

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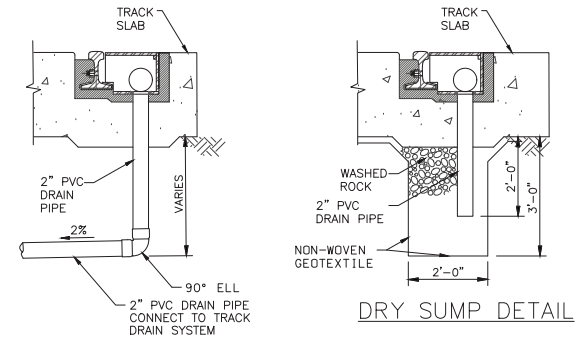
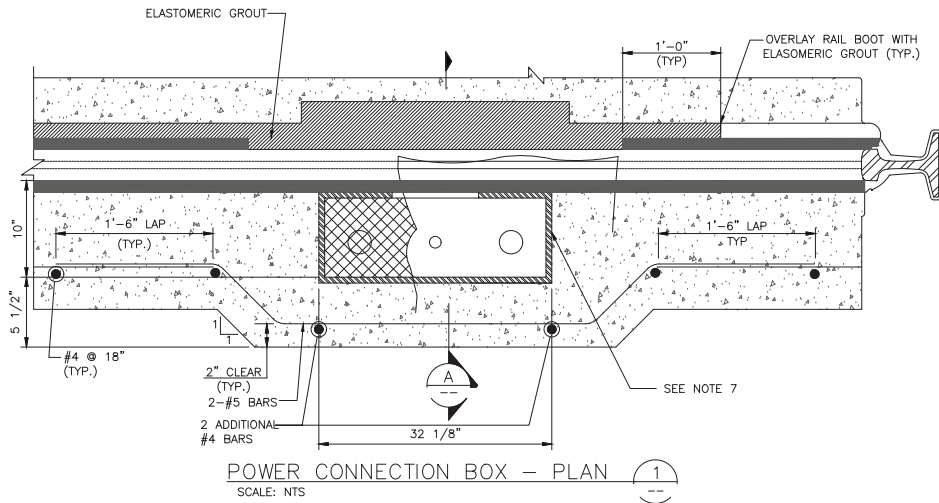
REVISION	DATE	DESCRIPTION



Designed By: F. NANNENGA
Drawn By: T. COVEYOU
Checked By: A. DIGIROLAMO
Approved By: A. DIGIROLAMO

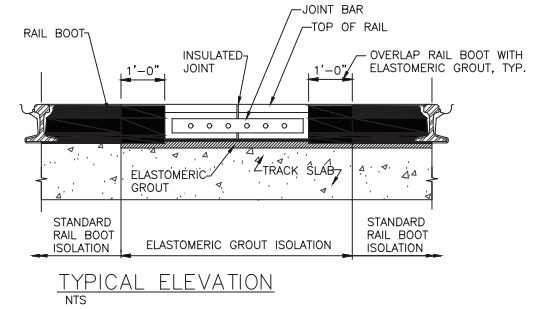
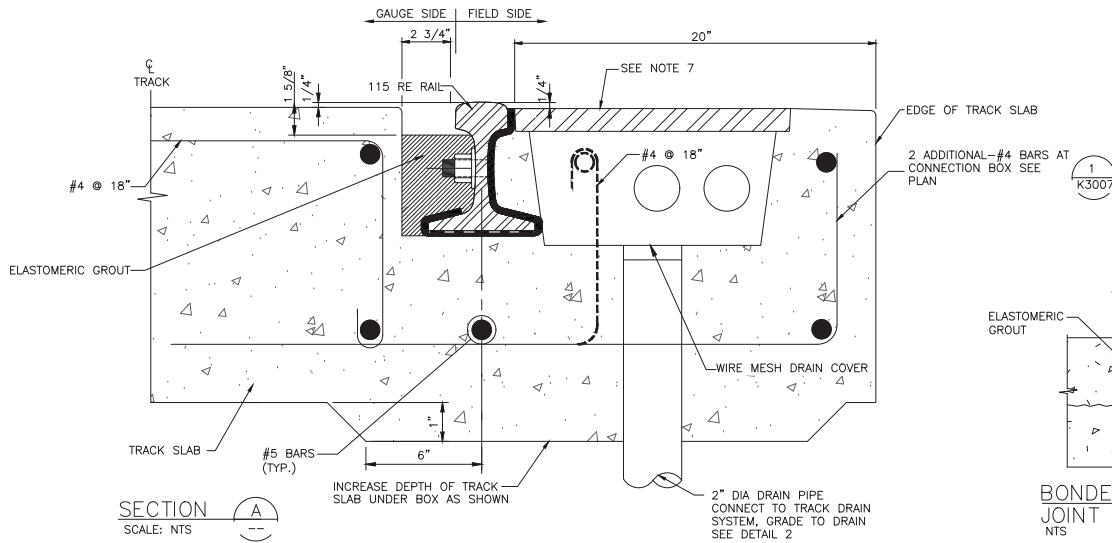
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
TRACKWORK
TRACK DRAINAGE DETAILS

State:	NTS
CADD Filename:	SL-C-K-3-009.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K3009
Sheet No.:	

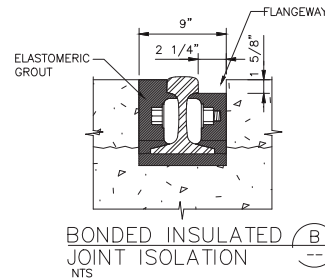


NOTE:
DRY SUMP CAN BE USED WHEN TRACK DRAIN SYSTEM IS NOT WITHIN 50' OF CONNECTION BOX. SEE DRY SUMP DETAIL.

CONNECTION TO TRACK DRAIN DETAIL (2)
SCALE: NTS



- NOTES:**
- SEE DUCTBANK PLANS FOR LOCATIONS OF SIGNAL TRACK CONNECTION BOXES.
 - CONDUIT ENTRANCE HOLE DIAMETER, QUANTITY, AND LOCATION MAY VARY ACCORDING TO LOCATION OF BOX. SEE SYSTEMS PLANS FOR CONDUIT REQUIREMENTS FOR EACH INDIVIDUAL BOX.
 - SIGNAL CONNECTION BOX OR EQUIVALENT SHALL BE CONSTRUCTED AS SHOWN; CONTRACTOR SHALL SUBMIT SIGNAL CONNECTION BOX SHOP DRAWING FOR REVIEW.
 - REINFORCING SHOWN ON THIS DRAWING SHOWS REQUIRED MODIFICATIONS. REFER TO DWG. K3004 FOR STD. TRACK SLAB REINFORCING DETAILS.
 - WHEN SIGNAL TRACK BOX IS USED FOR RAIL LUBRICATOR, THE 1" DIA HOLE SHOULD BE EXPANDED TO 2" DIA. ONLY THE REQUIRED HOLES SHOULD BE DRILLED.
 - FINAL TRACK CIRCUIT CONNECTION BOX LOCATION TO BE LOCATED AND COORDINATED WITH SYSTEMS CONTRACTOR.
 - POWER CONNECTION BOX, SEE DWG. K3005 FOR DETAILS.



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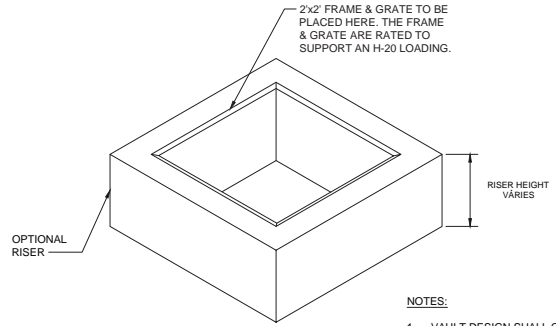
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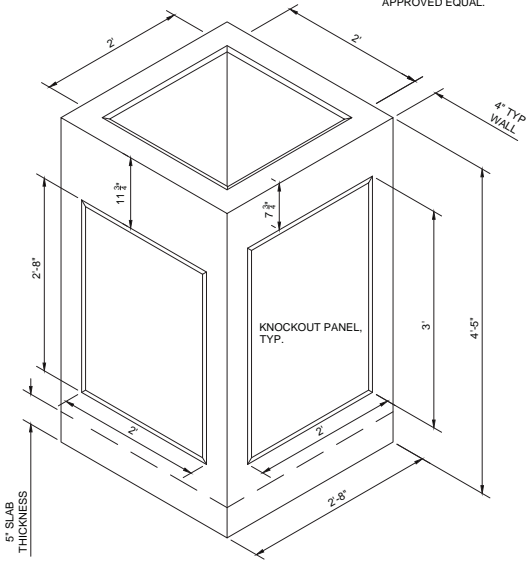
Designed By:	F. NANNENGA
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT	
STANDARD DRAWINGS	
TRACKWORK TRACK CONNECTION BOX	
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K3010
Sheet No.:	

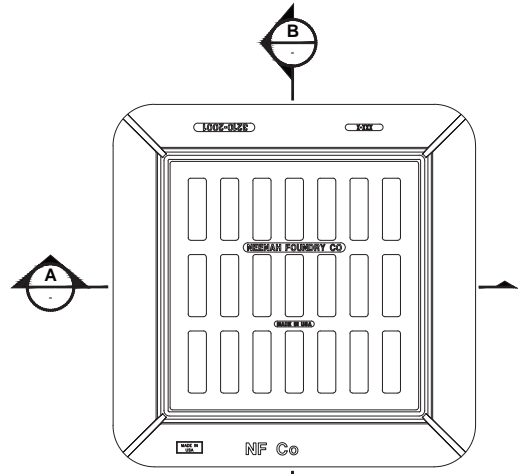
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Sheet No.:	



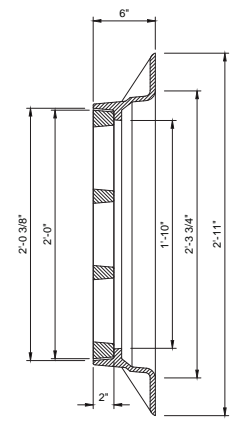
- NOTES:**
1. VAULT DESIGN SHALL COMPLY WITH ASTM C-458 & C-913 WITH LESS THAN 2" OF EARTH COVER AND AN AASHTO HS-20 LOADING.
 2. INLET SHOWN IS FROM GENEVA PIPE/NORTHWEST PIPE COMPANY OR APPROVED EQUAL.



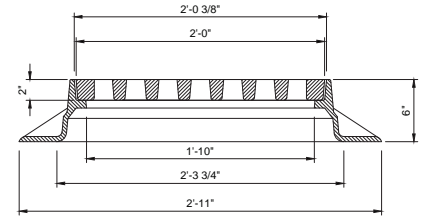
PRECAST CONCRETE CATCH BASIN 2'x2'x4' 1
NTS



2'x2' FRAME AND GRATE 2
2" = 1'-0"



SECTION B
2" = 1'-0"



SECTION A
2" = 1'-0"

- NOTES:**
1. GRATE SHOWN IS FROM NEENAH FOUNDRY CATALOG #3433.
 2. GRATE IS AASHTO RATED FOR HS-20 LOADING.
 3. ALL DIMENSIONS SHOWN ARE IN ENGLISH.
 4. COMPONENT NO'S: FRAME 3210-2001, GRATE 3210-0002.
 5. MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B.
 6. FINISH: NO PAINT.
 7. WEIGHT: FRAME 164#, GRATE 166#.

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Designed By:	F. NANNENGA
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

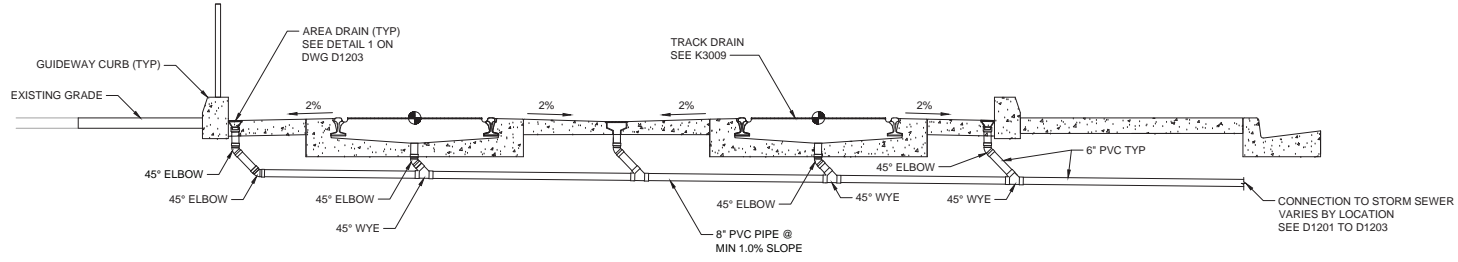
S-LINE EXTENSION PROJECT

STANDARD DRAWINGS

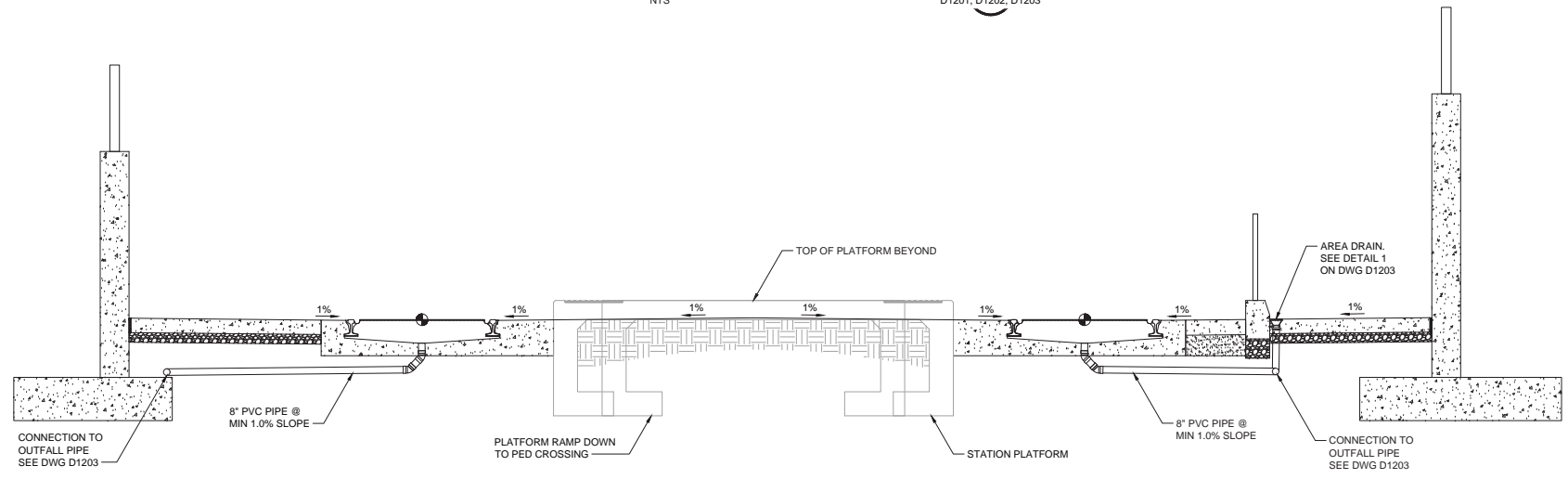
TRACKWORK
DRAINAGE CATCH BASIN

State:	AS NOTED
CADD Filename:	SL-C-K-3-011.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K3011
Sheet No.:	

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TYPICAL TRACK DRAIN ARRAY DETAIL 1
 NTS D1201, D1202, D1203



DRAIN DETAIL AT SUGAR HOUSE STATION 2
 NTS D1203

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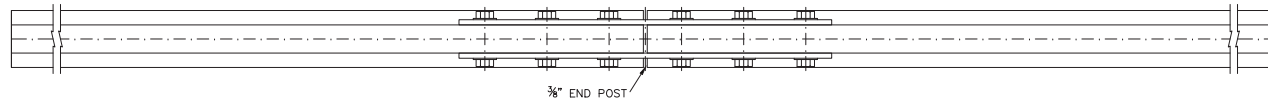


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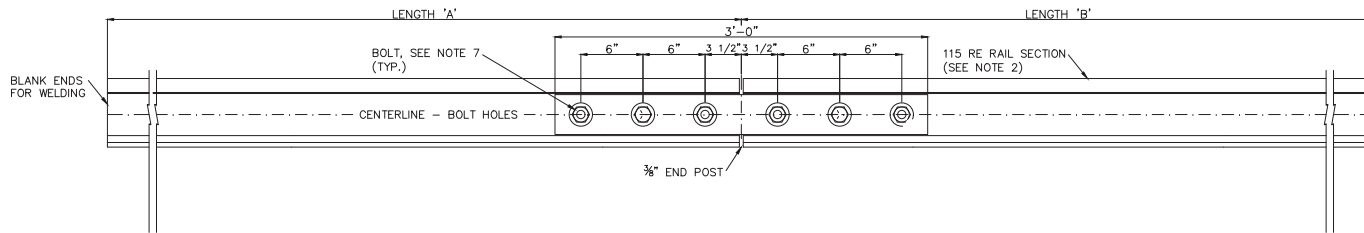
Designed By: F. NANNENGA
 Drawn By: T. COVEYOU
 Checked By: A. DIGIROLAMO
 Approved By: A. DIGIROLAMO

S-LINE EXTENSION PROJECT
 STANDARD DRAWINGS
 TRACKWORK
 TRACK DRAIN ARRAY
 AND PLATFORM DRAIN DETAILS

State:	NTS
CADD Filename:	SL-C-K-3-012.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K3012
Sheet No.:	



INSULATED GLUED JOINT 1
--



ELEVATION 2
--

LOCATION	A	B'	TOTAL
STANDARD (TANGENT)	10'-0" MIN.	10'-0" MIN.	20'- 3/8" MIN.
STANDARD (CURVED)	19'-0" MIN.	19'-0" MIN.	38'- 3/8" MIN.
* SPECIAL TRACKWORK	REFER TO SPECIAL TRACKWORK DRAWINGS		

NOTES:

- EXCEPT FOR INSULATED JOINTS LOCATED JUST WEST OF THE DOUBLE CROSSOVER NEAR STATION EB 212+89, FIELD INSTALLED JOINTS CAN BE USED.

NOTES:

- INSULATED JOINTS CAN BE FIELD FABRICATED OR JOINT PLUGS. WORKMANSHIP AND MATERIALS SHALL MEET OR EXCEED CURRENT AREMA SPECIFICATIONS, CHAPTER 4 PART 3.
- RAIL AND COMPONENTS SHALL CONFORM TO 115 RE RAIL SECTION
- RAIL LENGTH MINIMUM IS SHOWN IN TABLE.
- INSULATED JOINT PLUGS SHALL BE MANUFACTURED FROM HIGH-STRENGTH RAIL. FOR USE IN TURNOUTS, RAIL SHALL BE PRE-CURVED TO THE INDICATED RADIUS ON TURNOUT PLANS.
- ALL INSULATED JOINTS SHALL HAVE THE MANUFACTURER TAGS.
- ALL BOLT HOLES SHALL BE CHAMFERED.
- HUCK BOLTS 1 1/2" ASTM A490, OR 1 1/8" SAW GRADE 8 BOLTS WITH SECURITY LOCKNUTS SHALL BE FURNISHED. THE BOLTS SHALL BE LUBRICATED AND TORQUED TO 850 FOOT-POUNDS.
- I'S LOCATED IN RESTRAINED RAIL SECTION PER MANUFACTURER'S SHOP DRAWINGS.

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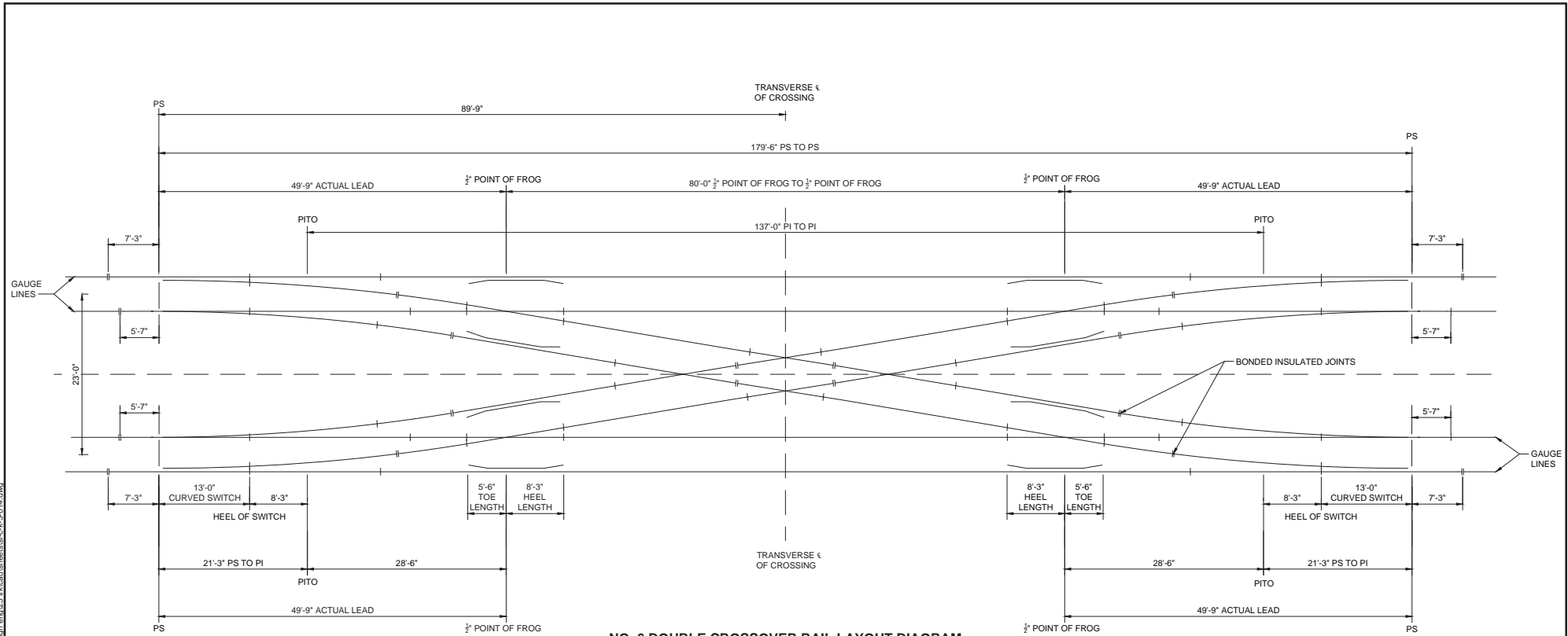


Designed By: F. NANNENGA
Drawn By: T. COVEYOU
Checked By: A. DIGIROLAMO
Approved By: A. DIGIROLAMO

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
TRACKWORK
INSULATED JOINT DETAILS

State: NTS
CADD Filename: SL-C-K-3-013.dwg
Submitted Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: K3013
Sheet No.:

Submitted By: _____ Approved By: _____



NO. 6 DOUBLE CROSSOVER RAIL LAYOUT DIAGRAM

LEGEND:

- || BONDING INSULATED JOINTS
(CONTRACTOR RESPONSIBLE FOR
LOCATING INSULATED JOINTS IN THE
FIELD FOR THE JOINTS NOT PROVIDED BY
THE SUPPLIER)
- | FIELD WELDED JOINT

NOTES:

1. ALL RAIL AND COMPONENTS SHALL CONFORM TO THE 115RE RAIL SECTION.
2. ALL RAILS ARE HIGH STRENGTH.
3. CLOSURE RAIL LENGTHS ALLOW 1" FOR EACH WELDED JOINT AND 3/8" FOR EACH INSULATED JOINT.
4. ALL SPECIAL TRACKWORK CROSSOVER PLATES MUST BE INSULATED. BONDING INSULATED JOINTS VARY BY LOCATION. PLACE JOINTS IN ACCORDANCE WITH TRAIN CONTROL DRAWINGS.
5. SUPPLY COMPLETE WITH RAIL CLIPS, SHOULDER, INSULATORS, AND PADS.
6. EXACT DIMENSIONS, LIMITS, SPACING, AND DETAILS OF CROSSOVER TO BE DETERMINED BY SUPPLIER CROSSOVER SHOP DRAWING.
7. SEE DRAWING K3018 FOR M-23A SWITCH MACHINE LAYOUT.

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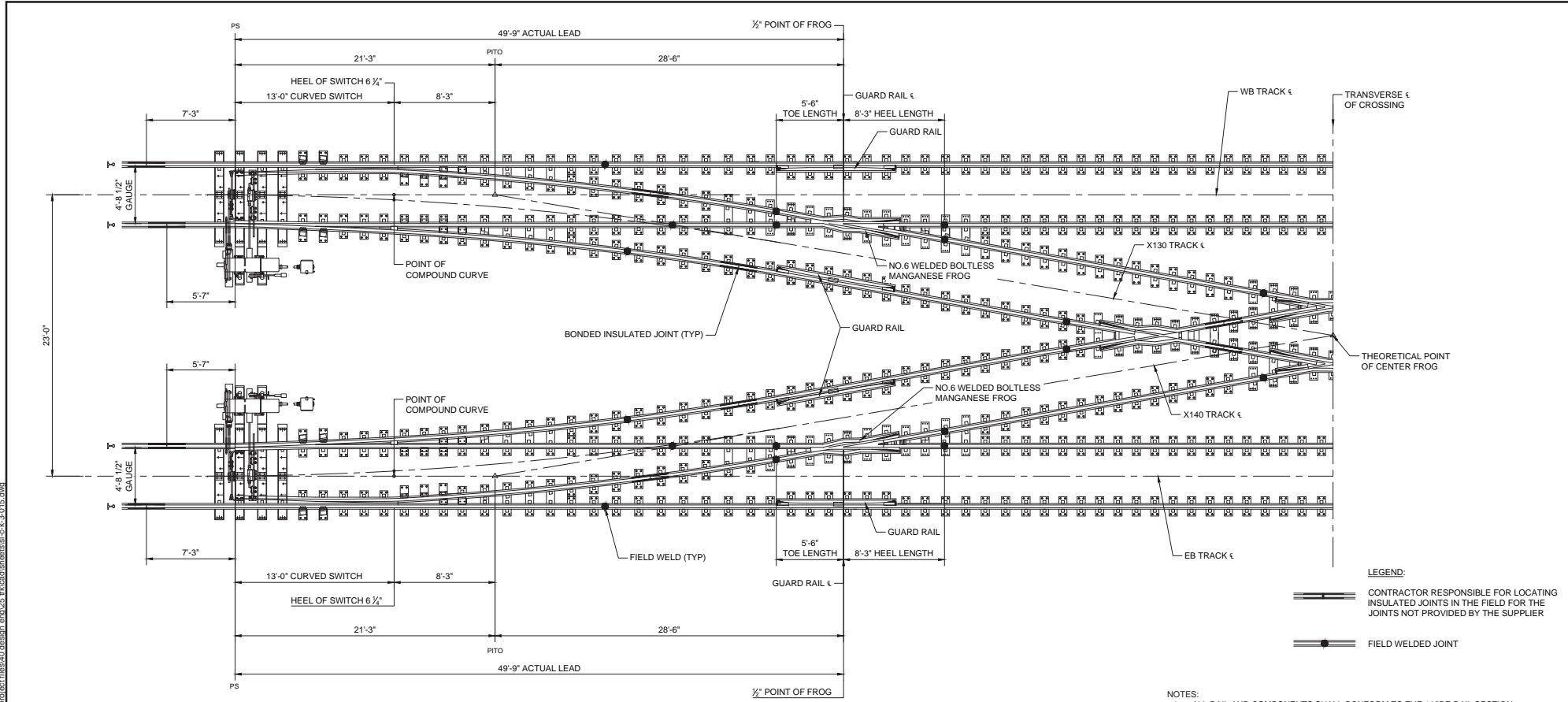
Approved By: _____

Designed By:	F. NANNENGA
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
TRACKWORK
NO. 6 DOUBLE CROSSOVER RAIL LAYOUT

State:	NTS
CADD Filename:	SL-C-K-3-014.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K3014
Sheet No.:	

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NO. 6 DIRECT FIXATION DOUBLE CROSSOVER 23'-0" TRACK CENTERS

- LEGEND:**
- CONTRACTOR RESPONSIBLE FOR LOCATING INSULATED JOINTS IN THE FIELD FOR THE JOINTS NOT PROVIDED BY THE SUPPLIER
 - FIELD WELDED JOINT

- NOTES:**
1. ALL RAIL AND COMPONENTS SHALL CONFORM TO THE 115RE RAIL SECTION.
 2. ALL RAILS ARE HIGH STRENGTH.
 3. CLOSURE RAIL LENGTHS ALLOW 1" FOR EACH WELDED JOINT AND 3/4" FOR EACH INSULATED JOINT.
 4. THE DESIGN CONFIGURATION AND LAYOUT ARE FOR INFORMATIONAL PURPOSES ONLY. FINAL DIMENSIONS, LIMITS, GEOMETRY, DETAILS, AND FASTENER SPACING, TO BE DETERMINED BY SUPPLIER TURNOUT/CROSSOVER SHOP DRAWING.
 5. STANDARD SPECIAL TRACKWORK DIRECT FIXATION FASTENERS SHALL BE FURNISHED WHERE SPECIAL TRACKWORK FASTENERS ARE NOT REQUIRED.
 6. ALL SPECIAL TRACKWORK TURNOUT PLATES MUST BE INSULATED.
 7. BONDED INSULATED JOINTS VARY BY LOCATION. PLACE JOINTS IN ACCORDANCE WITH TRAIN CONTROL DRAWINGS.
 8. SUPPLY COMPLETE WITH RAIL CLIPS, SHOULDER, INSULATORS, AND PADS.
 10. CROSSOVER IS SYMMETRICAL ABOUT TRANSVERSE CL.
 11. SEE DRAWING K3018 FOR M-23A SWITCH MACHINE LAYOUT.

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Designed By:
F. NANNENGA

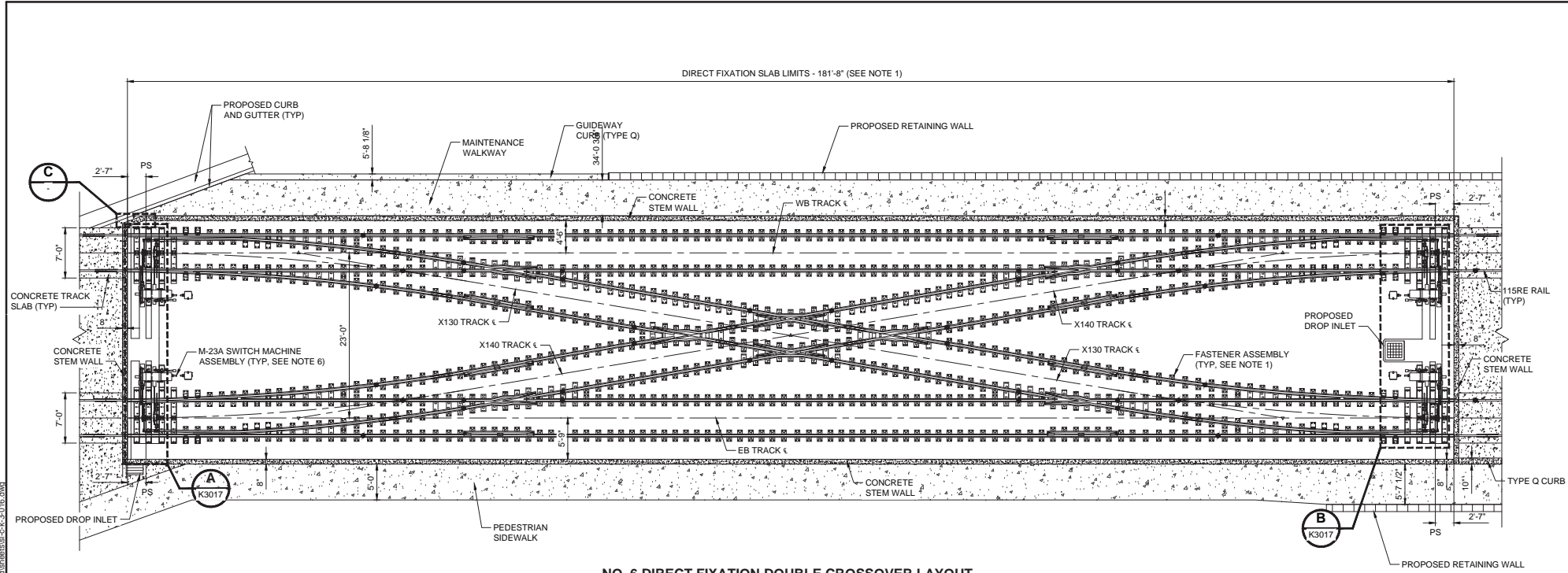
Drawn By:
T. COVEYOU

Checked By:
A. DIGIROLAMO

Approved By:
A. DIGIROLAMO

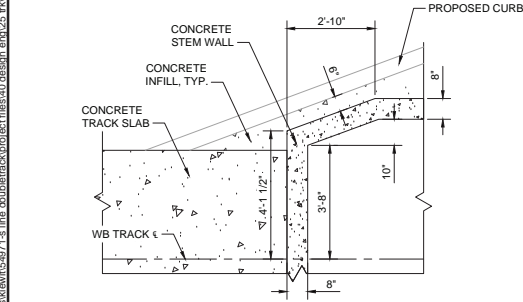
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STANDARD DRAWINGS TRACKWORK		CADD Filename: SL-C-K-3-015.dwg
NO. 6 DOUBLE CROSSOVER GEOMETRY AND LAYOUT 23'-0" TRACK CENTERS		Submitted Date: 01-16-26
		UTA Contract No.: 24-03849
		Drawing No.: K3015

Submitted By: _____ Approved By: _____



NO. 6 DIRECT FIXATION DOUBLE CROSSOVER LAYOUT



NTS



SLAB CORNER NORTH WEST SIDE

SCALE: 1" = 2'

LEGEND:

- 
 CONTRACTOR RESPONSIBLE FOR LOCATING INSULATED JOINTS IN THE FIELD FOR THE JOINTS NOT PROVIDED BY THE SUPPLIER
- 
 FIELD WELDED JOINT

NOTES:

1. THE DESIGN CONFIGURATION AND LAYOUT ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. FINAL LIMITS OF CROSSOVER, DIMENSIONS, DETAILS AND FASTENER LOCATION AND SPACING TO BE DETERMINED BY SUPPLIER CROSSOVER SHOP DRAWING.
2. CONTRACTOR TO ADJUST THESE DIMENSIONS AFTER SUPPLIED WITH FULL SET OF TURNOUT SHOP DRAWINGS FROM THE SUPPLIER.
3. STANDARD DIRECT FIXATION FASTENER TO BE USED WHERE SPECIAL TRACKWORK FASTENERS ARE NOT REQUIRED.
4. DRAINAGE BLOCKOUTS TO BE PLACED AT THE END OF DIRECT FIXATION AREA AND ADJACENT TO SWITCH MACHINE TO COLLECT RUNOFF WATER. BLOCKOUTS TO NOT BE PLACED IN CONFLICT WITH FASTENING SYSTEM.
5. SEE DRAWING K3017 FOR DRAINAGE BLOCKOUTS DETAIL.
6. SEE DRAWING K3018 FOR M-23A SWITCH MACHINE LAYOUT.

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Designed By: F. NANNENGA
Drawn By: T. COVEYOU
Checked By: A. DIGIROLAMO
Approved By: A. DIGIROLAMO

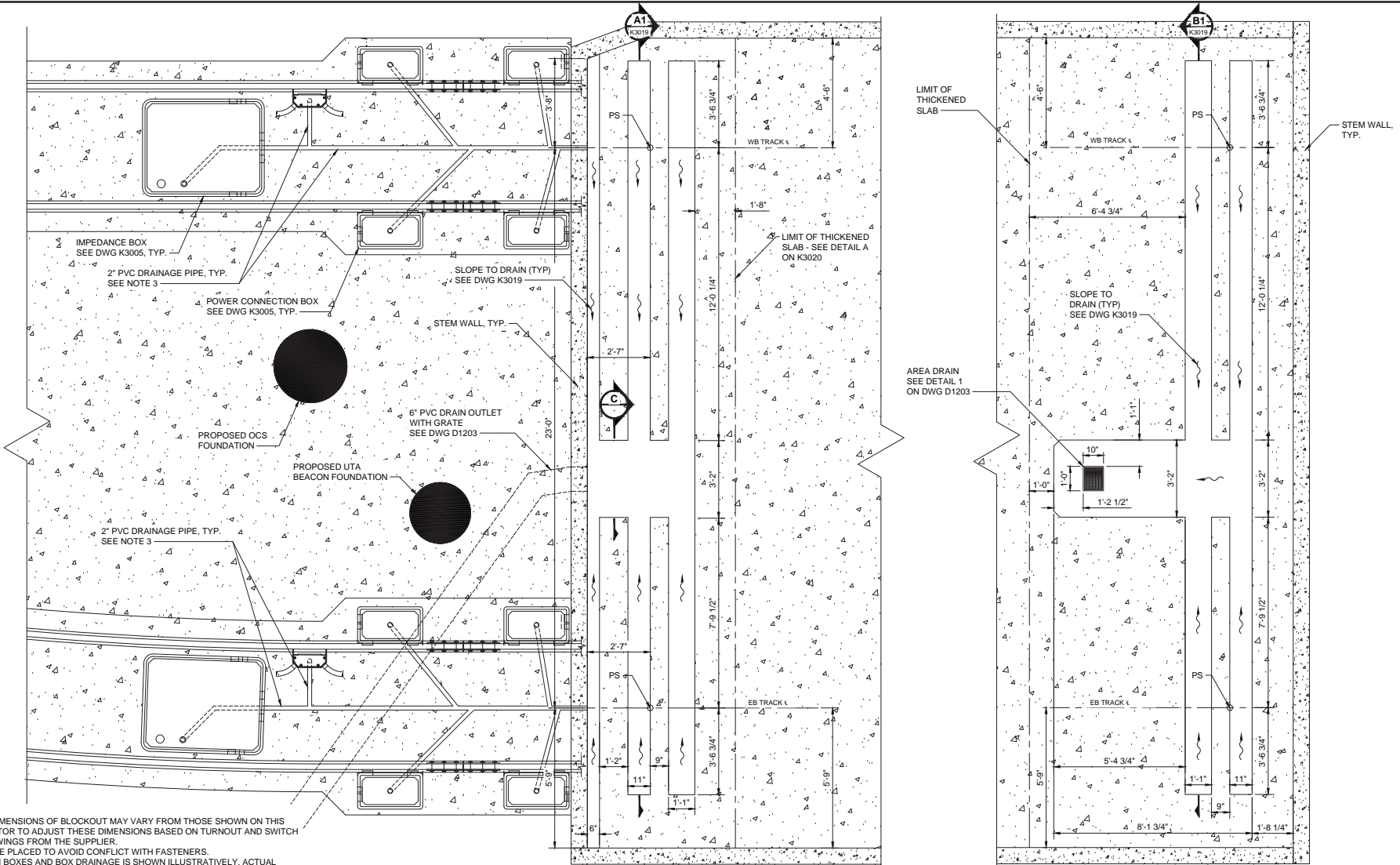
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
TRACKWORK
NO. 6 DIRECT FIXATION DOUBLE CROSSOVER
LAYOUT

State: AS SHOWN
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Submitted Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: K3016
Sheet No.:

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Approved By: _____

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- NOTES:
1. EXACT LIMITS AND DIMENSIONS OF BLOCKOUT MAY VARY FROM THOSE SHOWN ON THIS DRAWING. CONTRACTOR TO ADJUST THESE DIMENSIONS BASED ON TURNOUT AND SWITCH MACHINE SHOP DRAWINGS FROM THE SUPPLIER.
 2. BLOCKOUTS SHALL BE PLACED TO AVOID CONFLICT WITH FASTENERS.
 3. POWER CONNECTION BOXES AND BOX DRAINAGE IS SHOWN ILLUSTRATIVELY. ACTUAL LOCATIONS TO BE COORDINATED IN THE FIELD WITH THE SYSTEMS CONTRACTOR.

BLOCKOUT LAYOUT AT WEST END A
1" = 2'-0" K3016

BLOCKOUT LAYOUT AT EAST END B
1" = 2'-0" K3016

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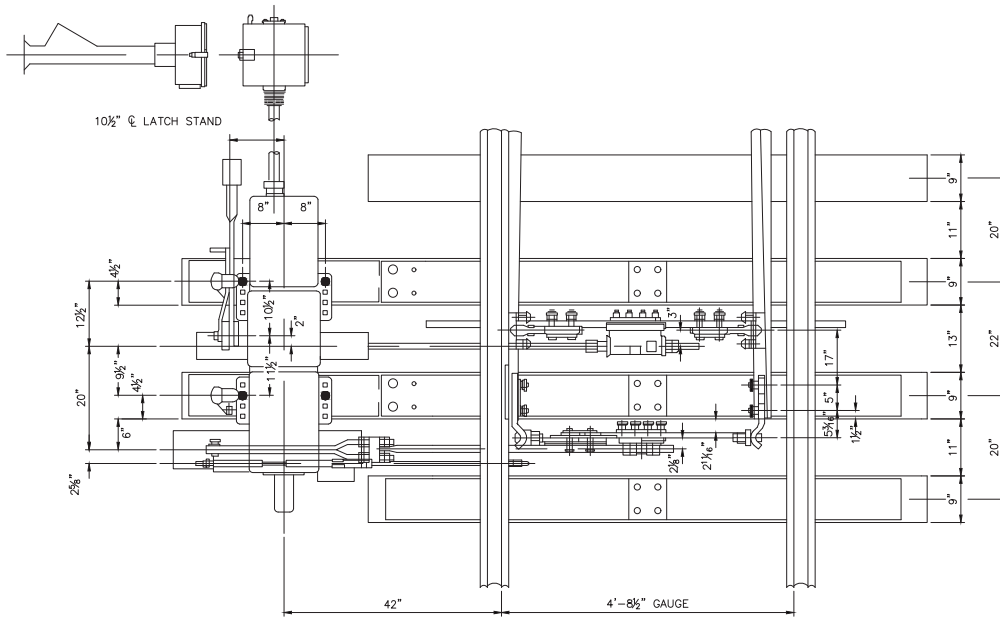


Designed By:	F. NANNENGA
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Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS
TRACKWORK
NO. 6 DIRECT FIXATION DOUBLE CROSSOVER
BLOCKOUT DETAILS

Scale:	AS SHOWN
CADD Filename:	SL-C-K-3-017.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K3017
Sheet No.:	



M-23A SWITCH MACHINE LH LAYOUT

- NOTES:
- M-23A SWITCH MACHINES SHALL BE INSTALLED ON ALL POWER TURNOUTS INDICATED ON TRACK PLAN SHEET.
 - PLAN SHEET INDICATES SIDE PLACEMENT FOR SWITCH MACHINE.
 - GAUGE PLATE EXTENSIONS SHALL BE PROVIDED WITH SWITCH MACHINE.
 - GAUGE PLATES SHALL BE INSTALLED WITH ELASTOMERIC PADS PROVIDED BY SWITCH MACHINE MANUFACTURER.
 - CONTRACTOR TO PLACE ALL FIELD WELDS IN BETWEEN DF CONNECTIONS. ALL FIELD WELDS ARE SHOWN SCHEMATICALLY ON PLANS.
 - LH LAYOUT SHOWN, RH LAYOUT IS MIRROR IMAGE.

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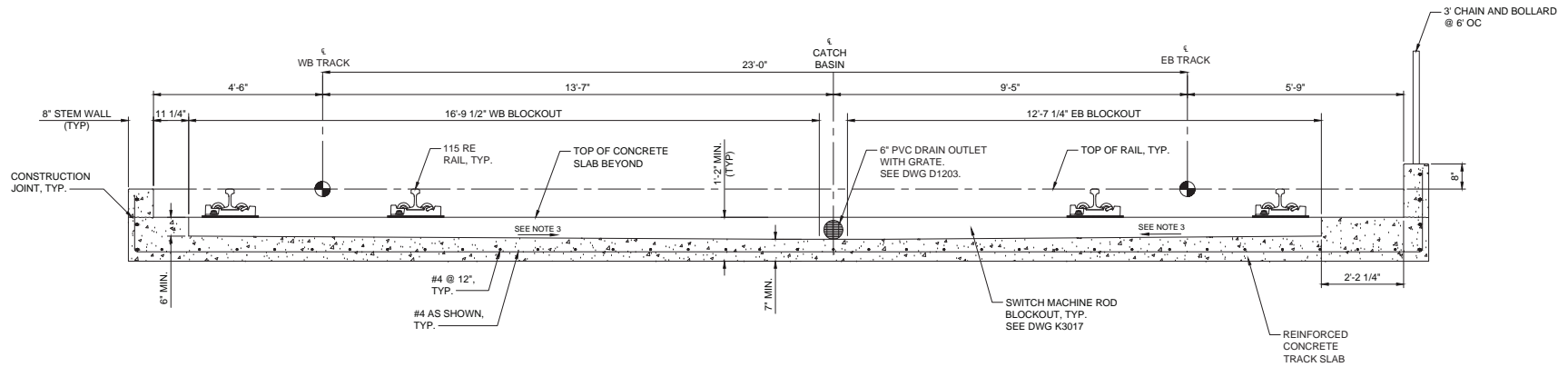


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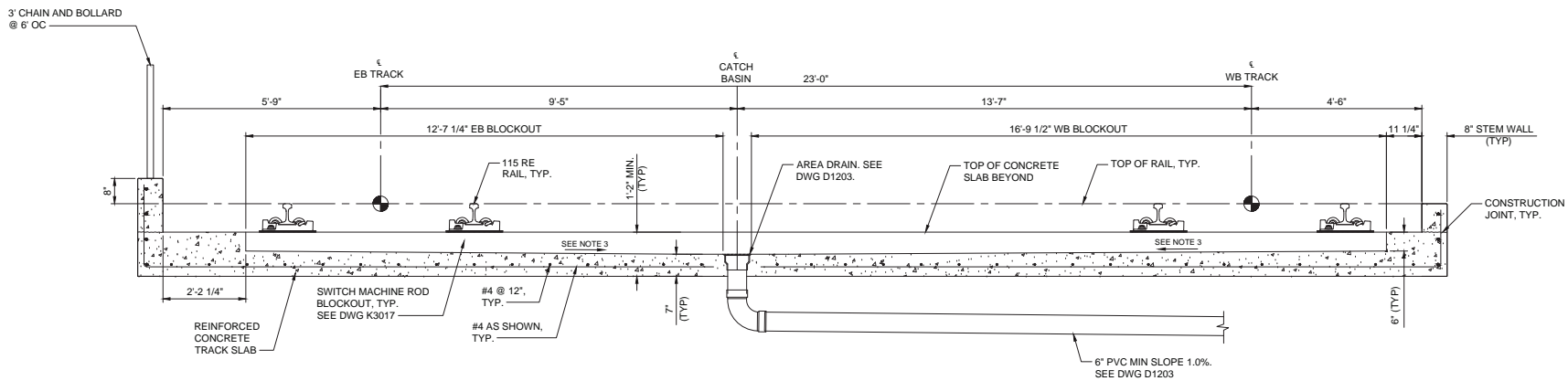
Designed By:
F. NANNENGA
Drawn By:
T. COVEYOU
Checked By:
A. DIGIROLAMO
Approved By:
A. DIGIROLAMO

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
TRACKWORK
SPECIAL TRACKWORK M-23A
SWITCH MACHINE LAYOUT

State:	NTS
CADD Filename:	SL-C-K-3-018.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K3018
Sheet No.:	



WEST END SWITCH MACHINE BLOCKOUTS **A1**
K3017



EAST END SWITCH MACHINE BLOCKOUTS **B1**
K3017

- NOTES:
1. SEE SHEET K3020 FOR SWITCH ROD BLOCKOUT REINFORCEMENT.
 2. SWITCH ROD DEPTH VARIES AS INDICATED IN SECTION. MAINTAIN MINIMUM 6" BLOCKOUT DEPTH.
 3. MAINTAIN MINIMUM 0.5% SLOPE TOWARDS CATCH BASIN.

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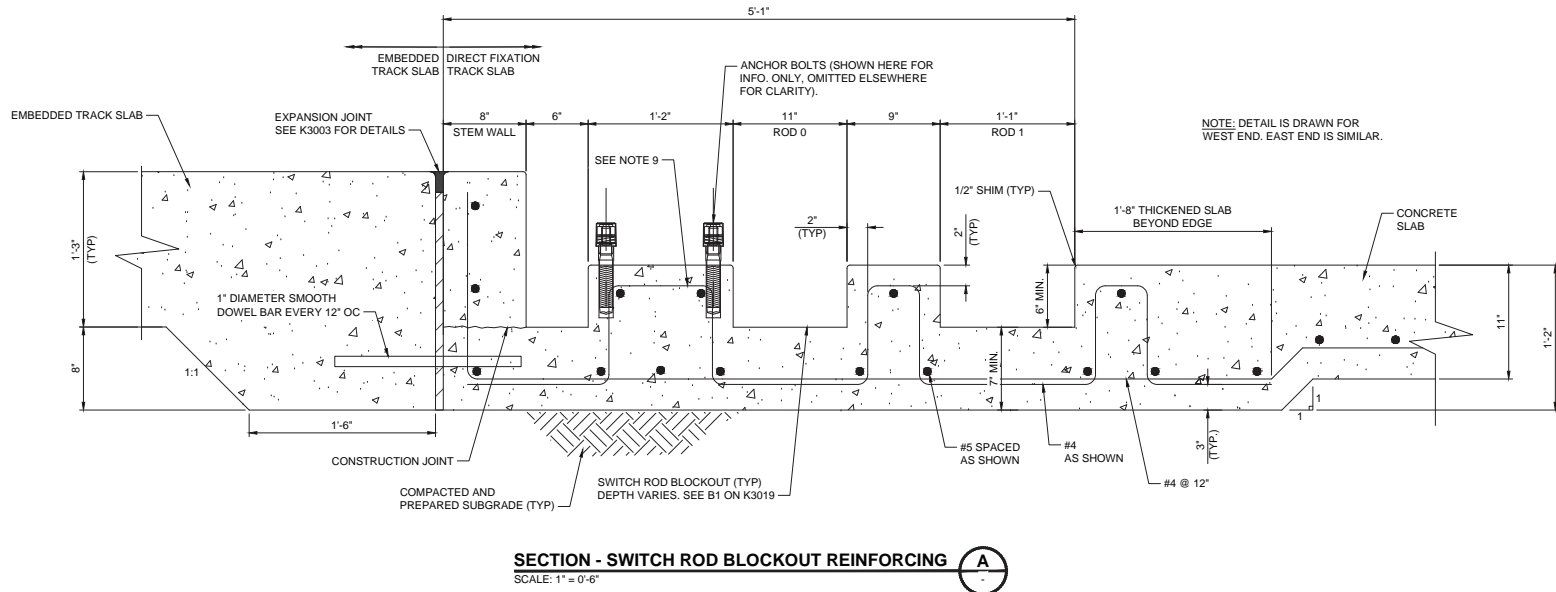


Designed By:	F. NANNENGA
Drawn By:	T. COVEYOU
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Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
TRACKWORK
DF FASTENER DETAIL AND SECTION

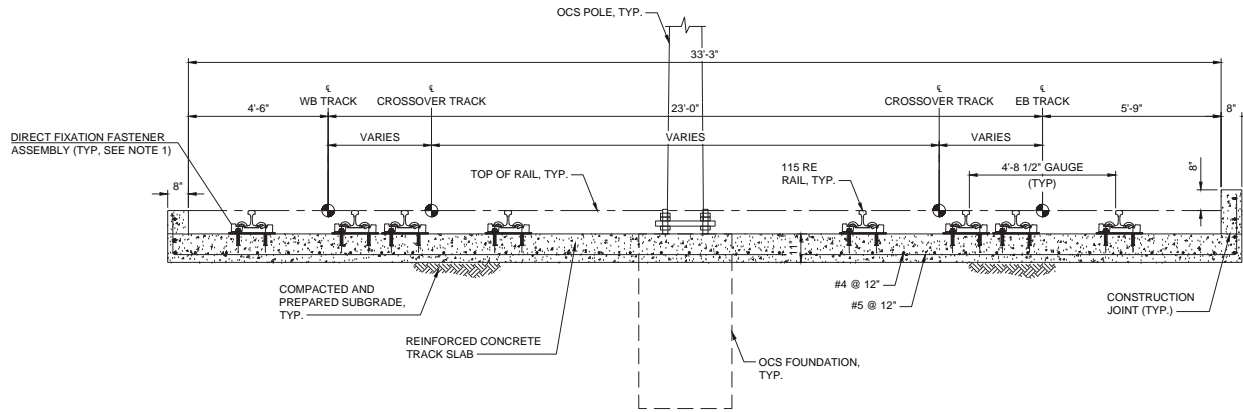
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Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K3019
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SECTION - SWITCH ROD BLOCKOUT REINFORCING

SCALE: 1" = 0'-6"



SECTION - DIRECT FIXATION ON SLAB

SCALE: 1" = 2'-0"



NOTES:

1. FASTENER HARDWARE, DETAILS, SPACING, AND PLACEMENT TO MATCH SPECIAL TRACKWORK SHOP DRAWINGS PROVIDED BY MANUFACTURER.
2. ANCHOR INSERTS TO BE INSTALLED BY EITHER THE DRILL AND GROUT METHOD OR CAST-IN-PLACE WITH CONCRETE. FINAL CONFIGURATION OF FASTENER MUST ALLOW FOR 1 1/2" MIN. CLEARANCE FROM BOTTOM OF RAIL TO TOP OF SLAB TO ALLOW FOR ROUTING OF SYSTEMS CABLES.
3. UP TO 1/2" MAX. OF SHIMMING IS ALLOWED UNDER FASTENER ASSEMBLY IF NEEDED. SHIMS TO BE HDPE OR APPROVED EQUAL.
4. SWITCH ROD BLOCKOUT REINFORCING IS DETAILED FOR THE SOUTHWEST SWITCH. USE SYMMETRICAL LAYOUT FOR THE OTHER THREE SWITCHES.
5. RAIL AND FASTENERS OMITTED FROM SECTION "A" FOR CLARITY.
6. DRAINAGE SLOTS SHALL CONNECT ALL SWITCH ROD BLOCKOUTS AS SHOWN ON DWG K3019.
7. DEPTH OF SWITCH ROD BLOCKOUT VARIES, 6" MIN.
8. ADJUST REBAR SPACING AS NEEDED TO ALLOW FOR 2" CLEAR AROUND ANCHOR BOLTS.

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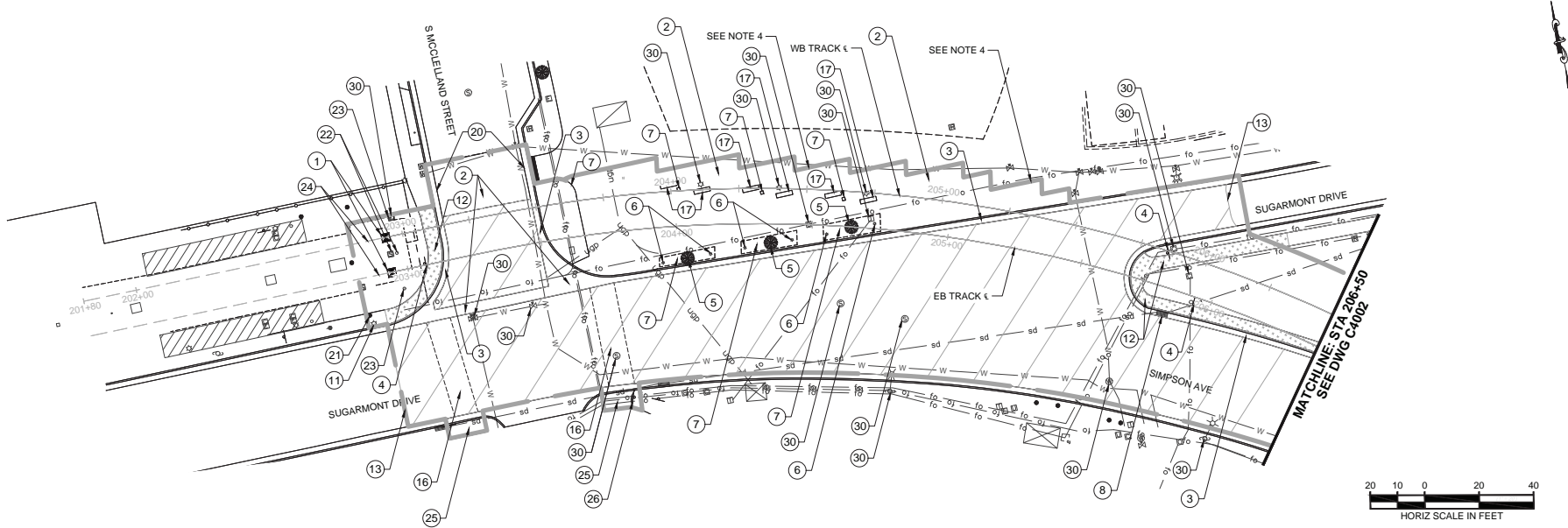


Designed By: F. NANNENGA
Drawn By: T. COVEYOU
Checked By: A. DIGRIOLAMO
Approved By: A. DIGRIOLAMO

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
TRACKWORK
DIRECT FIXATION ON SLAB DETAILS

State:	AS NOTED
CADD Filename:	SL-C-K-3-020.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K3020
Sheet No.:	

Submitted By: _____ Approved By: _____



DEMOLITION NOTES:

- ① RELOCATE BUMPING POST TO END OF LINE
- ② REMOVE CONCRETE
- ③ REMOVE CURB AND GUTTER
- ④ REMOVE SIGN AND PROVIDE TO OWNER
- ⑤ REMOVE TREE (SEE NOTE 11)
- ⑥ RELOCATE DECORATIVE LIGHTING (SEE NOTE 9)
- ⑦ REMOVE PLANTER
- ⑧ REMOVE DRAIN INLET (SEE NOTE 13)
- ⑨ PROTECT DRAINAGE MANHOLE IN PLACE (SEE NOTE 13)
- ⑩ PROTECT TRAFFIC SIGNAL POLE IN PLACE (SEE TRAFFIC PLANS)
- ⑪ PROTECT LIGHT POLE IN PLACE
- ⑫ REMOVE SIDEWALK
- ⑬ SAWCUT ASPHALT/CONCRETE, TYP., SEE NOTE 2
- ⑭ REMOVE TRAFFIC SIGNAL POLE (SEE TRAFFIC PLANS)
- ⑮ REMOVE AND REPLACE TACTILE PAVING
- ⑯ REMOVE BRICK CROSSWALK, REPLACE WITH BRICK TEXTURED EPOXY
- ⑰ REMOVE BENCH (SEE NOTE 9)
- ⑱ REMOVE DRAINAGE MANHOLE (SEE NOTE 13)
- ⑲ REMOVE AND RELOCATE LIGHT
- ⑳ REMOVE STEEL GUTTER PLATES
- ㉑ PROTECT BOLLARD IN PLACE
- ㉒ PROTECT OCS POLE/BOX IN PLACE
- ㉓ REMOVE OCS POLE
- ㉔ REMOVE TRACK (SEE NOTE 12)
- ㉕ REMOVE PEDESTRIAN RAMP
- ㉖ RELOCATE SIGN (SEE TRAFFIC PLANS)
- ㉗ PROTECT TRAFFIC SIGNAL BOX IN PLACE (SEE TRAFFIC PLANS)
- ㉘ REMOVE TRAFFIC SIGNAL BOX (SEE TRAFFIC PLANS)
- ㉙ PROTECT DRAIN INLET IN PLACE (SEE NOTE 13)
- ㉚ SEE NOTE 5

LEGEND:

- LIMITS OF CONSTRUCTION
- AC PAVEMENT REMOVAL
- SIDEWALK REMOVAL
SEE NOTE 8

NOTES:

1. RESTORE ALL DISTURBED GROUND SURFACES TO ORIGINAL CONDITION.
2. SAWCUT AND MATCH EXISTING PAVEMENT.
3. PROTECT EXISTING INFRASTRUCTURE NOT BEING REMOVED.
4. IN APARTMENT PLAZA AREA, CONCRETE SHALL BE REMOVED TO THE NEAREST CONTRACTION JOINT.
5. FOR EXACT UTILITY TREATMENT DETAILS SUCH AS SALVAGE, REMOVE, RELOCATE, AND PROTECT IN PLACE, SEE UTILITY RELOCATION PLAN DRAWINGS U1210 AND U1211.
6. CURB REMOVAL IS TO BE TO THE NEXT CONTRACTION JOINT FROM THE IMPACTED AREA AND IS TO REMAIN WITHIN THE LIMITS OF CONSTRUCTION.
7. IN CRA, ALL EXISTING DEVELOPMENT INCLUDING BUT NOT LIMITED TO: BUILDINGS, DRIVEWAYS, PARKING AREAS, UTILITIES, SIGNS, POLES FOUNDATIONS, ETC WILL BE REMOVED BY OTHERS OUTSIDE THIS CONTRACT.
8. IT IS ANTICIPATED FOR THIS SUBMITTAL THAT THE LIMITS OF CRA DEMO ARE THE PROPERTY LINES FROM BACK OF SIDEWALK TO BACK OF SIDEWALK.
9. ITEM TO BE SALVAGED AND RETURNED TO OWNER.
10. EXISTING BUILDINGS ON THE PROPERTY OWNED BY GRA ALONG SIMPSON AVE. WILL ENCROUGH OVER PROPERTY LINES. BUILDINGS THAT ENCROUGH INTO THE PUBLIC RIGHT OF WAY WILL NEED TO BE DEMOLISHED PRIOR TO FINAL PLAT APPROVAL.
11. COORDINATE WITH APARTMENT COMPLEX TO DETERMINE IF ITEM CAN BE SALVAGED AND RETURNED TO OWNER, RELOCATED, OR REMOVED.
12. BEGIN REMOVAL AT INSULATED JOINTS, SEE K1201 FOR MORE DETAILS.
13. SEE DRAWINGS D1201 - D1203 FOR MORE INFORMATION.

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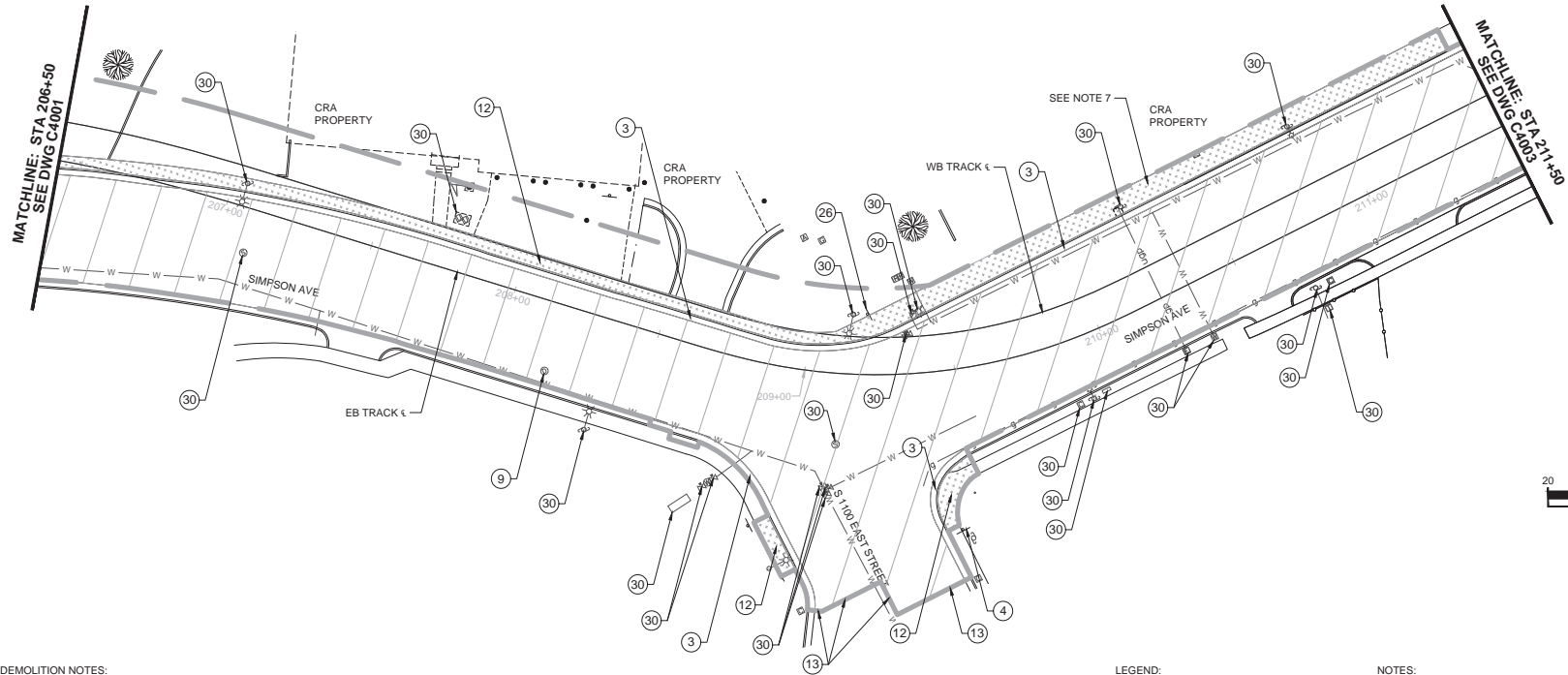


Submitted By: _____

Approved By: _____

Designed By: T. COVEYOU
Drawn By: T. COVEYOU
Checked By: A. DIGIROLAMO
Approved By: F. NANNENGA




S-LINE EXTENSION PROJECT		Scale: 1" = 20'
CADD Filename: SL-C-4-001.dwg		Submittal Date: 01-16-26
UTA Contract No.: 24-03849		Sheet No.:
Drawing No.: C4001		



DEMOLITION NOTES:

- ① RELOCATE BUMPING POST TO END OF LINE
- ② REMOVE CONCRETE
- ③ REMOVE CURB AND GUTTER
- ④ REMOVE SIGN AND PROVIDE TO OWNER
- ⑤ REMOVE TREE
- ⑥ RELOCATE DECORATIVE LIGHTING
- ⑦ REMOVE PLANTER
- ⑧ REMOVE DRAIN INLET (SEE NOTE 9)
- ⑨ PROTECT DRAINAGE MANHOLE IN PLACE (SEE NOTE 9)
- ⑩ PROTECT TRAFFIC SIGNAL POLE IN PLACE (SEE TRAFFIC PLANS)
- ⑪ PROTECT LIGHT POLE IN PLACE
- ⑫ REMOVE SIDEWALK
- ⑬ SAWCUT ASPHALT/CONCRETE, TYP., SEE NOTE 2
- ⑭ REMOVE TRAFFIC SIGNAL POLE (SEE TRAFFIC PLANS)
- ⑮ REMOVE AND REPLACE TACTILE PAVING
- ⑯ REMOVE BRICK CROSSWALK, REPLACE WITH BRICK TEXTURED EPOXY
- ⑰ REMOVE BENCH
- ⑱ REMOVE DRAINAGE MANHOLE (SEE NOTE 9)
- ⑲ REMOVE AND RELOCATE LIGHT
- ⑳ REMOVE STEEL GUTTER PLATES
- ㉑ PROTECT BOLLARD IN PLACE
- ㉒ PROTECT OCS POLE/BOX IN PLACE
- ㉓ REMOVE OCS POLE
- ㉔ REMOVE TRACK
- ㉕ REMOVE PEDESTRIAN RAMP
- ㉖ RELOCATE SIGN (SEE TRAFFIC PLANS)
- ㉗ PROTECT TRAFFIC SIGNAL BOX IN PLACE (SEE TRAFFIC PLANS)
- ㉘ REMOVE TRAFFIC SIGNAL BOX (SEE TRAFFIC PLANS)
- ㉙ PROTECT DRAIN INLET IN PLACE (SEE NOTE 9)
- ⑳ SEE NOTE 4

LEGEND:

-  LIMITS OF CONSTRUCTION
-  AC PAVEMENT REMOVAL
-  SIDEWALK REMOVAL
SEE NOTE 7

NOTES:

- 1. RESTORE ALL DISTURBED GROUND SURFACES TO ORIGINAL CONDITION.
- 2. SAWCUT AND MATCH EXISTING PAVEMENT.
- 3. PROTECT EXISTING INFRASTRUCTURE NOT BEING REMOVED.
- 4. FOR EXACT UTILITY TREATMENT DETAILS SUCH AS SALVAGE, REMOVE, RELOCATE, AND PROTECT IN PLACE, SEE UTILITY RELOCATION PLAN DRAWINGS U1210 - U1214, U1225, U1231, AND U1232.
- 5. CURB REMOVAL IS TO BE TO THE NEXT CONTRACTION JOINT FROM THE IMPACTED AREA AND IS TO REMAIN WITHIN THE LIMITS OF CONSTRUCTION.
- 6. IN CRA, ALL EXISTING DEVELOPMENT INCLUDING BUT NOT LIMITED TO: BUILDINGS, DRIVEWAYS, PARKING AREAS, UTILITIES, SIGNS, POLES FOUNDATIONS, ETC WILL BE REMOVED BY OTHERS OUTSIDE THIS CONTRACT.
- 7. SIDEWALK ALONG SIMPSON BETWEEN 1100 EAST STREET AND HIGHLAND INTERSECTION MAY BE REMOVED AS PART OF CRA SITE DEMO. IF NOT, THIS PROJECT WILL REMOVE IT.
- 8. EXISTING BUILDINGS ON THE PROPERTY OWNED BY CRA ALONG SIMPSON AVE. WILL ENCROACH OVER PROPERTY LINES. BUILDINGS THAT ENCROACH INTO THE PUBLIC RIGHT OF WAY WILL NEED TO BE DEMOLISHED PRIOR TO FINAL PLAT APPROVAL.
- 9. SEE DRAWINGS D1201 - D1203 FOR MORE INFORMATION.

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Submitted By: _____



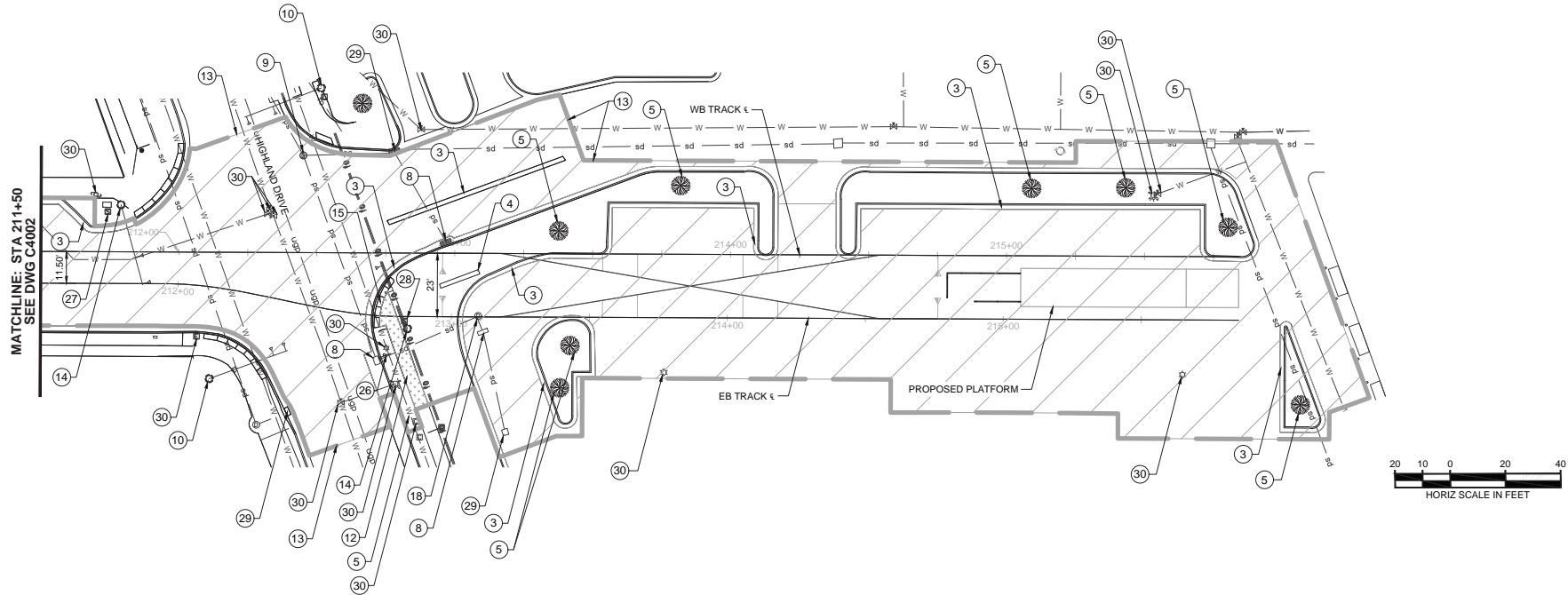
Approved By: _____

Designed By:	T. COVEYOU
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT

DEMOLITION PLAN
WB STA 206+50 TO WB STA 211+50

Scale:	1" = 20'
CADD Filename:	SL-C-4-002.dwg
Submission Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C4002
Sheet No.:	



DEMOLITION NOTES:

- ① RELOCATE BUMPING POST TO END OF LINE
- ② REMOVE CONCRETE
- ③ REMOVE CURB AND GUTTER
- ④ REMOVE SIGN AND PROVIDE TO OWNER
- ⑤ REMOVE TREE
- ⑥ RELOCATE DECORATIVE LIGHTING
- ⑦ REMOVE PLANTER
- ⑧ REMOVE DRAIN INLET (SEE NOTE 10)
- ⑨ PROTECT DRAINAGE MANHOLE IN PLACE (SEE NOTE 10)
- ⑩ PROTECT TRAFFIC SIGNAL POLE IN PLACE (SEE TRAFFIC PLANS)
- ⑪ PROTECT LIGHT POLE IN PLACE
- ⑫ REMOVE SIDEWALK
- ⑬ SAWCUT ASPHALT/CONCRETE, TYP., SEE NOTE 2
- ⑭ REMOVE TRAFFIC SIGNAL POLE (SEE TRAFFIC PLANS)
- ⑮ REMOVE AND REPLACE TACTILE PAVING
- ⑯ REMOVE BRICK CROSSWALK, REPLACE WITH BRICK TEXTURED EPOXY
- ⑰ REMOVE BENCH
- ⑱ REMOVE DRAINAGE MANHOLE (SEE NOTE 10)
- ⑲ REMOVE AND RELOCATE LIGHT (SEE ROADWAY PLANS)
- ⑳ REMOVE STEEL GUTTER PLATES
- ㉑ PROTECT BOLLARD IN PLACE
- ㉒ PROTECT OCS POLE/BOX IN PLACE
- ㉓ REMOVE OCS POLE
- ㉔ REMOVE TRACK
- ㉕ REMOVE PEDESTRIAN RAMP
- ㉖ RELOCATE SIGN (SEE TRAFFIC PLANS)
- ㉗ PROTECT TRAFFIC SIGNAL BOX IN PLACE (SEE TRAFFIC PLANS)
- ㉘ REMOVE TRAFFIC SIGNAL BOX (SEE TRAFFIC PLANS)
- ㉙ PROTECT DRAIN INLET IN PLACE (SEE NOTE 10)
- ㉚ SEE NOTE 4
- ㉛ REMOVE AND RESTORE LANDSCAPING AND IRRIGATION (SEE NOTE 11)

LEGEND:

- LIMITS OF CONSTRUCTION
- AC PAVEMENT REMOVAL
- SIDEWALK REMOVAL

NOTES:

1. RESTORE ALL DISTURBED GROUND SURFACES TO ORIGINAL CONDITION.
2. SAWCUT AND MATCH EXISTING PAVEMENT.
3. PROTECT EXISTING INFRASTRUCTURE NOT BEING REMOVED.
4. FOR EXACT UTILITY TREATMENT DETAILS SUCH AS SALVAGE, REMOVE, RELOCATE, AND PROTECT IN PLACE, SEE UTILITY RELOCATION PLAN DRAWINGS U1213, U1214, U1220 - U1222, U1225 - U1227, U1231, AND U1232. CURB REMOVAL IS TO BE TO THE NEXT CONTRACTION JOINT FROM THE IMPACTED AREA AND IS TO REMAIN WITHIN THE LIMITS OF CONSTRUCTION.
5. IN CRA, ALL EXISTING DEVELOPMENT INCLUDING BUT NOT LIMITED TO: BUILDINGS, DRIVEWAYS, PARKING AREAS, UTILITIES, SIGNS, POLES FOUNDATIONS, ETC WILL BE REMOVED BY OTHERS OUTSIDE THIS CONTRACT.
6. ITEM TO BE SALVAGED AND RETURNED TO OWNER.
7. EXISTING BUILDINGS ON THE PROPERTY OWNED BY CRA ALONG SIMPSON AVE. WILL ENCROACH OVER PROPERTY LINES. BUILDINGS THAT ENCROACH INTO THE PUBLIC RIGHT OF WAY WILL NEED TO BE DEMOLISHED PRIOR TO FINAL PLAT APPROVAL.
8. SEE CIVIL SHEETS C1108 AND C1109 FOR DEMOLITION GEOMETRY.
9. SEE DRAWINGS D1201 - D1203 FOR MORE INFORMATION.
10. SEE DRAWINGS C1003 FOR THE LOCATIONS OF THE PROPOSED LANDSCAPING.



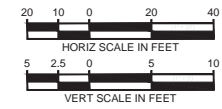
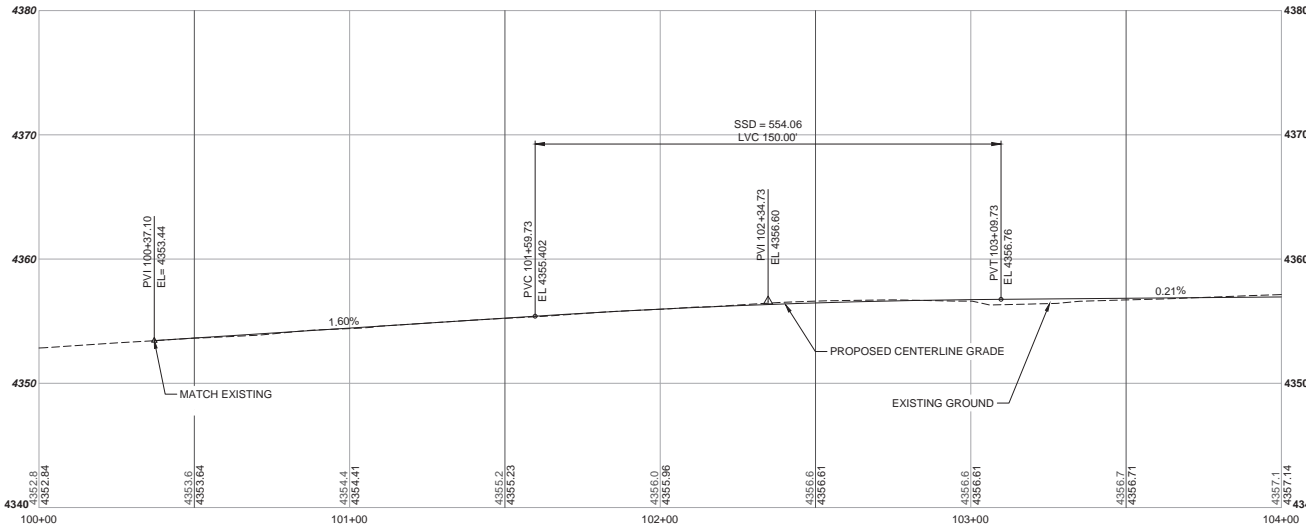
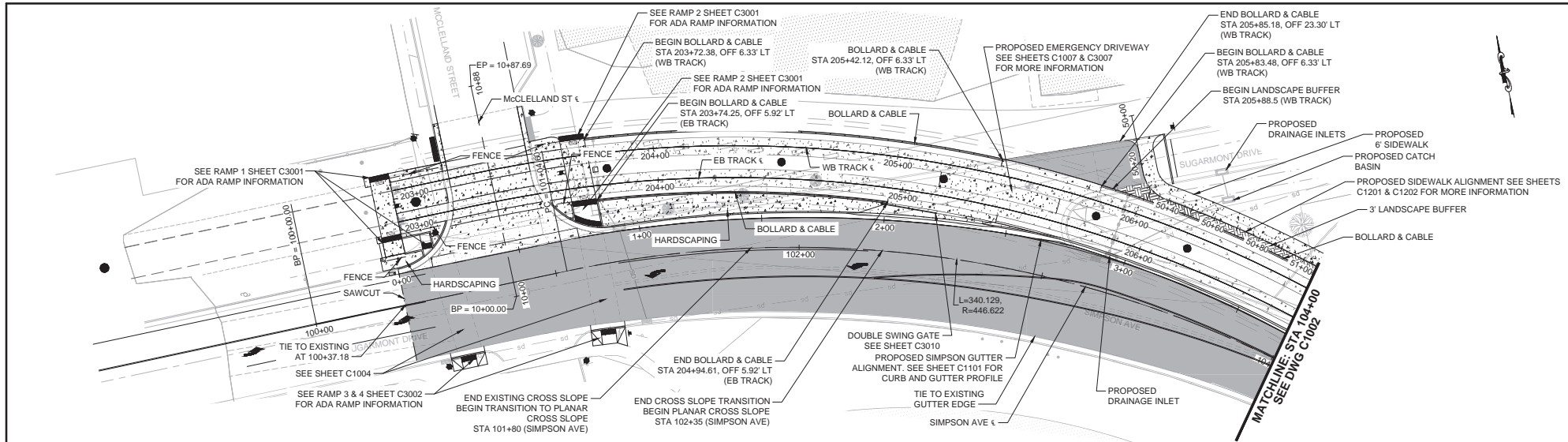
Designed By: T. COVEYOU
Drawn By: T. COVEYOU
Checked By: A. DIGIROLAMO
Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT

DEMOLITION PLAN
WB STA 211+50 TO WB STA 215+84.18

Scale: 1" = 20'
CADD Filename: SL-C-4-003.dwg
Submitted Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: C4003
Sheet No.:

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- LEGEND:**
- PAVEMENT
 - LANDSCAPING
 - CONCRETE
 - BP = BEGIN POINT
 - EP = END POINT

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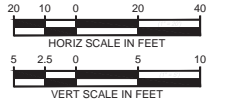
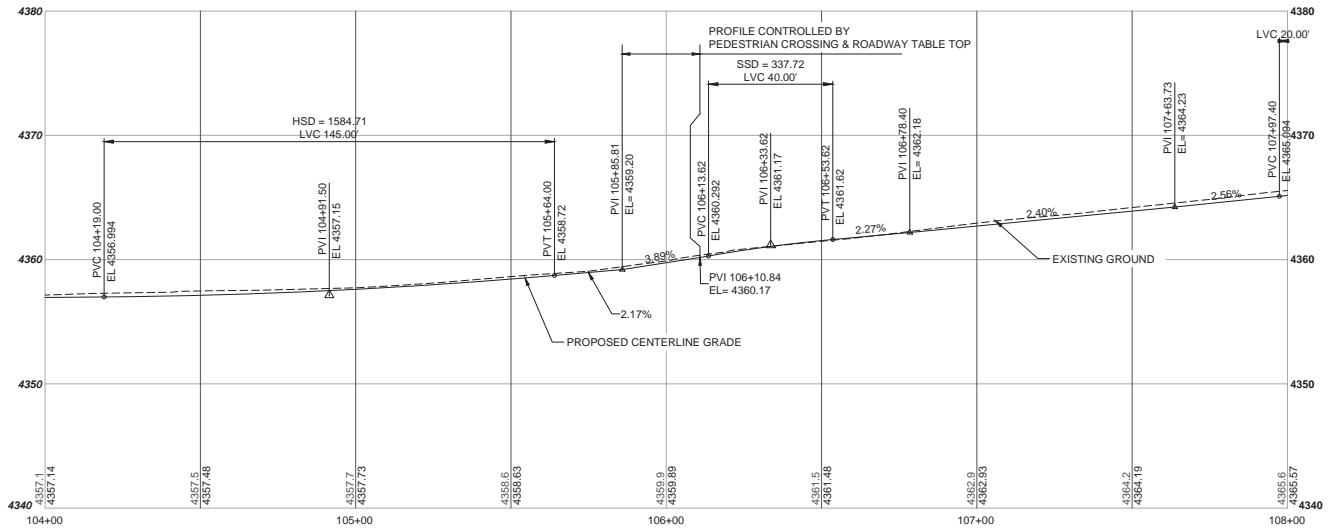
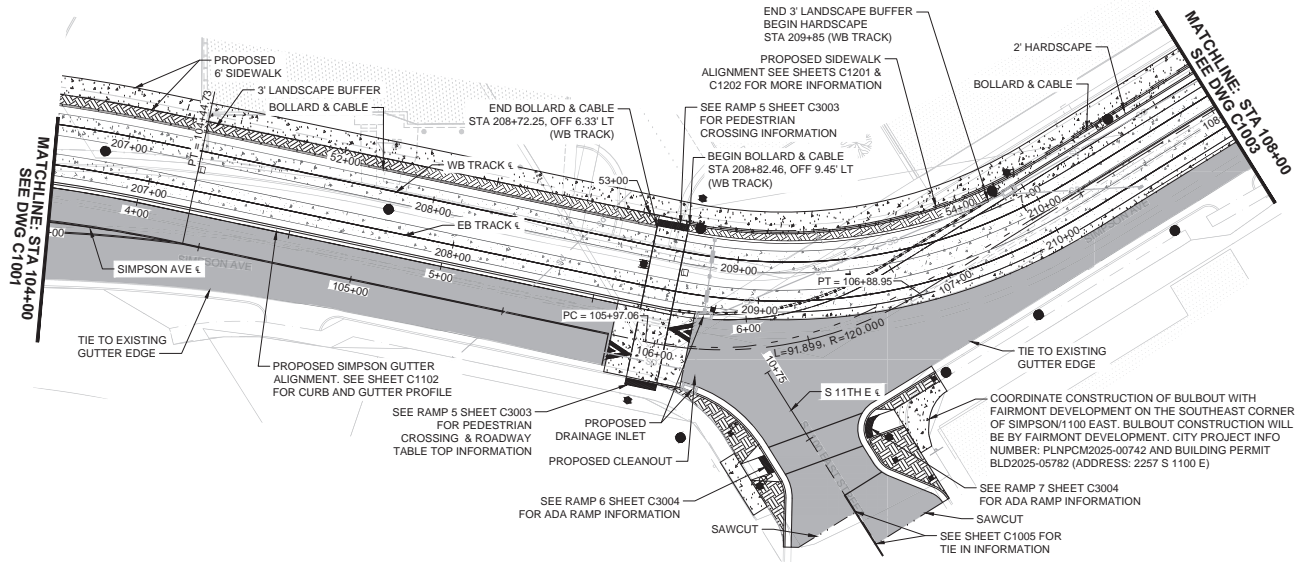
Designed By:
M. HARTMANN
Drawn By:
M. HARTMANN
Checked By:
A. DIGIROLAMO
Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT

SIMPSON PLAN AND PROFILE
STA 100+00 TO STA 104+00

Scale:	H: 1" = 20' V: 1" = 5'
CADD Filename:	SL-C-1-001.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1001
Sheet No.:	

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LEGEND:

- PAVEMENT
- LANDSCAPING
- CONCRETE
- BP = BEGIN POINT
- EP = END POINT

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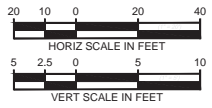
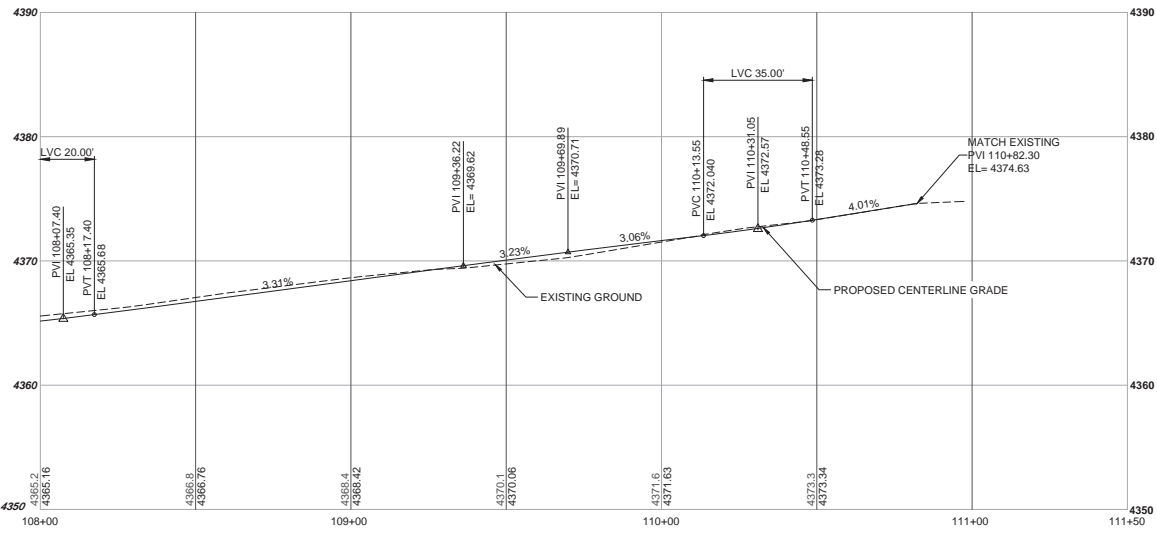
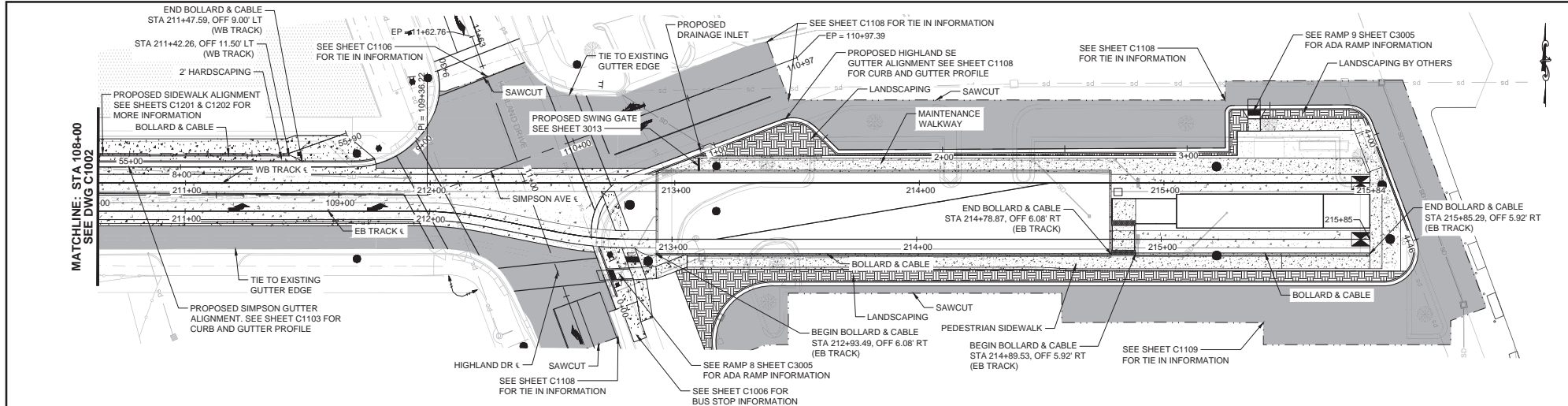





Designed By: M. HARTMANN
Drawn By: M. HARTMANN
Checked By: A. DIGIROLAMO
Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT

SIMPSON PLAN AND PROFILE
STA 104+00 TO STA 108+00

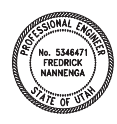
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Submitted Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: C1002



- LEGEND:**
-  PAVEMENT
 -  LANDSCAPING
 -  CONCRETE
 - BP = BEGIN POINT
 - EP = END POINT

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Designed By:
M. HARTMANN

Drawn By:
M. HARTMANN

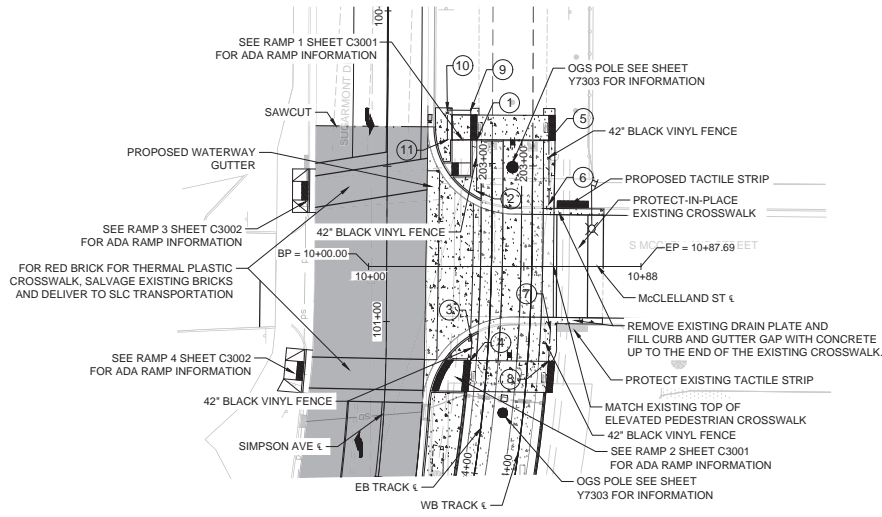
Checked By:
A. DIGIROLAMO

Approved By:
F. NANNENGA

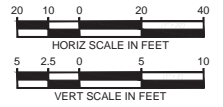
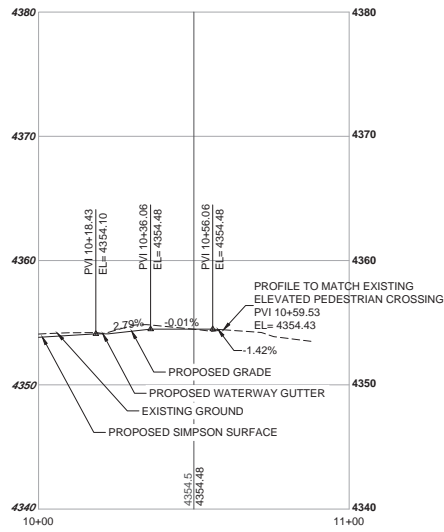
S-LINE EXTENSION PROJECT

SIMPSON PLAN AND PROFILE
STA 108+00 TO STA 111+00

State: H: 1" = 20' V: 1" = 5'	
CADD Filename: SL-C-1-003.dwg	
Submitted Date: 01-16-26	
UTA Contract No.: 24-03849	
Drawing No.: C1003	Sheet No.:



- ① BEGIN 42" BLACK VINYL FENCE STA 202+92.42, OFF 5.00' RT (EB TRACK)
- ② END 42" BLACK VINYL FENCE STA 203+08.92, OFF 5.00' RT (EB TRACK)
- ③ BEGIN 42" BLACK VINYL FENCE STA 203+57.82, OFF 5.35' RT (EB TRACK)
- ④ END 42" BLACK VINYL FENCE STA 203+63.82, OFF 5.36' RT (EB TRACK)
- ⑤ BEGIN 42" BLACK VINYL FENCE STA 202+91.70, OFF 5.21' LT (WB TRACK)
- ⑥ END 42" BLACK VINYL FENCE STA 203+12.21, OFF 5.35' LT (WB TRACK)
- ⑦ BEGIN 42" BLACK VINYL FENCE STA 203+53.46, OFF 5.41' LT (WB TRACK)
- ⑧ END 42" BLACK VINYL FENCE STA 203+62.46, OFF 6.67' LT (WB TRACK)
- ⑨ BEGIN 42" BLACK VINYL FENCE STA 202+82.92, OFF 6.97' RT (EB TRACK)
- ⑩ 42" BLACK VINYL FENCE CORNER STA 202+82.89, OFF 14.53' RT (EB TRACK)
- ⑪ END 42" BLACK VINYL FENCE STA 202+92.44, OFF 14.48' RT (EB TRACK)



- LEGEND:**
- PAVEMENT
 - LANDSCAPING
 - CONCRETE
 - BP = BEGIN POINT
 - EP = END POINT

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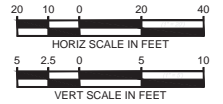
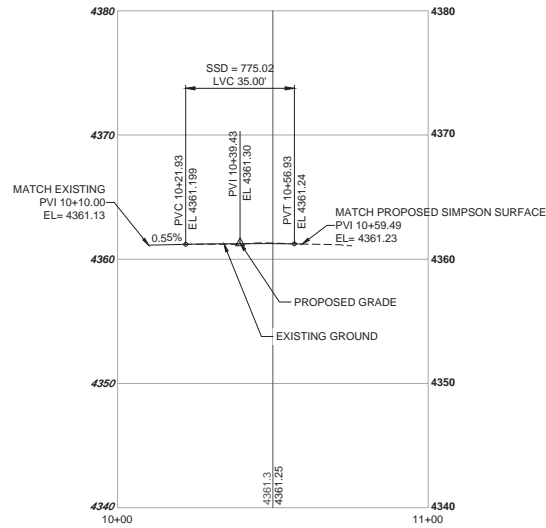
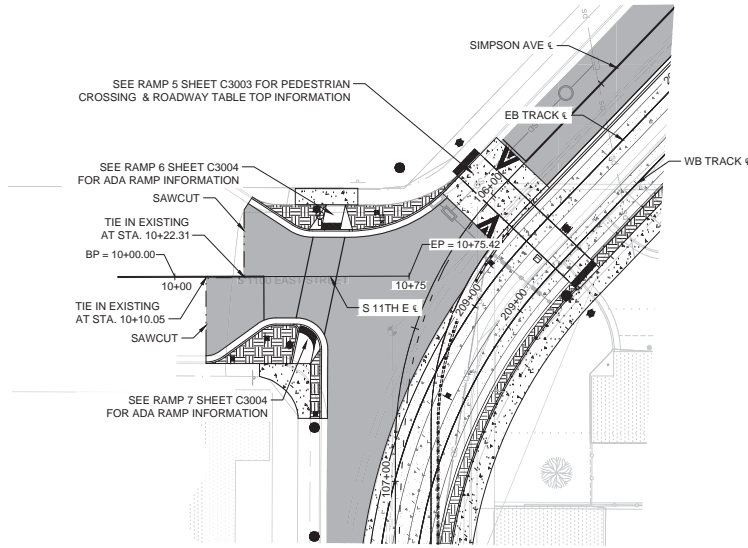


Designed By:	M. HARTMANN
Drawn By:	M. HARTMANN
Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT

**McCLELLAND ST
PLAN AND PROFILE
STA 10+00 TO STA 10+88**

Scale:	H: 1" = 20' V: 1" = 5'
CADD Filename:	SL-C-1-004.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1004
Sheet No.:	



- LEGEND:**
- PAVEMENT
 - LANDSCAPING
 - CONCRETE
 - BP = BEGIN POINT
 - EP = END POINT

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Submitted By: _____ Approved By: _____

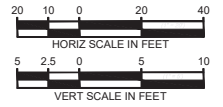
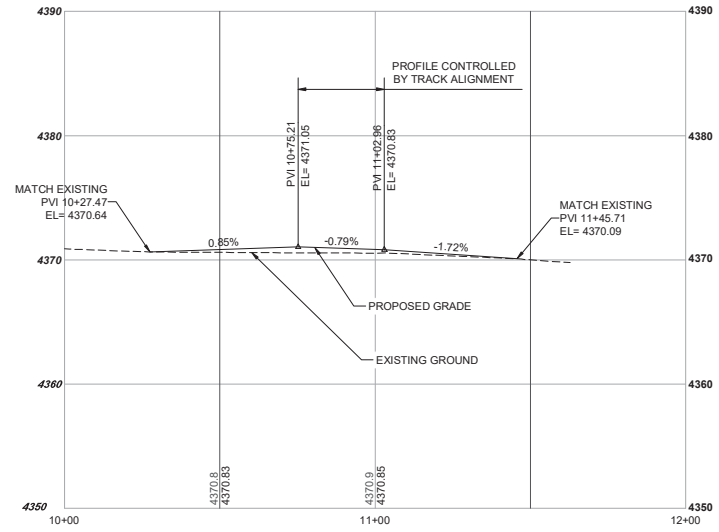
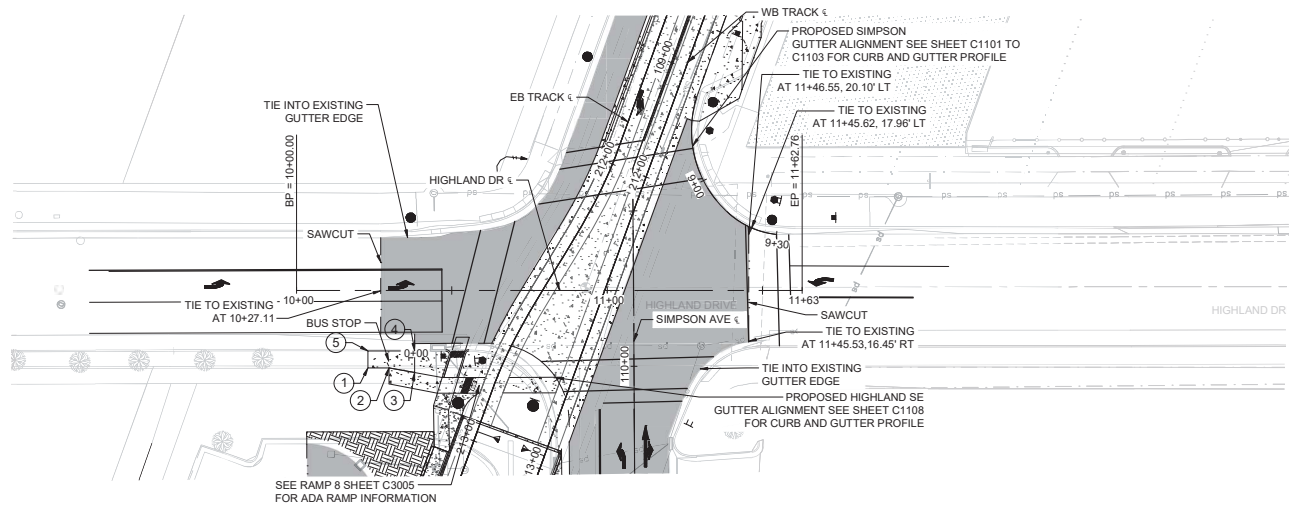
Designed By:	M. HARTMANN
Drawn By:	M. HARTMANN
Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT

**S 11TH E PLAN AND PROFILE
STA 10+00 TO STA 11+00**

State:	H: 1" = 20' V: 1" = 5'
CADD Filename:	SL-C-C-1-005.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1005
Sheet No.:	

- ① BUS STOP
STA 10+23.00, OFF 24.99' RT
(HIGHLAND DR CL)
MATCH EXISTING SIDEWALK
- ② BUS STOP
STA 10+29.79, OFF 24.97' RT
(HIGHLAND DR CL)
MATCH EXISTING SIDEWALK
- ③ BUS STOP
STA 10+38.00, OFF 26.46' RT
(HIGHLAND DR CL)
MATCH PROPOSED SIDEWALK
- ④ BUS STOP
STA 10+38.01, OFF 19.59' RT
(HIGHLAND DR CL)
MATCH EXISTING BACK OF CURB
- ⑤ BUS STOP
STA 10+22.98, OFF 19.51' RT
(HIGHLAND DR CL)
MATCH EXISTING BACK OF CURB



- LEGEND:**
- PAVEMENT
 - LANDSCAPING
 - CONCRETE
 - BP = BEGIN POINT
 - EP = END POINT

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REV	DATE	Description



Designed By:
M. HARTMANN

Drawn By:
M. HARTMANN

Checked By:
A. DIGIROLAMO

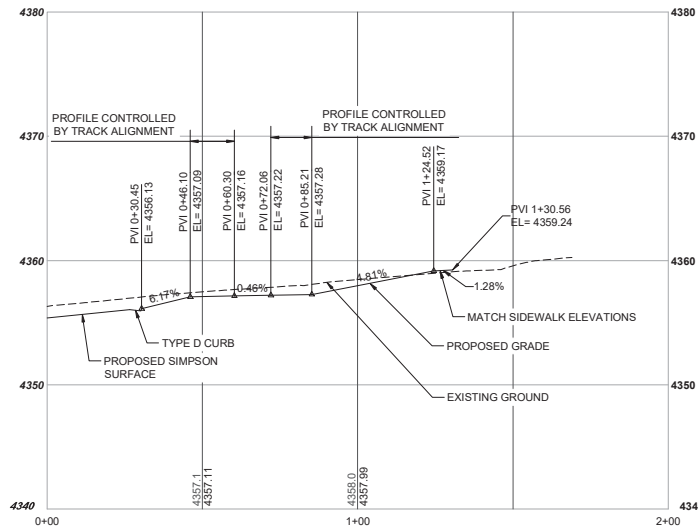
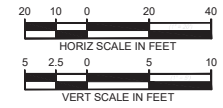
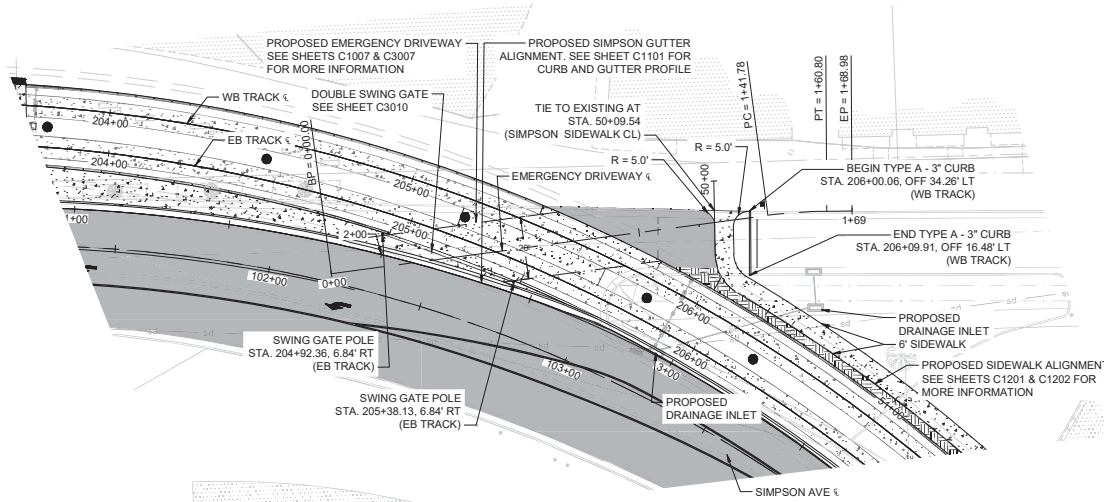
Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT

**HIGHLAND DR
PLAN AND PROFILE
STA 10+00 TO STA 11+63**

Scale:	H: 1" = 20' V: 1" = 5'
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Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1006
Sheet No.:	

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LEGEND:

PAVEMENT

LANDSCAPING

CONCRETE

BP = BEGIN POINT

EP = END POINT

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REV	DATE	Description	



Designed By:
M. HARTMANN

Drawn By:
M. HARTMANN

Checked By:
A. DIGIROLAMO

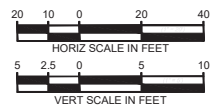
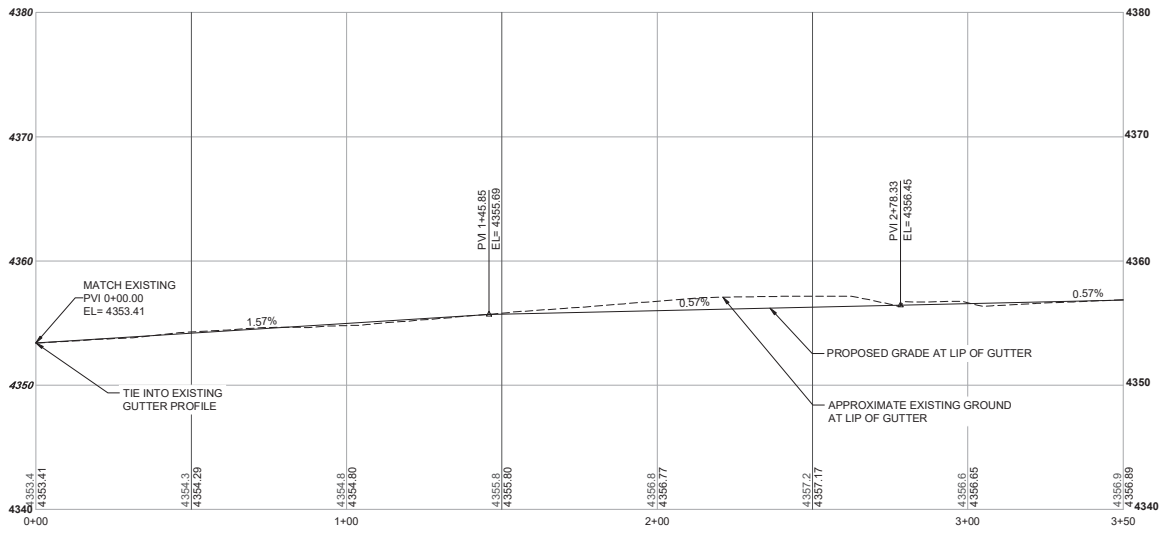
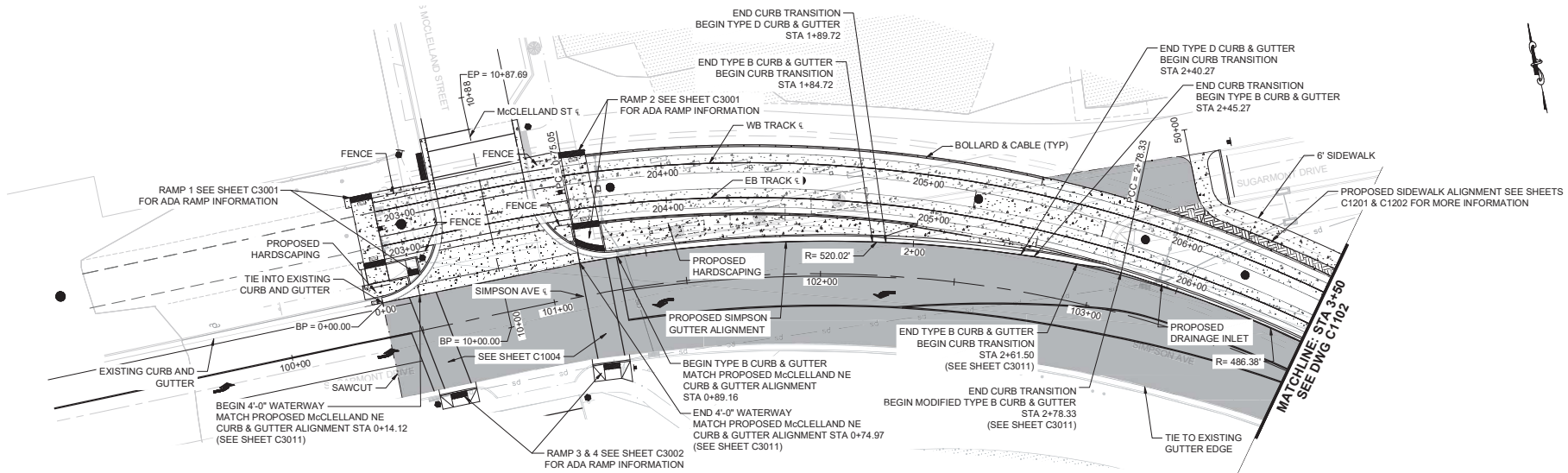
Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT

EMERGENCY DRIVEWAY
PLAN AND PROFILE
STA 0+00 TO STA 1+50

Scale:	H: 1" = 20' V: 1" = 5'
CADD Filename:	SL-C-C-1-007.dwg
Submittal Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1007
Sheet No.:	

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 1/16/2026



- LEGEND:**
- PAVEMENT
 - LANDSCAPING
 - CONCRETE
- BP = BEGIN POINT
EP = END POINT

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REV	DATE	Description



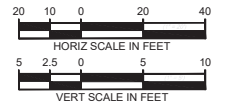
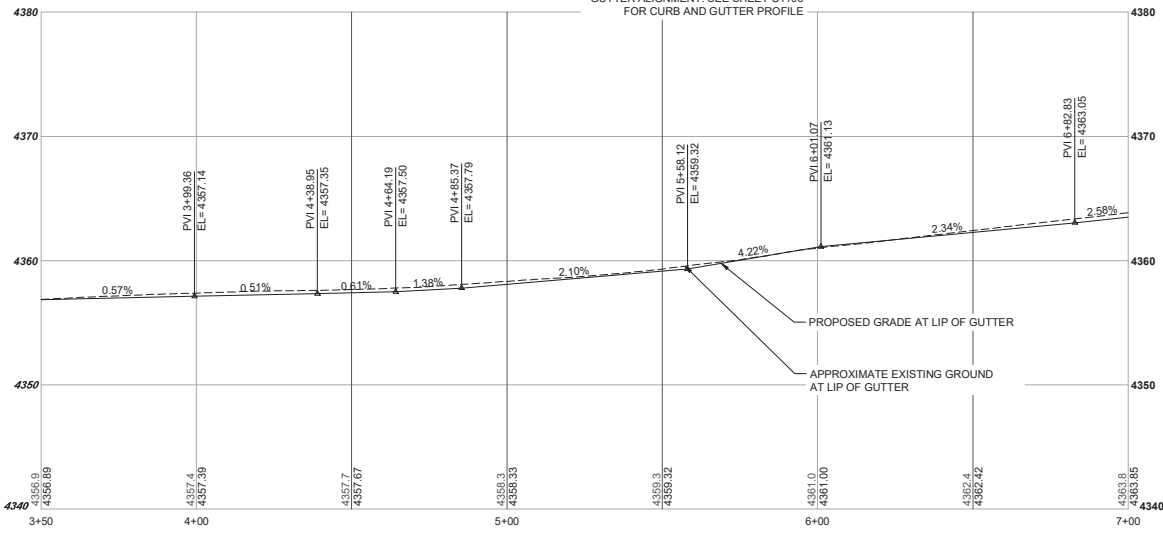
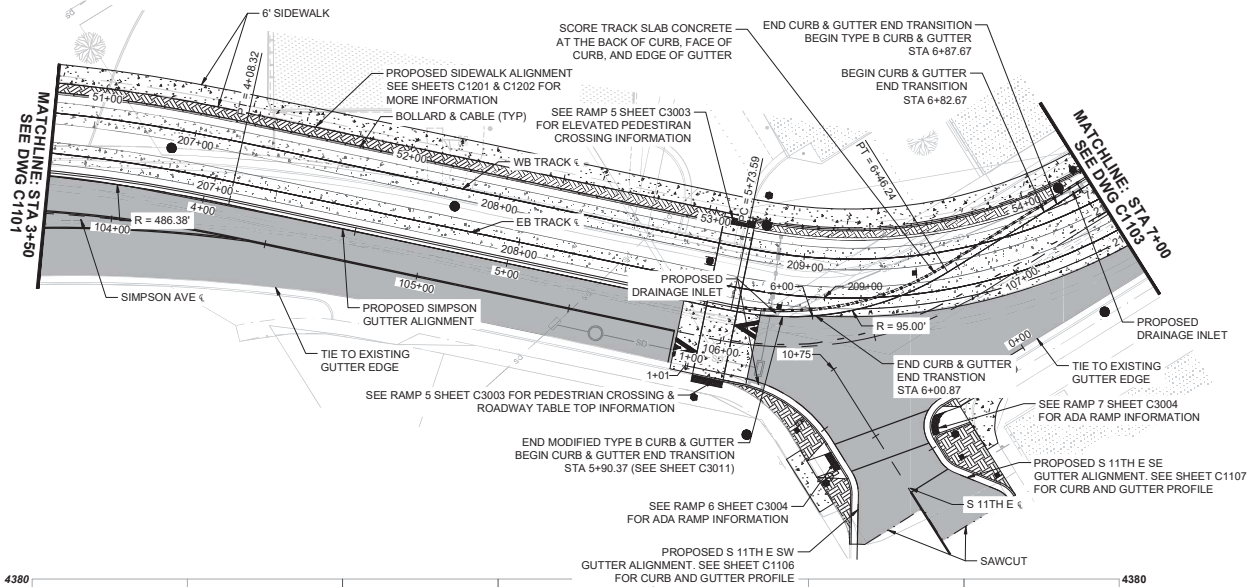
Designed By: M. HARTMANN
 Drawn By: M. HARTMANN
 Checked By: A. DIGIROLAMO
 Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT

**SIMPSON CURB AND GUTTER
 PLAN AND PROFILE
 STA 0+00 TO STA 3+50**

Scale: H: 1" = 20' V: 1" = 5'
CADD Filename: SL-C-C-1-101.dwg
Submission Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: C1101

Submitted By: _____ Approved By: _____



- LEGEND:**
- PAVEMENT
 - LANDSCAPING
 - CONCRETE
 - BP = BEGIN POINT
 - EP = END POINT



Designed By:
M. HARTMANN

Drawn By:
M. HARTMANN

Checked By:
A. DIGIROLAMO

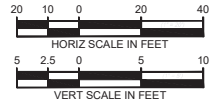
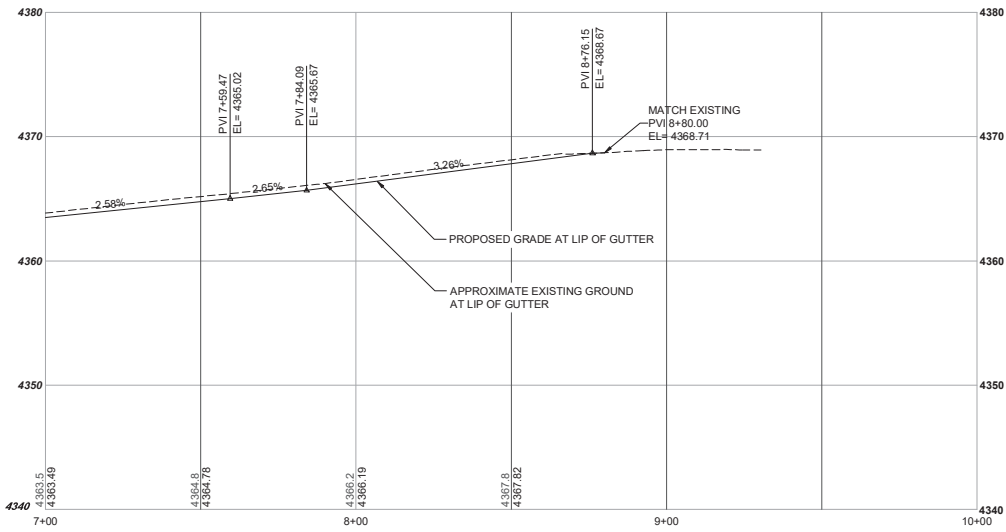
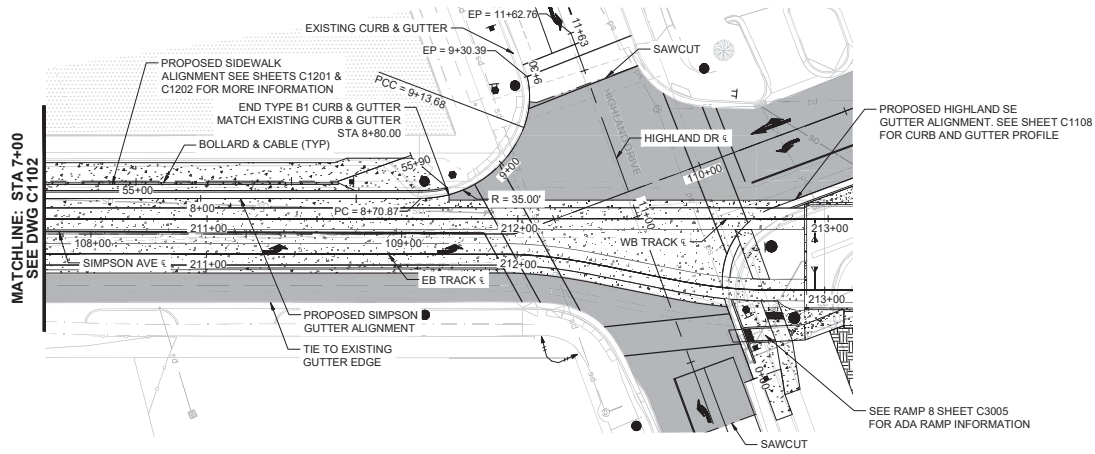
Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT

**SIMPSON CURB AND GUTTER
PLAN AND PROFILE
STA 3+50 TO STA 7+00**

Scale:	H: 1" = 20' V: 1" = 5'
CADD Filename:	SL-C-1-102.dwg
Submittal Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1102
Sheet No.:	

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- LEGEND:**
- PAVEMENT
 - LANDSCAPING
 - CONCRETE
 - BP = BEGIN POINT
 - EP = END POINT

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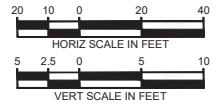
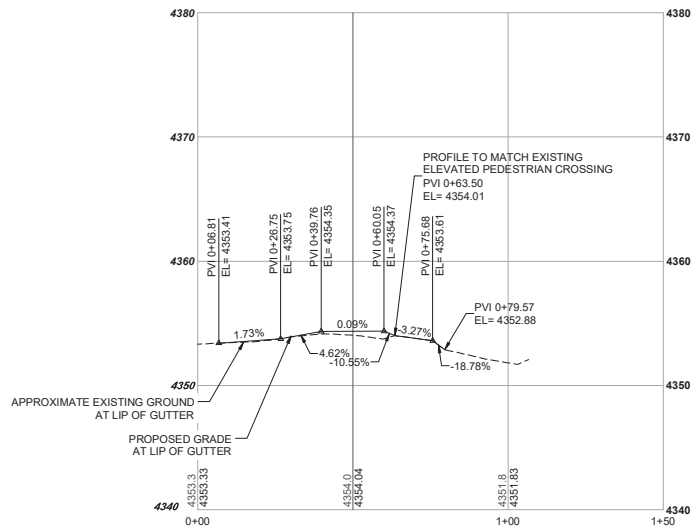
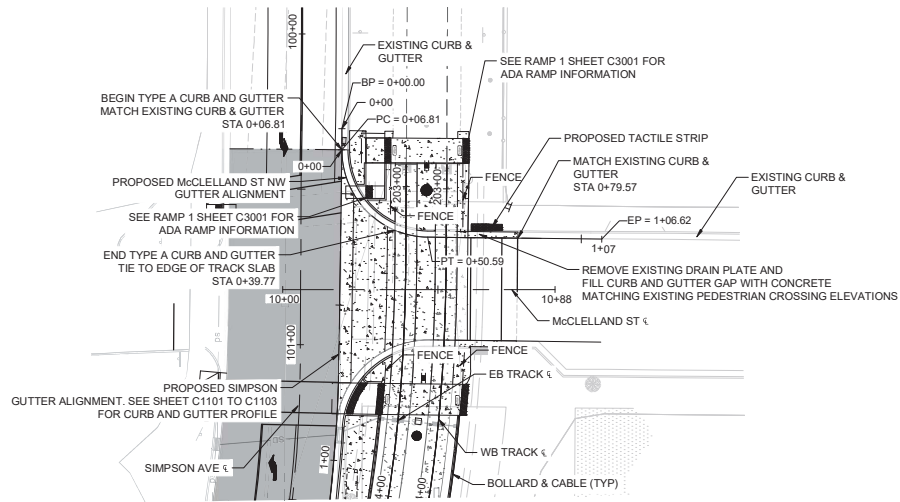
Designed By:
M. HARTMANN
Drawn By:
M. HARTMANN
Checked By:
A. DIGIROLAMO
Approved By:
F. NANNENGA




S-LINE EXTENSION PROJECT
GENERAL
SIMPSON CURB AND GUTTER
PLAN AND PROFILE
STA 7+00 TO STA 9+00

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Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1103
Sheet No.:	

Submitted By: _____

Approved By: _____



- LEGEND:**
-  PAVEMENT
 -  LANDSCAPING
 -  CONCRETE
 - BP = BEGIN POINT
 - EP = END POINT

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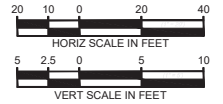
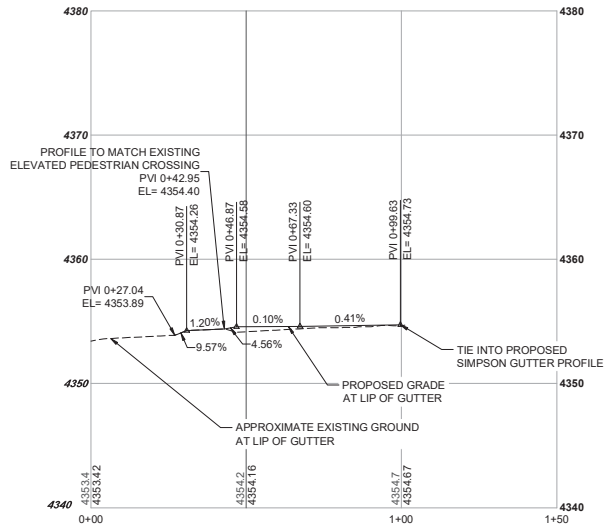
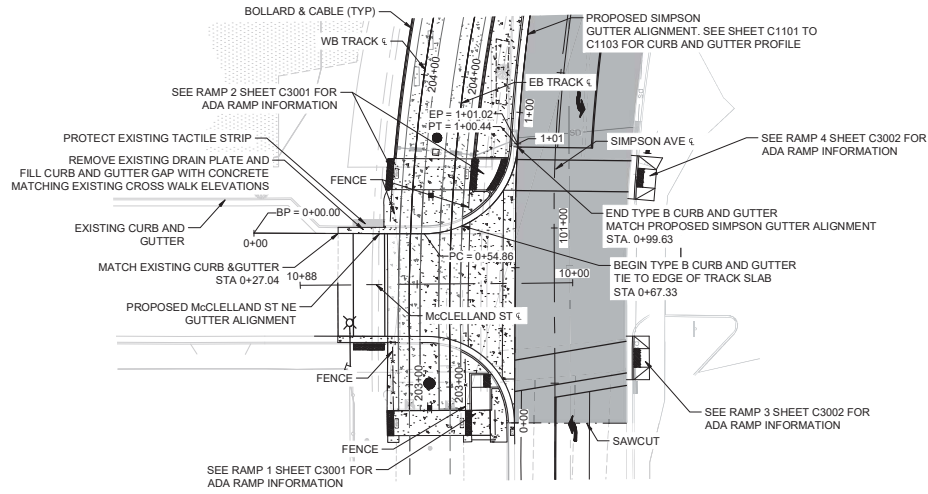
Designed By:	M. HARTMANN
Drawn By:	M. HARTMANN
Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT

**McCLELLAND ST NW CURB AND GUTTER
PLAN AND PROFILE
STA 0+00 TO STA 1+00**

Scale:	H: 1" = 20' V: 1" = 5'
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Submittal Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1104
Sheet No.:	

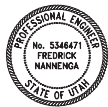
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- LEGEND:**
- PAVEMENT
 - LANDSCAPING
 - CONCRETE
 - BP = BEGIN POINT
 - EP = END POINT

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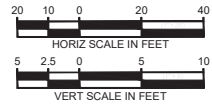
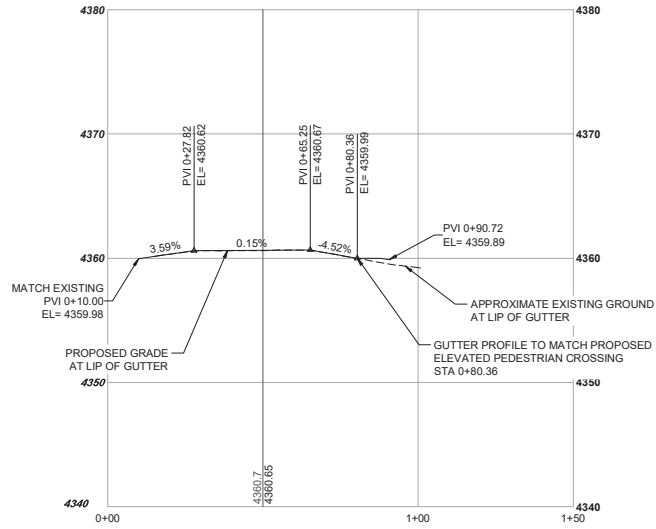
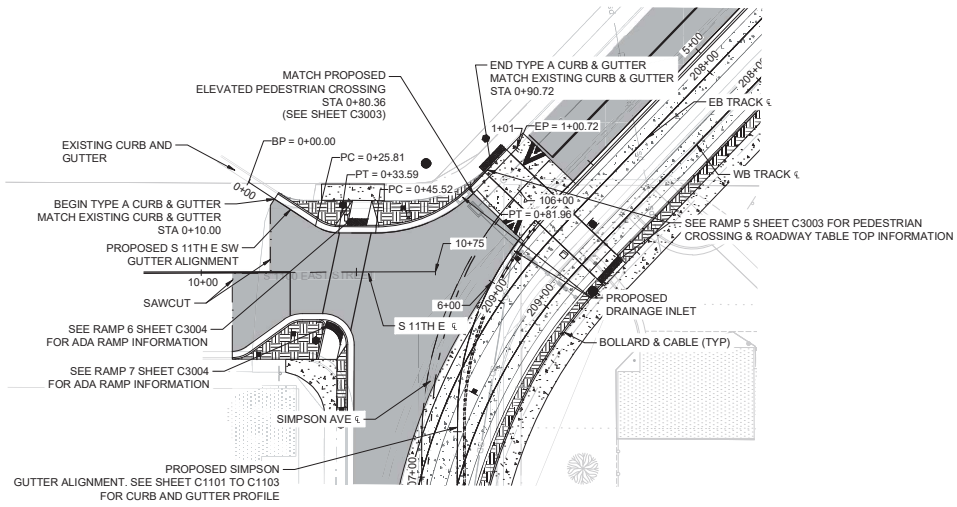
Designed By M. HARTMANN
Drawn By M. HARTMANN
Checked By A. DIGIROLAMO
Approved By F. NANNENGA

S-LINE EXTENSION PROJECT

McCLELLAND ST NE CURB AND GUTTER
PLAN AND PROFILE
STA 0+00 TO STA 1+00

Scale H: 1" = 20' V: 1" = 5'
CADD Filename SL-C-1-105.dwg
Submital Date 01-16-26
UTA Contract No. 24-03849
Drawing No. C1105
Sheet No.

Submitted By: _____ Approved By: _____



- LEGEND:**
- PAVEMENT
 - LANDSCAPING
 - CONCRETE
 - BP = BEGIN POINT
 - EP = END POINT

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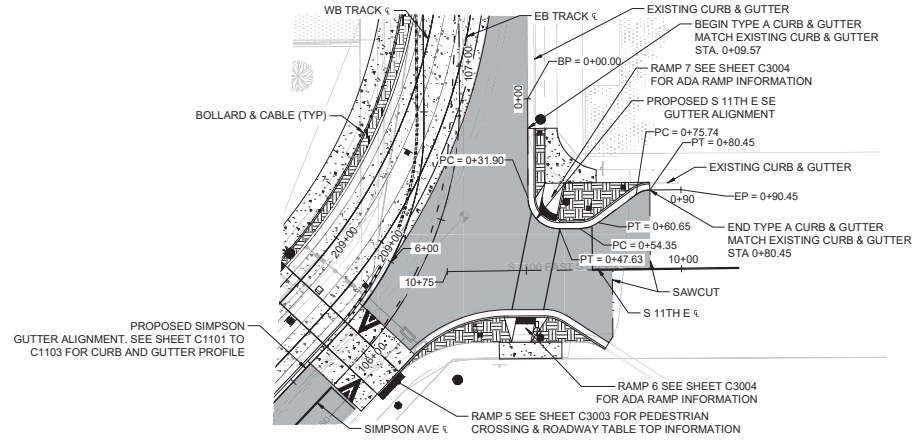
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M. HARTMANN
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Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT

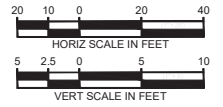
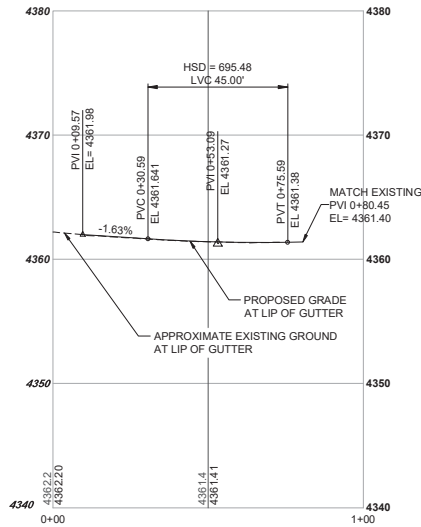
S 11TH E SW CURB AND GUTTER
PLAN AND PROFILE
STA 0+00 TO STA 1+00

Scale:	H: 1" = 20' V: 1" = 5'
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Submittal Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1106
Sheet No.:	

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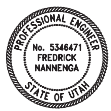
PROPOSED SIMPSON GUTTER ALIGNMENT. SEE SHEET C1101 TO C1103 FOR CURB AND GUTTER PROFILE



- LEGEND:**
- PAVEMENT
 - LANDSCAPING
 - CONCRETE
 - BP = BEGIN POINT
 - EP = END POINT

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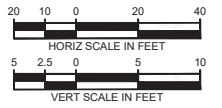
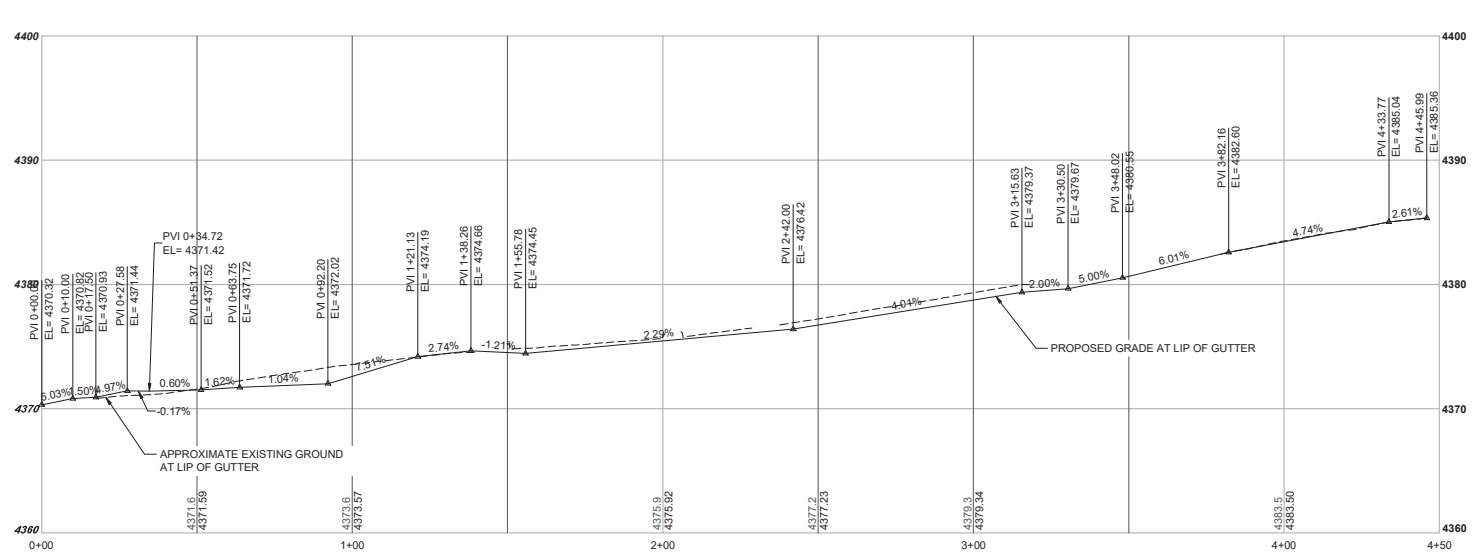
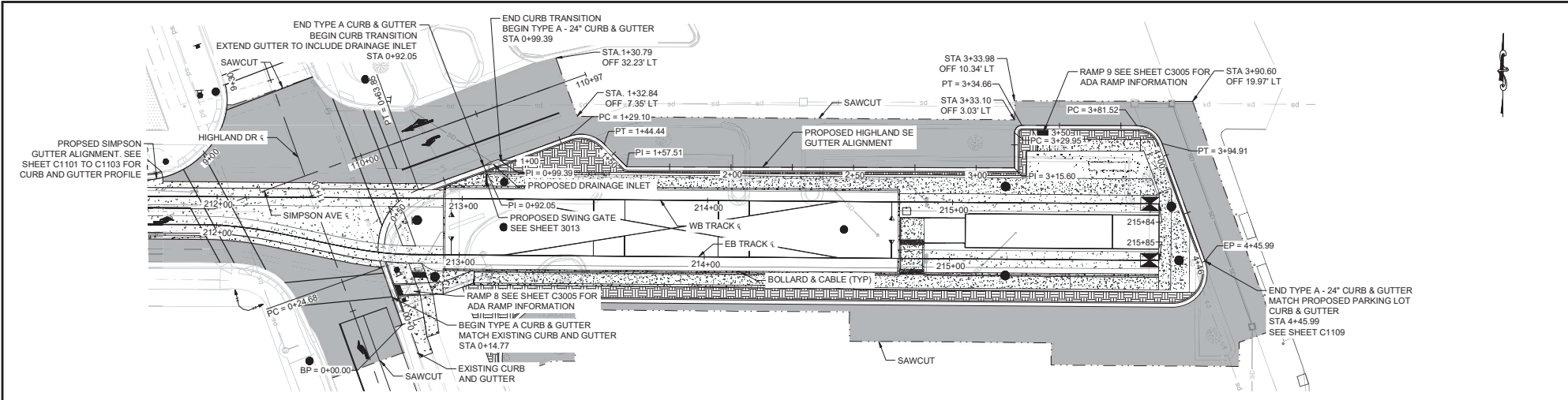


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Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT
S 11TH E SE CURB AND GUTTER
PLAN AND PROFILE
STA 0+00 TO STA 1+00

Scale:	H: 1" = 20' V: 1" = 5'
CADD Filename:	SL-C-C-1-107.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1107
Sheet No.:	

Submitted By: _____ Approved By: _____



- LEGEND:**
- PAVEMENT
 - LANDSCAPING
 - CONCRETE
 - BP = BEGIN POINT
 - EP = END POINT

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M. HARTMANN

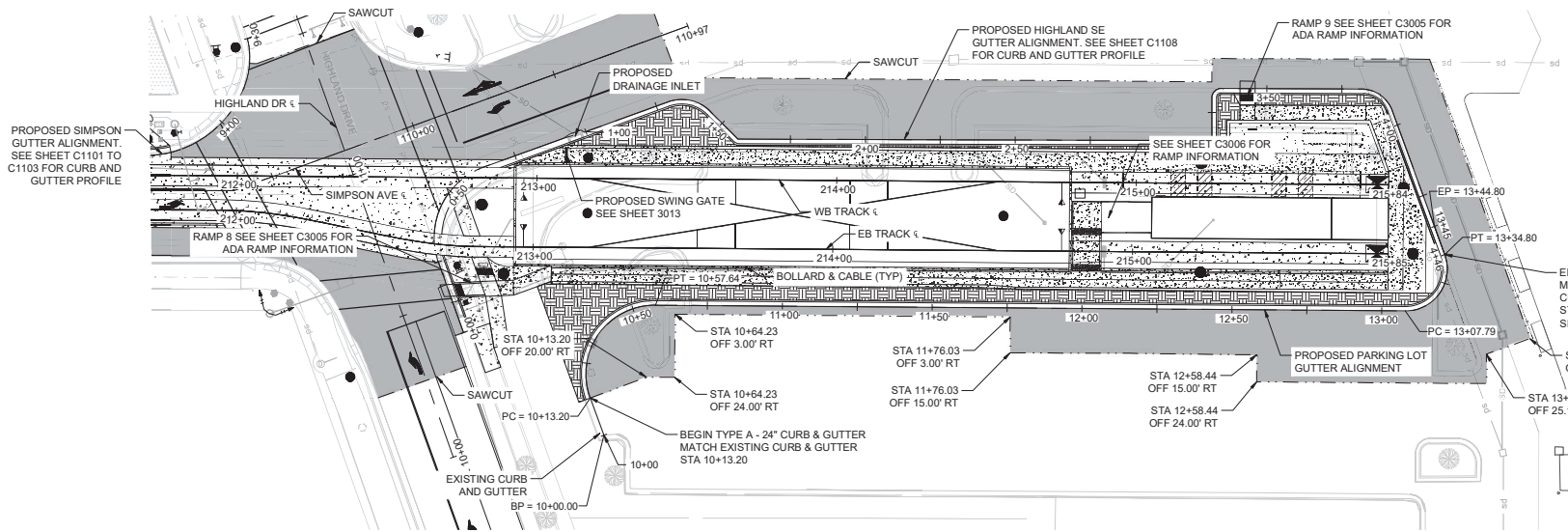
Checked By:
A. DIGIROLAMO

Approved By:
F. NANNENGA

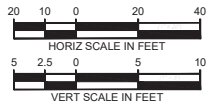
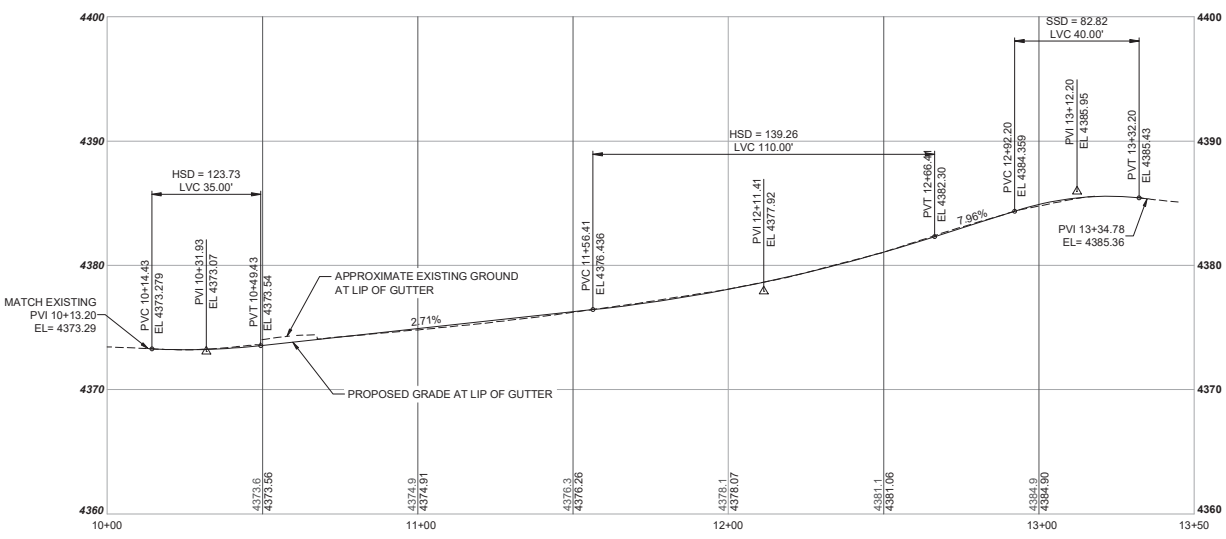
S-LINE EXTENSION PROJECT

**HIGHLAND SE CURB AND GUTTER
PLAN AND PROFILE
STA 0+00 TO STA 4+50**

Scale:	H: 1" = 20' V: 1" = 5'
CADD Filename:	SL-C-C-1-108.dwg
Submittal Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1108
Sheet No.:	



END TYPE A - 24" CURB & GUTTER
MATCH PROPOSED HIGHLAND SE
CURB & GUTTER
STA 13+34.80
SEE SHEET C1108



LEGEND:

- PAVEMENT
- LANDSCAPING
- CONCRETE
- BP = BEGIN POINT
- EP = END POINT

11/15/2023				
REV	DATE	Description		

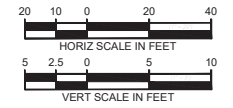
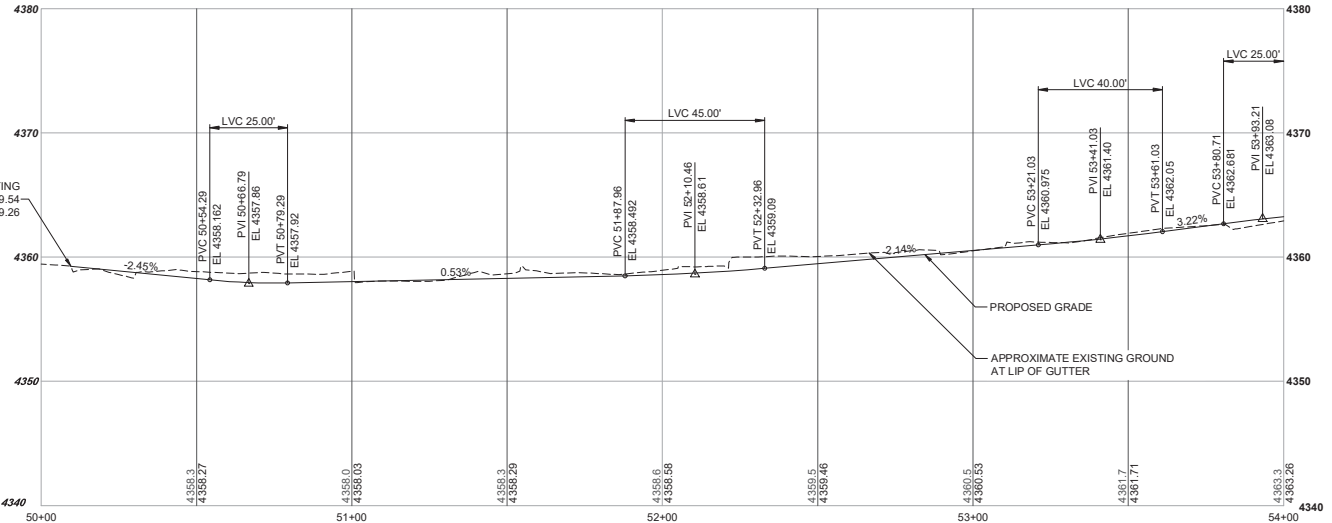
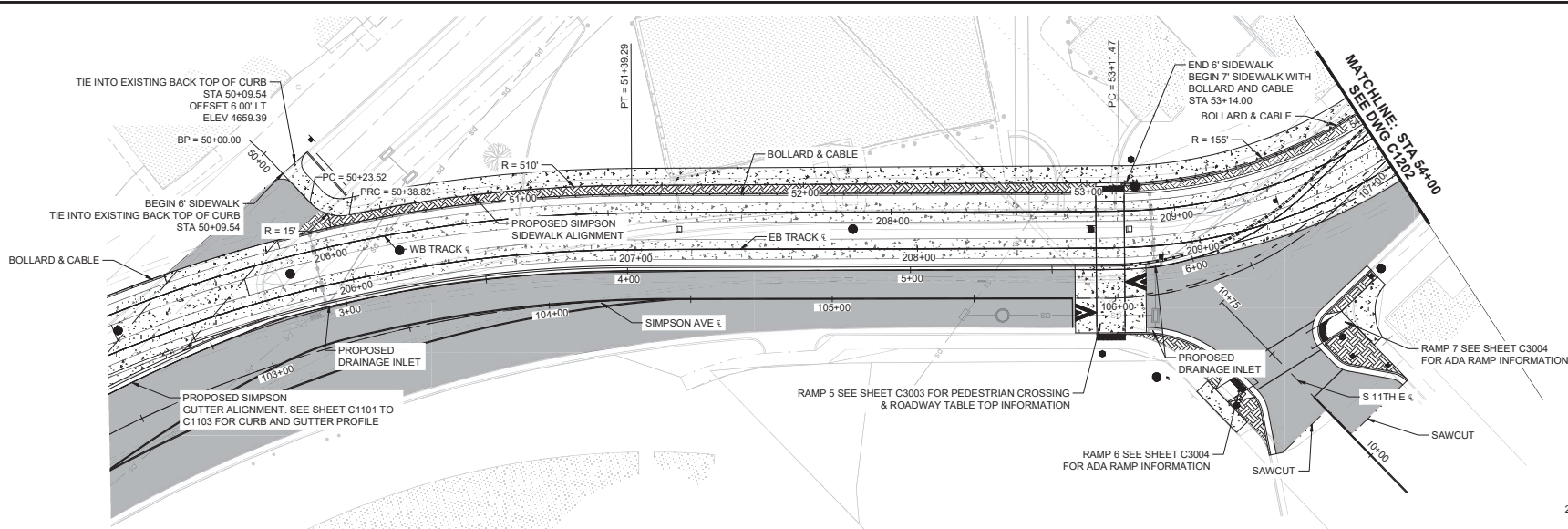


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Checked By:
A. DIGIROLAMO
Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT

PARKING LOT CURB AND GUTTER
PLAN AND PROFILE
STA 0+0 TO STA 3+50

Scale:	H: 1" = 20' V: 1" = 5'
CADD Filename:	SL-C-C-1-109.dwg
Submittal Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1109
Sheet No.:	



- LEGEND:**
- PAVEMENT
 - LANDSCAPING
 - CONCRETE
 - BP = BEGIN POINT
 - EP = END POINT

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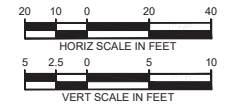
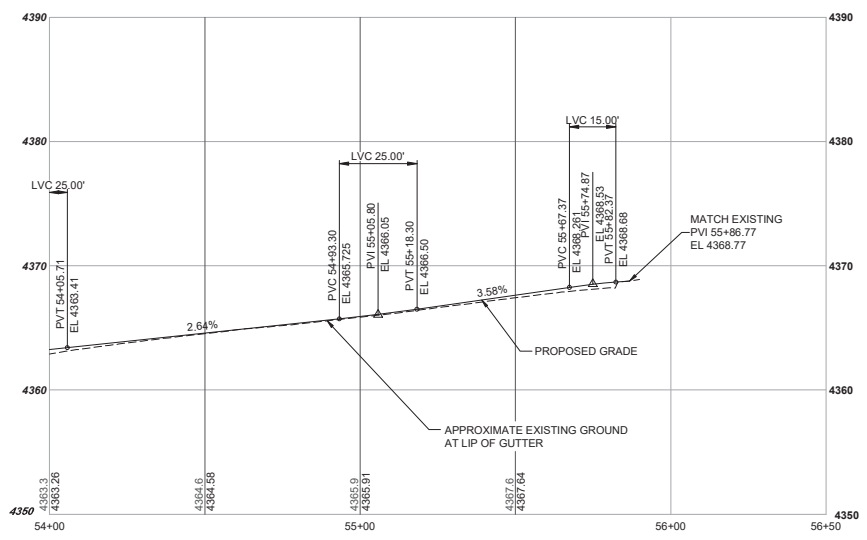
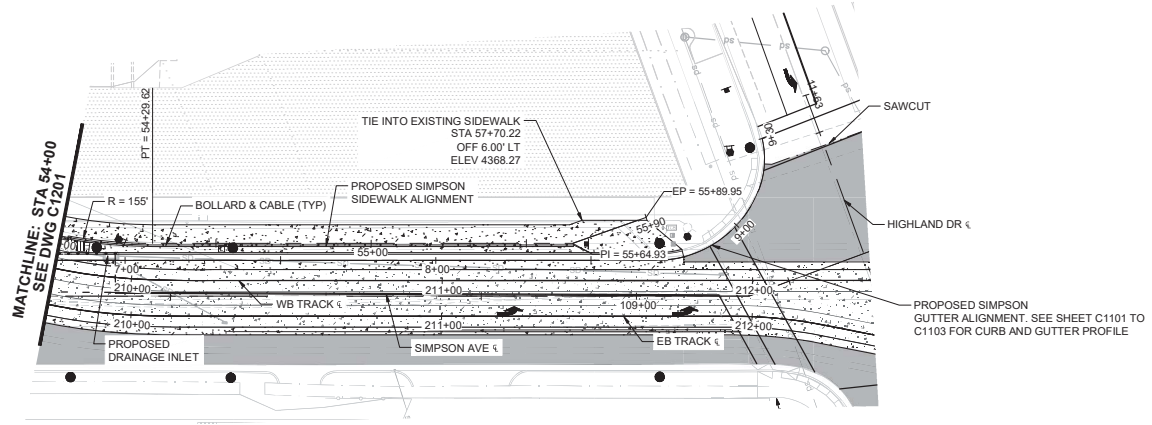
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REV	DATE	Description



Designed By: M. HARTMANN
 Drawn By: M. HARTMANN
 Checked By: A. DIGIROLAMO
 Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT
 SIMPSON SIDEWALK
 PLAN AND PROFILE
 STA 50+12 TO STA 54+00

Scale: H: 1" = 20' V: 1" = 5'	
CADD Filename: SL-C-1-201.dwg	
Submitted Date: 01-16-26	
UTA Contract No.: 24-03849	
Drawing No.: C1201	Sheet No.:



- LEGEND:**
- PAVEMENT
 - LANDSCAPING
 - CONCRETE
 - BP = BEGIN POINT
 - EP = END POINT

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M. HARTMANN

Drawn By:
M. HARTMANN

Checked By:
A. DIGIROLAMO

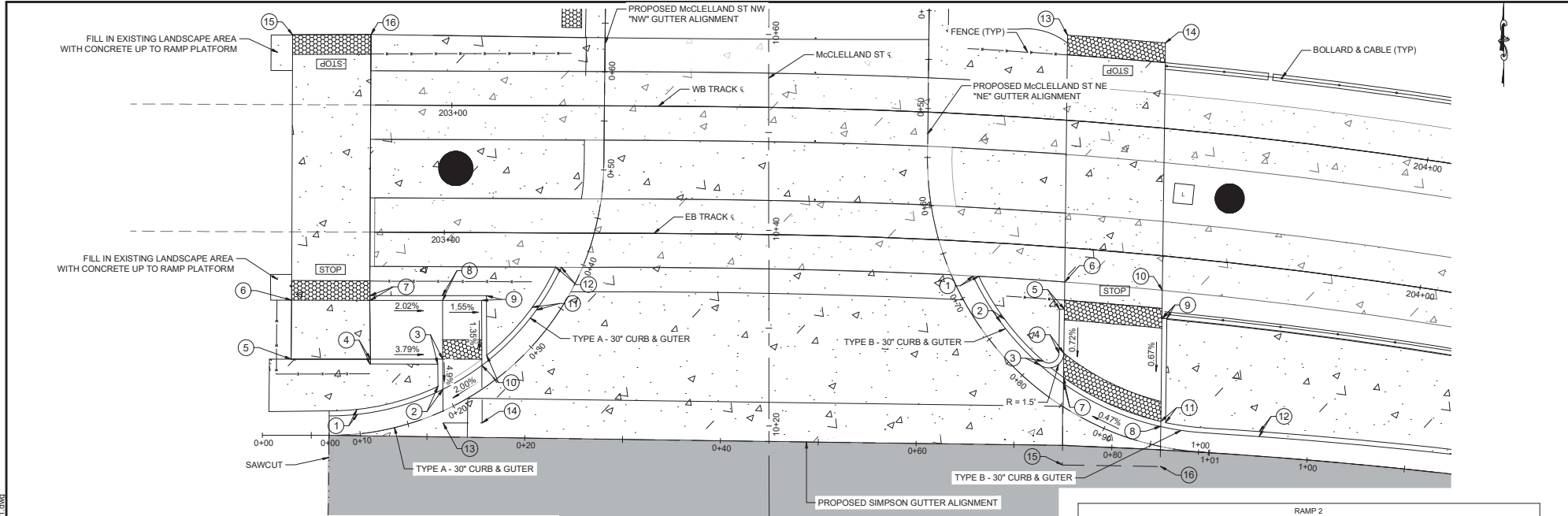
Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT

**SIMPSON SIDEWALK
PLAN AND PROFILE
STA 54+00 TO STA 57+25**

Scale:	H: 1" = 20' V: 1" = 5'
CADD Filename:	SL-C-1-202.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1202
Sheet No.:	

Submitted By: _____ Approved By: _____



POINT#	"NW" STATION	OFFSET	ELEV	DESCRIPTION
1	0+09.94	2.00' LT	4353.25'	BEGIN TRANSITION FOR GUTTER PAN SLOPE REDUCTION
	0+09.94	2.50' LT	4353.75'	TOP BACK OF CURB
2	0+19.45	2.50' LT	4354.05'	TOP BACK OF CURB
	0+19.79	2.00' LT	4353.55'	END TRANSITION FOR GUTTER PAN SLOPE REDUCTION
3	0+20.61	4.53' LT	4354.20'	TOP BACK OF CURB - BEGIN END CURB TRANSITION
	0+21.42	4.72' LT	4353.70'	FRONT FACE OF CURB - BEGIN END CURB TRANSITION
4	0+12.44	6.87' LT	4353.98'	FRONT OF SIDEWALK - END OF CURB
	0+12.57	7.37' LT	4353.98'	FRONT OF SIDEWALK - END OF CURB
5	0+02.92	7.77' LT	4353.98'	MATCH EXISTING SIDEWALK
	0+02.95	13.81' LT	4353.94'	MATCH EXISTING SIDEWALK
7	0+14.74	13.21' LT	4353.94'	FRONT OF SIDEWALK - END OF CURB
	0+15.02	13.69' LT	4353.94'	FRONT OF SIDEWALK - END OF CURB
8	0+25.98	9.71' LT	4354.29'	FRONT FACE OF CURB - BEGIN END CURB TRANSITION
	0+26.41	10.11' LT	4353.79'	TOP BACK OF CURB - BEGIN END CURB TRANSITION
9	0+30.10	6.96' LT	4353.73'	FRONT FACE OF CURB - REFERENCE POINT
	0+31.04	6.92' LT	4354.23'	TOP BACK OF CURB - REFERENCE POINT
10	0+24.83	2.00' LT	4353.64'	BEGIN TRANSITION FROM GUTTER PAN SLOPE REDUCTION
	0+25.94	2.50' LT	4354.14'	TOP BACK OF CURB
11	0+33.41	2.00' LT	4353.98'	GRADE BREAK - BEGIN END OF CURB TRANSITION
	0+33.41	2.50' LT	4354.48'	GRADE BREAK - BEGIN END OF CURB TRANSITION
12	0+38.62	2.50' LT	4354.33'	END OF CURB - MATCH TRACK SLAB ELEVATION
	0+38.87	2.00' LT	4354.33'	END OF CURB - MATCH TRACK SLAB ELEVATION
13	0+18.33	1.13' RT	4354.60'	CLEAR SPACE
14	0+21.67	2.92' RT	4354.62'	CLEAR SPACE
15	0+63.45	31.94' LT	4353.93'	MATCH EXISTING SIDEWALK

POINT#	"NE" STATION	OFFSET	ELEV	DESCRIPTION
1	0+68.39	2.00' LT	4354.60'	END OF CURB - MATCH TRACK SLAB ELEVATION
	0+68.69	2.50' LT	4354.60'	END OF CURB - MATCH TRACK SLAB ELEVATION
2	0+74.28	2.00' LT	4354.59'	BEGIN TRANSITION FOR GUTTER PAN SLOPE REDUCTION
	0+74.28	2.50' LT	4355.05'	GRADE BREAK - END END OF CURB TRANSITION
3	0+80.66	2.50' LT	4355.07'	TOP BACK OF CURB
	0+80.72	2.00' LT	4354.57'	END TRANSITION FOR GUTTER PAN SLOPE REDUCTION
4	0+81.42	4.18' LT	4354.91'	TOP BACK OF CURB - BEGIN END CURB TRANSITION
	0+81.88	4.49' LT	4354.60'	FRONT FACE OF CURB - BEGIN END CURB TRANSITION
5	0+77.65	7.48' LT	4354.63'	TOP BACK OF CURB - END CURB
	0+78.11	7.83' LT	4354.63'	FRONT FACE OF CURB - END CURB
6	0+75.16	9.69' LT	4354.65'	MATCH TRACK SLAB ELEVATION
	0+83.55	2.50' LT	4354.58'	TOP BACK OF CURB - REFERENCE POINT
7	0+83.92	2.00' LT	4354.58'	FRONT FACE OF CURB - REFERENCE POINT
	0+95.65	2.00' LT	4354.63'	BEGIN TRANSITION FROM GUTTER PAN SLOPE REDUCTION
8	0+91.66	12.64' LT	4354.70'	FRONT FACE OF CURB - END CURB
	0+92.48	12.81' LT	4354.70'	TOP BACK OF CURB - END CURB
10	0+89.67	15.33' LT	4354.72'	MATCH TRACK SLAB ELEVATION
	0+95.54	2.50' LT	4354.63'	FRONT FACE OF CURB - BEGIN END CURB TRANSITION
11	0+96.09	2.50' LT	4355.14'	TOP BACK OF CURB - BEGIN END CURB TRANSITION
	"SN" 0+94.94	2.00' LT	4354.65'	END TRANSITION FROM GUTTER PAN SLOPE REDUCTION
12	"SN" 0+94.94	2.50' LT	4355.32'	TOP BACK OF CURB
	0+42.36	14.17' LT	4355.32'	MATCH EXISTING SIDEWALK PLAZA
14	0+43.06	24.17' LT	4354.65'	MATCH EXISTING SIDEWALK PLAZA
15	0+87.94	5.21' RT	4354.54'	CLEAR SPACE
16	0+96.45	2.00' RT	4354.70'	CLEAR SPACE

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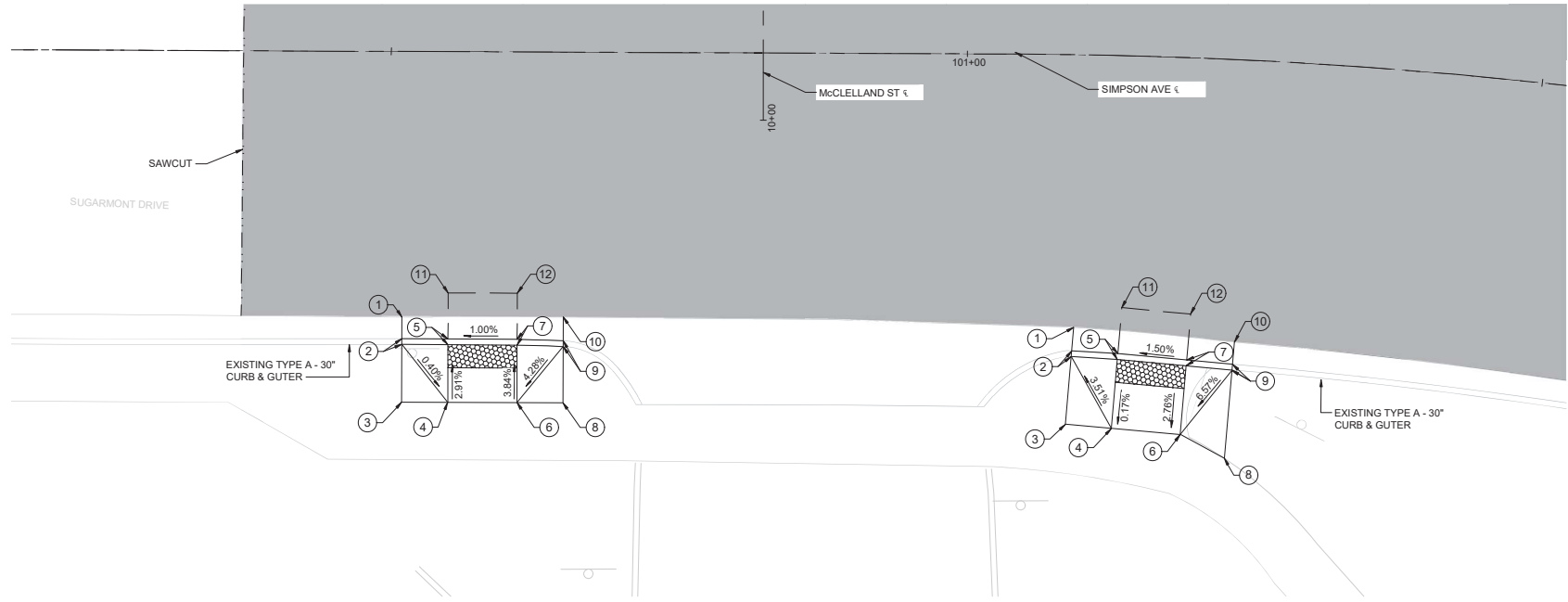
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Designed By: M. HARTMANN
 Drawn By: M. HARTMANN
 Checked By: A. DIGIROLAMO
 Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT
 STANDARD DRAWINGS
 ROADWAY
 CURB RETURN DETAILS

Scale	NTS
CADD Filename	SL-C-C-3-001.dwg
Submitted Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	C3001
Sheet No.	



RAMP 3				
POINT TABLE				
POINT#	"S" STATION	OFFSET	ELEV	DESCRIPTION
1	100+51.02	23.05' RT	4352.77'	GUTTER - MATCH EXISTING
2	100+51.02	24.92' RT	4352.74'	FRONT FACE OF CURB - MATCH EXISTING
	100+51.03	25.42' RT	4353.08'	TOP BACK OF CURB - MATCH EXISTING
3	100+51.03	30.44' RT	4352.99'	MATCH EXISTING SIDEWALK
4	100+55.03	30.44' RT	4353.05'	MATCH EXISTING SIDEWALK
5	100+55.02	24.93' RT	4352.91'	FRONT FACE OF CURB
	100+55.03	25.44' RT	4352.91'	TOP BACK OF CURB
6	100+61.03	30.43' RT	4353.16'	MATCH EXISTING SIDEWALK
	100+61.03	24.86' RT	4352.97'	FRONT FACE OF CURB
7	100+61.03	25.44' RT	4352.97'	TOP BACK OF CURB
	100+65.03	30.43' RT	4353.25'	MATCH EXISTING SIDEWALK
8	100+65.02	25.05' RT	4352.99'	FRONT FACE OF CURB - MATCH EXISTING
	100+65.03	25.55' RT	4353.43'	TOP BACK OF CURB - MATCH EXISTING
9	100+65.02	22.98' RT	4353.13'	GUTTER - MATCH EXISTING
11	100+55.02	20.94' RT	4353.06'	CLEAR SPACE
12	100+61.02	20.94' RT	4353.16'	CLEAR SPACE

RAMP 4				
POINT TABLE				
POINT#	"S" STATION	OFFSET	ELEV	DESCRIPTION
1	101+09.61	23.67' RT	4353.69'	GUTTER - MATCH EXISTING
2	101+09.46	25.71' RT	4353.56'	FRONT FACE OF CURB - MATCH EXISTING
	101+09.42	26.21' RT	4353.96'	TOP BACK OF CURB - MATCH EXISTING
3	101+08.96	32.07' RT	4353.85'	MATCH EXISTING SIDEWALK
4	101+13.26	32.36' RT	4353.71'	MATCH EXISTING SIDEWALK
	101+13.70	25.87' RT	4353.72'	FRONT FACE OF CURB
5	101+13.67	26.37' RT	4353.72'	TOP BACK OF CURB
	101+19.74	32.70' RT	4353.64'	MATCH EXISTING SIDEWALK
6	101+20.06	26.23' RT	4353.81'	FRONT FACE OF CURB
	101+20.03	26.73' RT	4353.81'	TOP BACK OF CURB
7	101+23.96	34.61' RT	4353.54'	MATCH EXISTING SIDEWALK
	101+24.30	26.43' RT	4353.96'	FRONT FACE OF CURB - MATCH EXISTING
8	101+24.28	26.93' RT	4354.12'	TOP BACK OF CURB - MATCH EXISTING
	101+24.38	24.51' RT	4353.90'	GUTTER - MATCH EXISTING
9	101+13.96	21.87' RT	4353.95'	CLEAR SPACE
10	101+20.26	22.24' RT	4353.89'	CLEAR SPACE

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REV	DATE	Description	

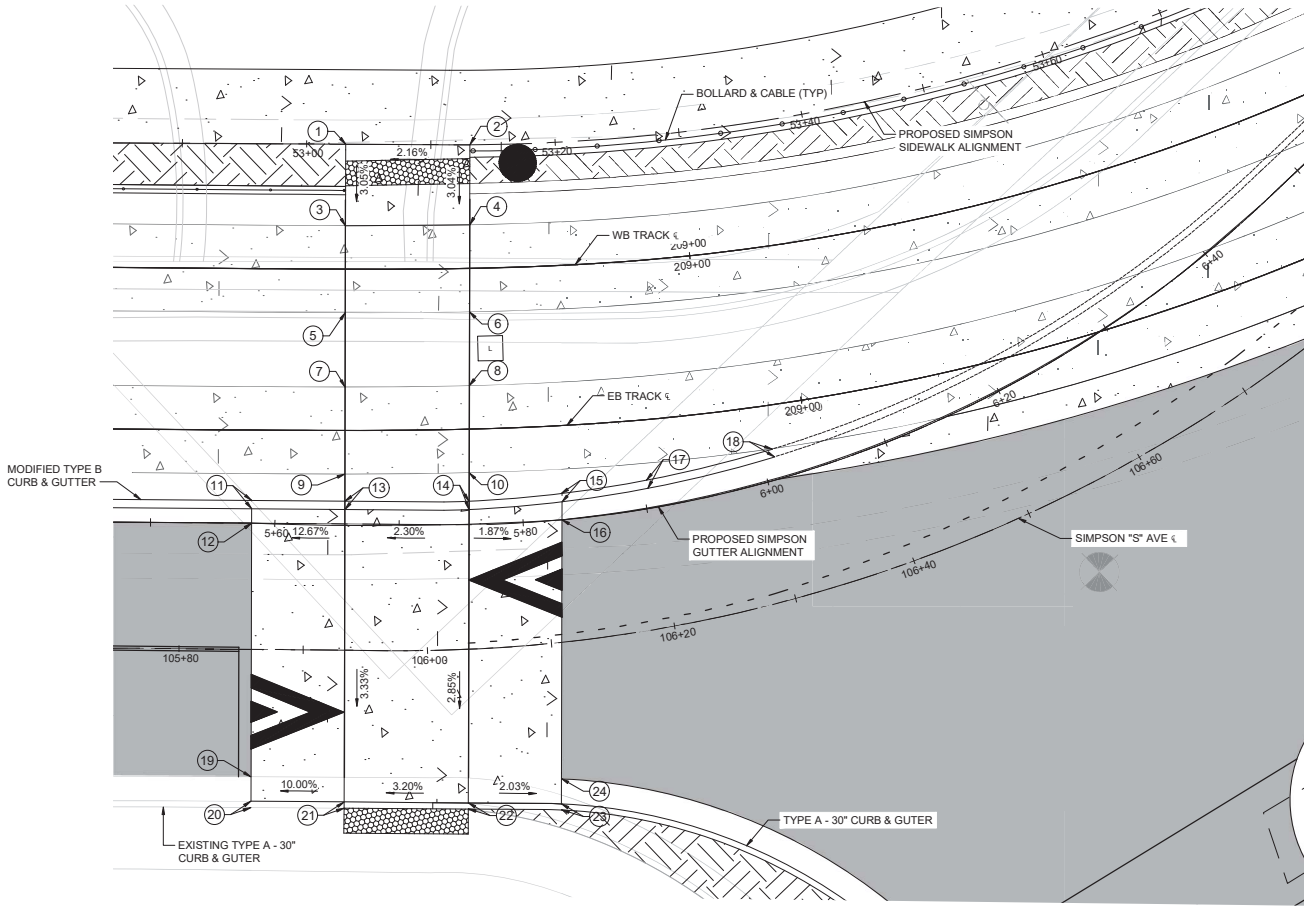


Designed By:	M. HARTMANN
Drawn By:	M. HARTMANN
Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT
 STANDARD DRAWINGS
 ROADWAY
 CURB RETURN DETAILS

State:	NTS
CADD Filename:	SL-C-3-002.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C3002
Sheet No.:	

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 11/14/2026



RAMP 5 - PEDESTRIAN WALK POINT TABLE				
POINT#	"S" STATION	OFFSET	ELEV	DESCRIPTION
1	105+91.90	40.60' LT	4360.59'	MATCH SIDEWALK ELEVATION
2	106+05.46	40.33' LT	4360.81'	MATCH SIDEWALK ELEVATION
3	105+91.94	34.04' LT	4360.39'	MATCH TRACK SLAB ELEVATION
4	106+04.72	33.90' LT	4360.61'	MATCH TRACK SLAB ELEVATION
5	105+91.98	27.04' LT	4360.39'	MATCH TRACK SLAB ELEVATION
6	106+04.03	26.92' LT	4360.60'	MATCH TRACK SLAB ELEVATION
7	105+92.01	21.05' LT	4360.39'	MATCH TRACK SLAB ELEVATION
8	106+03.53	20.98' LT	4360.60'	MATCH TRACK SLAB ELEVATION
9	105+92.05	14.05' LT	4360.39'	MATCH TRACK SLAB ELEVATION
10	106+03.00	14.00' LT	4360.60'	MATCH TRACK SLAB ELEVATION

RAMP 5 - PEDESTRIAN WALK CONT. POINT TABLE				
POINT#	"S" STATION	OFFSET	ELEV	DESCRIPTION
11	105+84.57	11.20' LT	4359.44'	FRONT FACE OF CURB
	105+84.56	11.86' LT	4360.19'	BACK TOP OF CURB
12	105+84.57	10.03' LT	4359.32'	LIP OF GUTTER
	105+92.07	11.86' LT	4360.39'	FRONT FACE OF CURB
13	105+92.07	11.20' LT	4360.39'	BACK TOP OF CURB
	106+02.85	11.71' LT	4360.60'	FRONT FACE OF CURB
14	106+02.80	11.04' LT	4360.60'	BACK TOP OF CURB
	106+11.08	10.97' LT	4360.46'	FRONT FACE OF CURB
15	106+11.18	11.63' LT	4361.21'	BACK TOP OF CURB
	106+18.73	9.34' LT	4360.33'	LIP OF GUTTER
16	106+18.98	10.79' LT	4360.75'	GRADE BREAK - BEGIN END OF CURB TRANSITION
	106+19.00	11.46' LT	4361.50'	GRADE BREAK - BEGIN END OF CURB TRANSITION
17	106+30.09	11.00' LT	4361.08'	END OF CURB - MATCH TRACK SLAB ELEVATION
	106+30.08	11.65' LT	4361.08'	END OF CURB - MATCH TRACK SLAB ELEVATION
18	105+84.70	10.38' RT	4359.07'	LIP OF GUTTER
	105+84.71	12.38' RT	4358.86'	FRONT FACE OF CURB
19	105+84.71	12.88' RT	4359.36'	BACK TOP OF CURB
	105+92.21	12.36' RT	4359.61'	FRONT FACE OF CURB
20	105+92.21	12.86' RT	4359.61'	BACK TOP OF CURB
	106+01.52	12.54' RT	4359.93'	FRONT FACE OF CURB
21	106+01.50	13.04' RT	4359.93'	BACK TOP OF CURB
	106+08.27	13.14' RT	4359.78'	FRONT FACE OF CURB
22	106+08.22	13.70' RT	4360.28'	BACK TOP OF CURB
	106+08.46	11.19' RT	4359.99'	LIP OF GUTTER

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REVISION	DATE	DESCRIPTION	



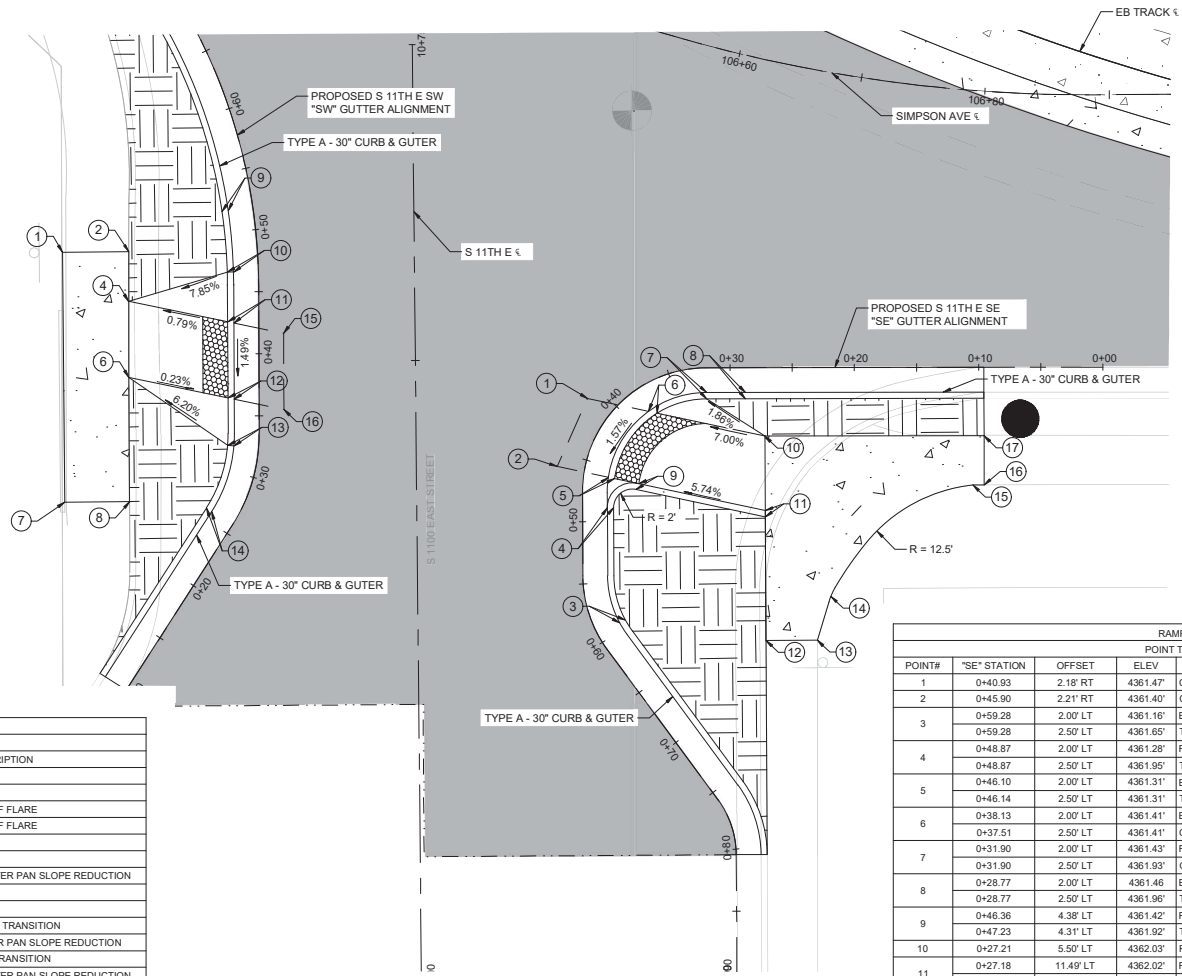
Designed By	M. HARTMANN
Drawn By	M. HARTMANN
Checked By	A. DIGIROLAMO
Approved By	F. NANNENGA

S-LINE EXTENSION PROJECT

ROADWAY CURB RETURN DETAILS

Submitted By: _____ Approved By: _____

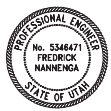
State	NTS
CADD Filename	SL-C-3-003.dwg
Submitted Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	C3003
Sheet No.	



RAMP 6					
POINT TABLE					
POINT#	"SW" STATION	OFFSET	ELEV	DESCRIPTION	
1	0+49.70	15.64' LT	4360.47'	MATCH EXISTING SIDEWALK	
2	0+49.09	10.32' LT	4360.39'	MATCH EXISTING SIDEWALK	
4	0+44.27	10.45' LT	4360.56'	FRONT OF SIDEWALK - TOP OF FLARE	
6	0+38.14	10.47' LT	4360.55'	FRONT OF SIDEWALK - TOP OF FLARE	
7	0+20.03	12.35' LT	4360.44'	MATCH EXISTING SIDEWALK	
8	0+22.90	7.98' LT	4360.29'	MATCH EXISTING SIDEWALK	
9	0+51.83	2.00' LT	4360.40'	BEGIN TRANSITION FOR GUTTER PAN SLOPE REDUCTION	
	0+51.83	2.50' LT	4361.07'	TOP BACK OF CURB	
10	0+46.64	2.00' LT	4360.54'	FRONT FACE OF CURB	
	0+46.66	2.50' LT	4361.21'	GRADE BREAK - BEGIN FLARE TRANSITION	
11	0+42.48	2.00' LT	4360.62'	END TRANSITION FOR GUTTER PAN SLOPE REDUCTION	
	0+42.59	2.50' LT	4360.62'	GRADE BREAK - END FLARE TRANSITION	
12	0+36.35	2.00' LT	4360.53'	BEGIN TRANSITION FOR GUTTER PAN SLOPE REDUCTION	
	0+36.46	2.50' LT	4360.53'	GRADE BREAK - BEGIN FLARE TRANSITION	
13	0+32.42	2.00' LT	4360.48'	FRONT FACE OF CURB	
	0+32.42	2.50' LT	4361.15'	GRADE BREAK - END FLARE TRANSITION	
14	0+25.81	2.00' LT	4360.41'	END TRANSITION FOR GUTTER PAN SLOPE REDUCTION	
	0+25.81	2.50' LT	4361.08'	TOP BACK OF CURB	
15	0+11.64	2.00' RT	4360.73'	CLEAR SPACE	
16	0+35.51	2.00' RT	4360.73'	CLEAR SPACE	

RAMP 7					
POINT TABLE					
POINT#	"SE" STATION	OFFSET	ELEV	DESCRIPTION	
1	0+40.93	2.18' RT	4361.47'	CLEAR SPACE	
2	0+45.90	2.21' RT	4361.40'	CLEAR SPACE	
3	0+50.28	2.00' LT	4361.16'	BEGIN TRANSITION FOR GUTTER PAN SLOPE REDUCTION	
	0+50.28	2.50' LT	4361.65'	TOP BACK OF CURB	
4	0+48.87	2.00' LT	4361.28'	FRONT FACE OF CURB - REFERENCE POINT	
	0+48.87	2.50' LT	4361.95'	TOP BACK OF CURB - REFERENCE POINT	
5	0+46.10	2.00' LT	4361.31'	END TRANSITION FOR GUTTER PAN SLOPE REDUCTION	
	0+46.14	2.50' LT	4361.31'	TOP BACK OF CURB	
6	0+38.13	2.00' LT	4361.41'	BEGIN TRANSITION FOR GUTTER PAN SLOPE REDUCTION	
	0+37.51	2.50' LT	4361.41'	GRADE BREAK - BEGIN FLARE TRANSITION	
7	0+31.90	2.00' LT	4361.43'	FRONT FACE OF CURB	
	0+31.90	2.50' LT	4361.93'	GRADE BREAK - END FLARE TRANSITION	
8	0+28.77	2.00' LT	4361.46	END TRANSITION FOR GUTTER PAN SLOPE REDUCTION	
	0+28.77	2.50' LT	4361.96'	TOP BACK OF CURB	
9	0+46.36	4.38' LT	4361.42'	FRONT FACE OF CURB - BEGIN END CURB TRANSITION	
	0+47.23	4.31' LT	4361.92'	TOP BACK OF CURB - BEGIN END CURB TRANSITION	
10	0+27.21	5.50' LT	4362.03'	FRONT OF SIDEWALK - TOP OF FLARE	
11	0+27.18	11.49' LT	4362.02'	FRONT OF SIDEWALK - END OF FRONT FACE OF CURB	
	0+27.18	12.01' LT	4362.02'	FRONT OF SIDEWALK - END OF TOP BACK OF CURB	
12	0+67.67	10.72' LT	4361.80'	MATCH EXISTING SIDEWALK	
13	0+70.10	14.07' LT	4361.86'	MATCH EXISTING SIDEWALK	
14	0+67.54	17.71' LT	4361.82'	BACK OF SIDEWALK - REFERENCE POINT	
15	0+10.47	9.46' LT	4362.28'	BACK OF SIDEWALK - REFERENCE POINT	
16	0+09.56	9.52' LT	4362.31'	MATCH EXISTING SIDEWALK	
17	0+09.57	5.50' LT	4362.30'	MATCH EXISTING SIDEWALK	

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Designed By:
M. HARTMANN

Drawn By:
M. HARTMANN

Checked By:
A. DIGIROLAMO

Approved By:
F. NANNENGA

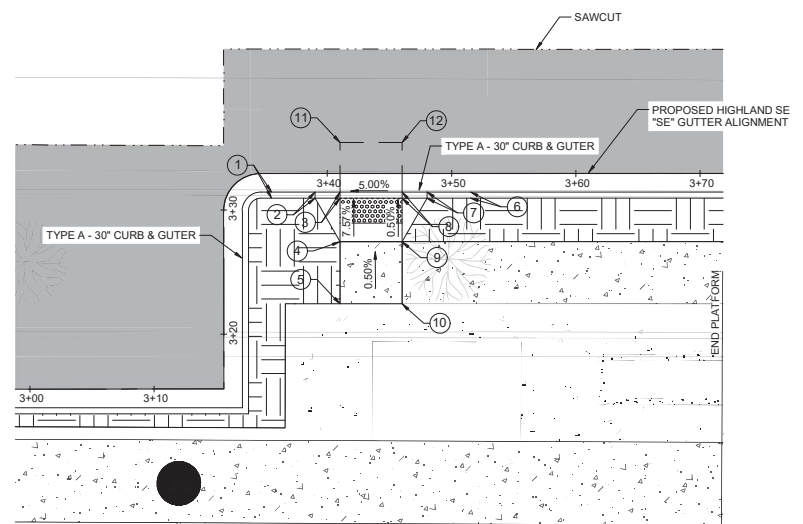
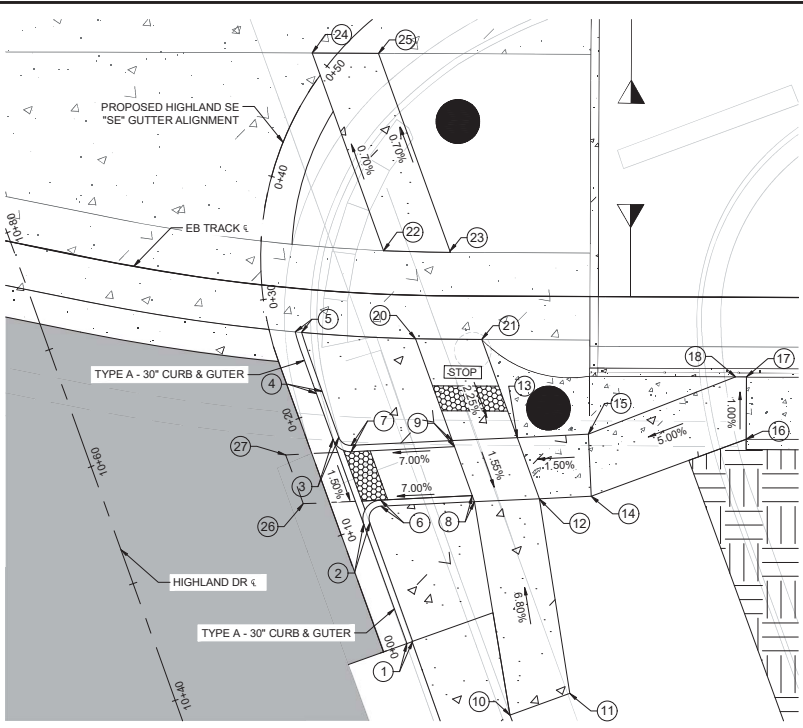
S-LINE EXTENSION PROJECT

ROADWAY CURB RETURN DETAILS

State:	NTS
CADD Filename:	SL-C-C-3-004.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C3004
Sheet No.:	

Submitted By: _____

Approved By: _____



RAMP 8 POINT TABLE				
POINT#	"SE" STATION	OFFSET	ELEV	DESCRIPTION
1	0+00.00	2.00' RT	4370.11'	BEGIN TRANSITION FOR GUTTER PAN SLOPE REDUCTION
	0+00.00	2.50' RT	4370.61'	TOP BACK OF CURB
2	0+10.14	2.00' RT	4370.74'	END TRANSITION FOR GUTTER PAN SLOPE REDUCTION
	0+10.14	2.50' RT	4371.24'	TOP BACK OF CURB
3	0+17.47	2.00' RT	4370.85'	BEGIN GUTTER PAN TRANSITION
	0+17.50	2.50' RT	4371.35'	TOP BACK OF CURB
4	0+21.40	2.00' RT	4371.13'	GRADE BREAK - BEGIN END OF CURB TRANSITION
	0+21.40	2.50' RT	4371.42'	GRADE BREAK - BEGIN END OF CURB TRANSITION
5	0+26.61	2.00' RT	4371.48'	END CURB - MATCH TRACK SLAB ELEVATION
	0+26.61	2.50' RT	4371.50'	END CURB - MATCH TRACK SLAB ELEVATION
6	0+11.10	3.80' RT	4370.91'	TOP BACK OF CURB - BEGIN END CURB TRANSITION
	0+11.57	3.94' RT	4371.41'	FRONT FACE OF CURB - BEGIN END CURB TRANSITION
	0+16.03	3.06' RT	4370.91'	FRONT FACE OF CURB - BEGIN END CURB TRANSITION
7	0+16.50	3.23' RT	4371.41'	TOP BACK OF CURB - BEGIN END CURB TRANSITION
	0+08.87	11.00' RT	4371.43'	END CURB
8	0+09.39	11.00' RT	4371.43'	END CURB
	0+13.48	11.00' RT	4371.50'	END CURB
	0+14.10	11.00' RT	4371.50'	END CURB
26	0+13.41	2.00' LT	4370.58'	CLEAR SPACE
	0+17.59	2.00' LT	4370.64'	CLEAR SPACE

RAMP 8 Cont. POINT TABLE				
POINT#	NORTHING	EASTING	ELEV	DESCRIPTION
10	7431855.84	1541106.68	4372.66'	FRONT OF SIDEWALK - MATCH EXISTING
11	7431857.58	1541111.48	4372.74'	BACK OF SIDEWALK - MATCH EXISTING
12	7431873.25	1541109.04	4371.51'	BACK OF SIDEWALK - REFERENCE POINT
13	7431878.17	1541107.26	4371.58'	BACK OF SIDEWALK - REFERENCE POINT
14	7431873.45	1541113.22	4372.29'	GRADE BREAK - SIDEWALK REFERENCE POINT
15	7431878.44	1541112.99	4371.66'	GRADE BREAK - SIDEWALK REFERENCE POINT
16	7431878.05	1541125.68	4372.29'	BACK OF SIDEWALK - MATCH TRACK SIDEWALK
17	7431883.05	1541125.70	4372.24'	FRONT OF SIDEWALK - MATCH TRACK SIDEWALK
18	7431883.05	1541124.83	4372.25'	GRADE BREAK - FRONT OF SIDEWALK

RAMP 8 Cont. POINT TABLE				
POINT#	"E" STATION	OFFSET	ELEV	DESCRIPTION
20	212+79.55	3.50' RT	4371.72'	MATCH TRACK SLAB ELEVATION
21	212+84.81	3.50' RT	4371.83'	MATCH TRACK SLAB ELEVATION
22	212+76.74	3.50' LT	4371.60'	MATCH TRACK SLAB ELEVATION
23	212+82.23	3.50' LT	4371.71'	MATCH TRACK SLAB ELEVATION
24	212+89.34	18.98' LT	4371.48'	MATCH TRACK SLAB ELEVATION
25	212+75.43	19.34' LT	4371.59'	MATCH TRACK SLAB ELEVATION

RAMP 9 POINT TABLE				
POINT#	"SE" STATION	OFFSET	ELEV	DESCRIPTION
1	3+35.82	1.50' RT	4379.76'	BEGIN TRANSITION FOR GUTTER PAN SLOPE REDUCTION
	3+35.82	2.00' RT	4380.26'	TOP BACK OF CURB
2	3+39.32	1.50' RT	4380.00'	FRONT FACE OF CURB
	3+39.32	2.00' RT	4380.43'	GRADE BREAK - BEGIN FLARE TRANSITION
3	3+41.32	1.50' RT	4380.13'	END TRANSITION FOR GUTTER PAN SLOPE REDUCTION
	3+41.32	2.00' RT	4380.13'	GRADE BREAK - END FLARE TRANSITION
4	3+41.32	5.50' RT	4380.30'	FRONT OF SIDEWALK - TOP OF FLARE
	3+41.32	10.50' RT	4380.44'	BACK OF SIDEWALK
6	3+51.82	1.50' RT	4380.59'	END TRANSITION FOR GUTTER PAN SLOPE REDUCTION
	3+51.82	2.00' RT	4381.09'	TOP BACK OF CURB
7	3+48.32	1.50' RT	4380.46'	FRONT FACE OF CURB
	3+48.32	2.00' RT	4380.88'	GRADE BREAK - END FLARE TRANSITION
8	3+46.32	1.50' RT	4380.38'	BEGIN TRANSITION FOR GUTTER PAN SLOPE REDUCTION
	3+46.32	2.00' RT	4380.38'	GRADE BREAK - BEGIN FLARE TRANSITION
9	3+46.32	5.50' RT	4380.40'	FRONT OF SIDEWALK - TOP OF FLARE
	3+46.32	10.50' RT	4380.44'	BACK OF SIDEWALK
11	3+41.02	2.50' LT	4380.28'	CLEAR SPACE
	3+46.02	2.50' LT	4380.56'	CLEAR SPACE

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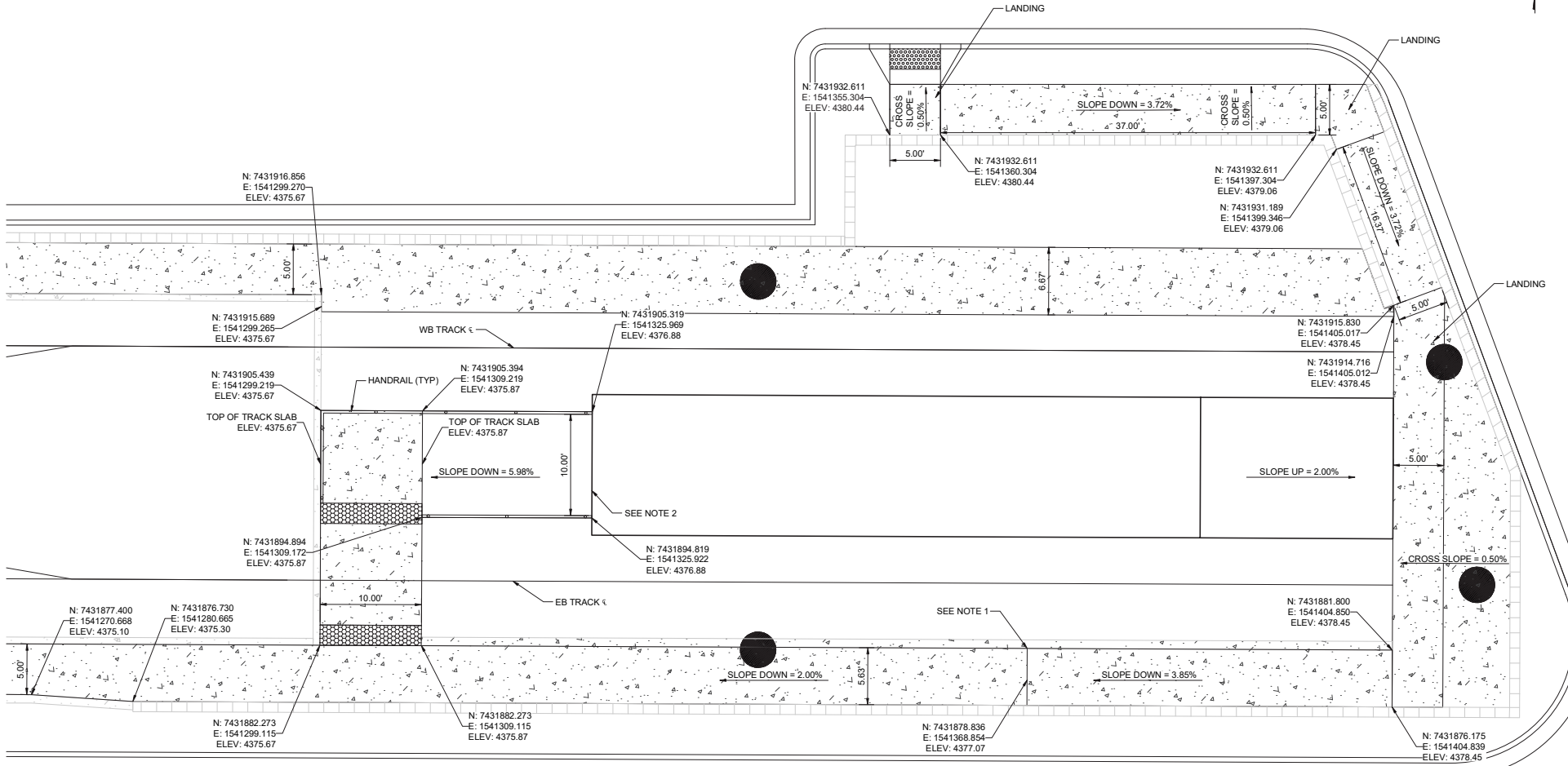
Designed By: M. HARTMANN
Drawn By: M. HARTMANN
Checked By: A. DIGIROLAMO
Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT

ROADWAY CURB RETURN DETAILS

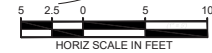
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CADD Filename: SL-C-3-005.dwg
Submission Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: C3005
Sheet No.:

- NOTES:
 1. SEE DRAWING C3005 FOR ELEVATIONS AT THE WEST END OF THE SIDEWALK.
 2. SEE DRAWING P3203 FOR STATION PLATFORM RAMP ELEVATIONS.



HIGHLAND PLATFORM AREA - SIDEWALK PLAN AND ELEVATION PLAN

SCALE: 1" = 5'



REV	DATE	Description



Submitted By: _____

Approved By: _____

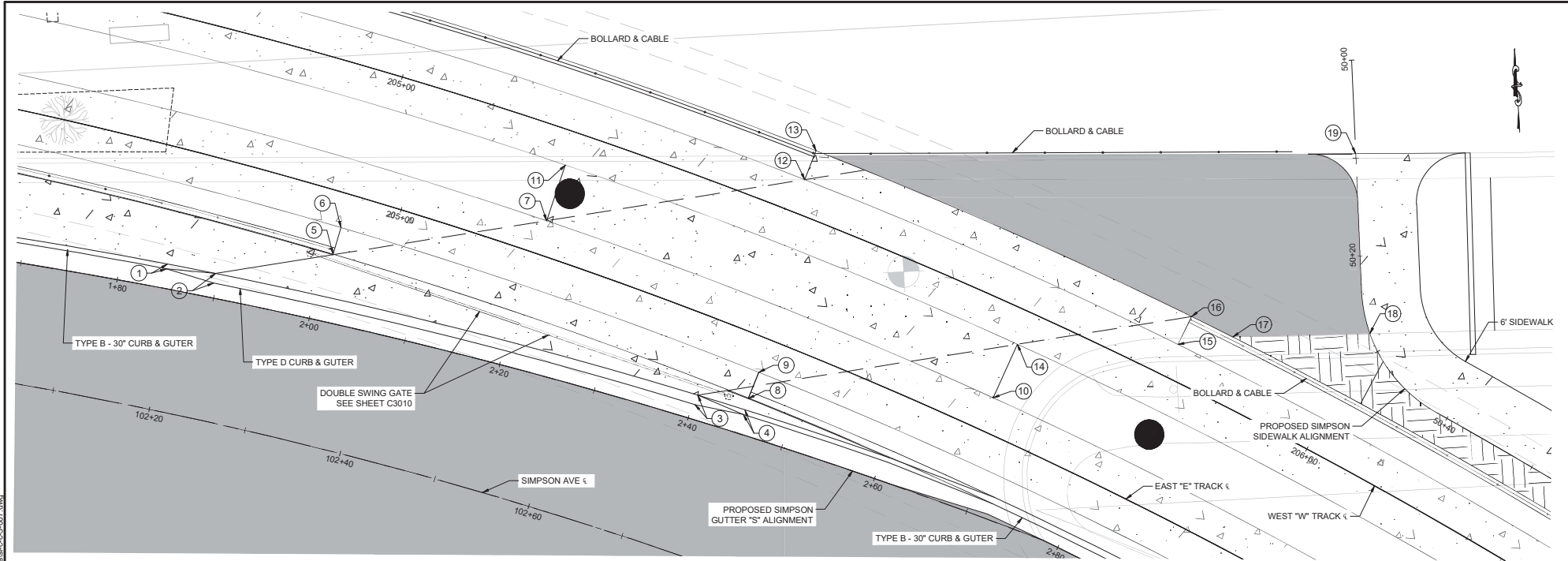
Designed By: S. JOSHI
Drawn By: S. JOSHI
Checked By: A. DIGIROLAMO
Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT

 SUGAR HOUSE PLATFORM AREA
 PEDESTRIAN RAMP AND SIDEWALK PLAN

Scale: H: 1" = 5'
CADD Filename: SL-C-3-006.dwg
Submittal Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: C3006
Sheet No.:

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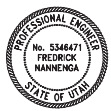
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		OFFSET	ELEV	
1	1+81.72	2.00' LT	4356.67'	BEGIN CURB TYPE TRANSITION
	1+84.72	2.50' LT	4356.34'	BEGIN CURB TYPE TRANSITION
	1+89.72	1.50' LT	4356.83'	END CURB TYPE TRANSITION
2	1+89.72	2.50' LT	4356.33'	END CURB TYPE TRANSITION
	2+40.27	1.50' LT	4356.11'	BEGIN CURB TYPE TRANSITION
	2+45.27	2.00' LT	4356.01'	END CURB TYPE TRANSITION
4	2+45.27	2.50' LT	4356.68'	END CURB TYPE TRANSITION

POINT#	"E" STATION	POINT TABLE		DESCRIPTION
		OFFSET	ELEV	
5	204+94.61	6.40' RT	4356.90'	
6	204+94.61	3.50' RT	4356.94'	MATCH TRACK SLAB ELEVATION
7	205+14.42	3.50' LT	4357.00'	MATCH TRACK SLAB ELEVATION
8	205+40.09	6.40' RT	4357.15'	
9	205+40.09	3.50' RT	4357.19'	MATCH TRACK SLAB ELEVATION
10	206+43.13	3.50' LT	4357.32'	MATCH TRACK SLAB ELEVATION

POINT#	"W" STATION	POINT TABLE		DESCRIPTION
		OFFSET	ELEV	
11	205+18.65	3.50' RT	4357.05'	MATCH TRACK SLAB ELEVATION
12	205+42.52	3.50' LT	4357.17'	MATCH TRACK SLAB ELEVATION
13	205+42.12	6.67' LT	4357.12'	
14	205+45.66	3.50' RT	4357.32'	MATCH TRACK SLAB ELEVATION
15	205+45.48	3.50' LT	4357.40'	MATCH TRACK SLAB ELEVATION
16	205+45.48	6.67' LT	4357.35'	
17	205+48.11	6.67' LT	4357.55'	
18	206+00.14	13.41' LT	4358.92'	MATCH PROPOSED SIDEWALK EDGE
19	206+40.76	29.02' LT	4359.28'	MATCH EXISTING SIDEWALK

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REV	DATE	Description



Designed By:
M. HARTMANN

Drawn By:
M. HARTMANN

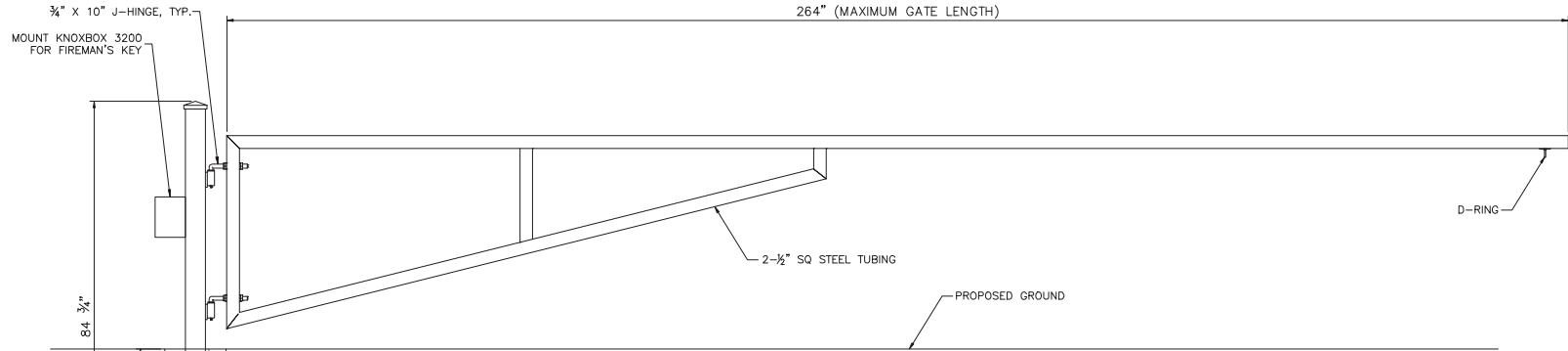
Checked By:
A. DIGIROLAMO

Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT

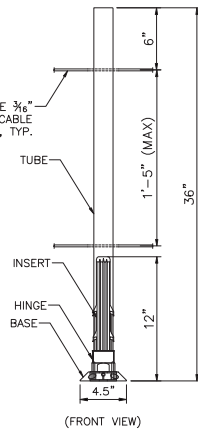
ROADWAY EMERGENCY DRIVEWAY GRADING

State:	NTS
CADD Filename:	SL-C-3-007.dwg
Submital Date:	01-16-26
UTA Contract No.:	24-03849
Sheet No.:	C3007



SWING GATE
NTS

STAINLESS STEEL CABLE 3/16"
T316 MARINE GRADE DECK CABLE
RAILING 1X19 STRANDS, TYP.



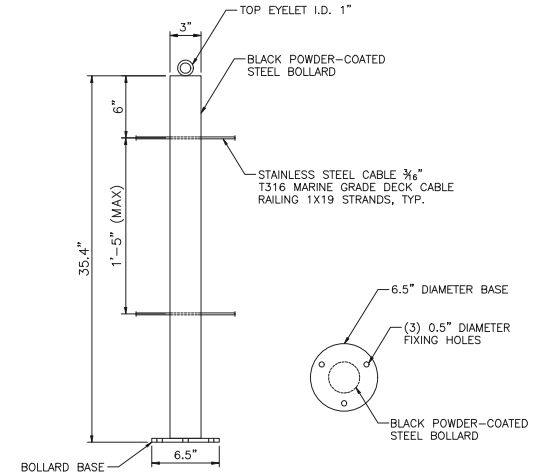
(FRONT VIEW)



BASE
(PLAN VIEW)

NOTES:
1. PRODUCT SHOWN IS FLEXSTAKE SURFACE MOUNT TUBULAR TRAFFIC DELINEATOR (ITEM# X9003-2RT24) SOLD BY TRAFFICSIGN.COM OR SIMILAR EQUIVALENT MAY BE USED.

INTERMEDIATE BOLLARD AND CABLE POST DETAIL
NTS



NOTES:
1. PRODUCT SHOWN IS BLACK 76MM BOLT DOWN STEEL BOLLARD WITH TOP CHAIN EYELET - HEAVY DUTY CAR PARK SECURITY POST (PRODUCT REFERENCE 001-2930-00) AS SOLD BY ULTRASECUREUSA.COM OR SIMILAR EQUIVALENT MAY BE USED.

BOLLARD AND CABLE ELEVATION AND BASE
NTS

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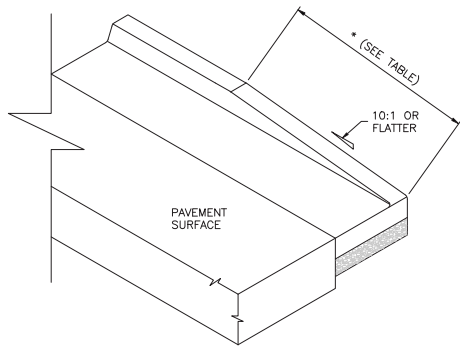
Designed By:
M. HARTMANN
Drawn By:
M. HARTMANN
Checked By:
A. DIGIROLAMO
Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
CIVIL
BOLLARD AND SWING GATE DETAILS

State	NTS
CADD Filename:	SL-C-3-010.dwg
Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	C3010
Sheet No.	

Submitted By: _____

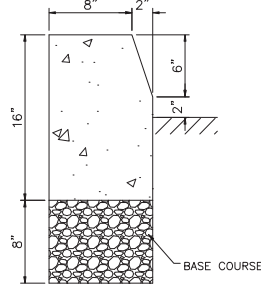
Approved By: _____



CURB & GUTTER END TRANSITION
NTS

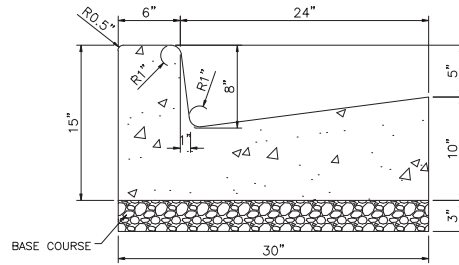
MIN END TRANSITION LENGTH	
CURB TYPE	* (FT)
A	5
B	7
A - 24"	5
9" MODIFIED	9

NOTES:
1. TYPE Q CURB BASED ON PLAN NO. 209 IN 2017 MANUAL OF STANDARD PLANS - APWA UTAH CHAPTER



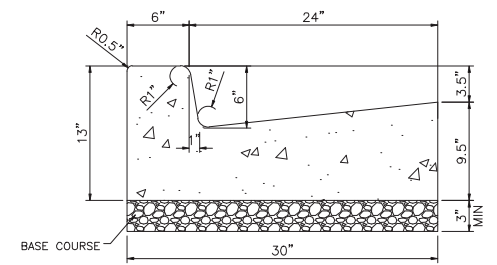
TYPE Q CURB
NTS

NOTES:
1. TYPE B CURB AND GUTTER BASED ON PLAN NO. 205.2 IN 2025 MANUAL OF STANDARD PLANS - APWA UTAH CHAPTER.
2. 2" CONTRACTION JOINT USED, SEE PLAN NO. 205.2.

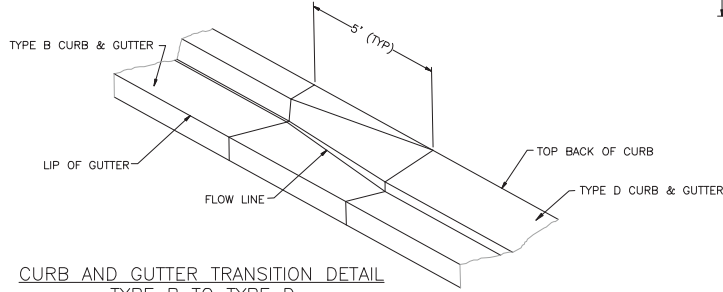


TYPE B - 30" STANDARD
NTS

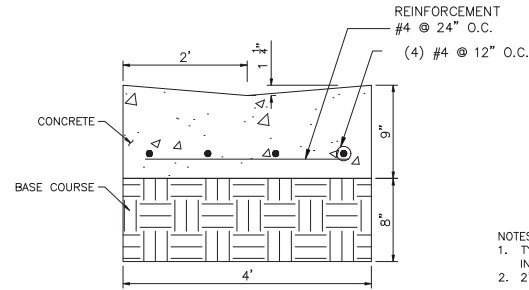
NOTES:
1. TYPE A CURB AND GUTTER BASED ON PLAN NO. 205.2 IN 2025 MANUAL OF STANDARD PLANS - APWA UTAH CHAPTER.
2. 2" CONTRACTION JOINT USED, SEE PLAN NO. 205.2.



TYPE A - 30" STANDARD
NTS

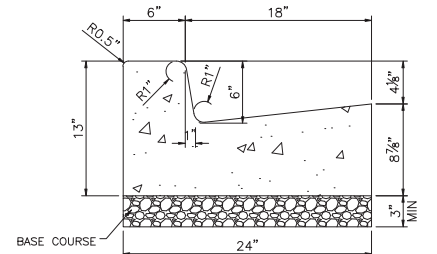


CURB AND GUTTER TRANSITION DETAIL
TYPE B TO TYPE D
NTS

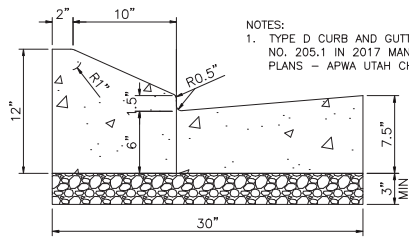


4'-0" WATERWAY
NTS

NOTES:
1. TYPE A - 24" CURB AND GUTTER BASED ON PLAN NO. 205.1 IN 2025 MANUAL OF STANDARD PLANS - APWA UTAH CHAPTER.
2. 2" CONTRACTION JOINT USED, SEE PLAN NO. 205.1.

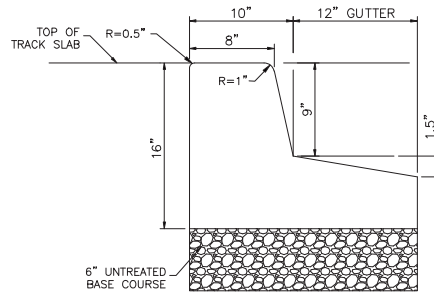


TYPE A - 24" STANDARD
NTS



TYPE D
NTS

NOTES:
1. TYPE D CURB AND GUTTER BASED ON PLAN NO. 205.1 IN 2017 MANUAL OF STANDARD PLANS - APWA UTAH CHAPTER.



MODIFIED TYPE B CURB AND GUTTER
NTS

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REV	DATE	Description



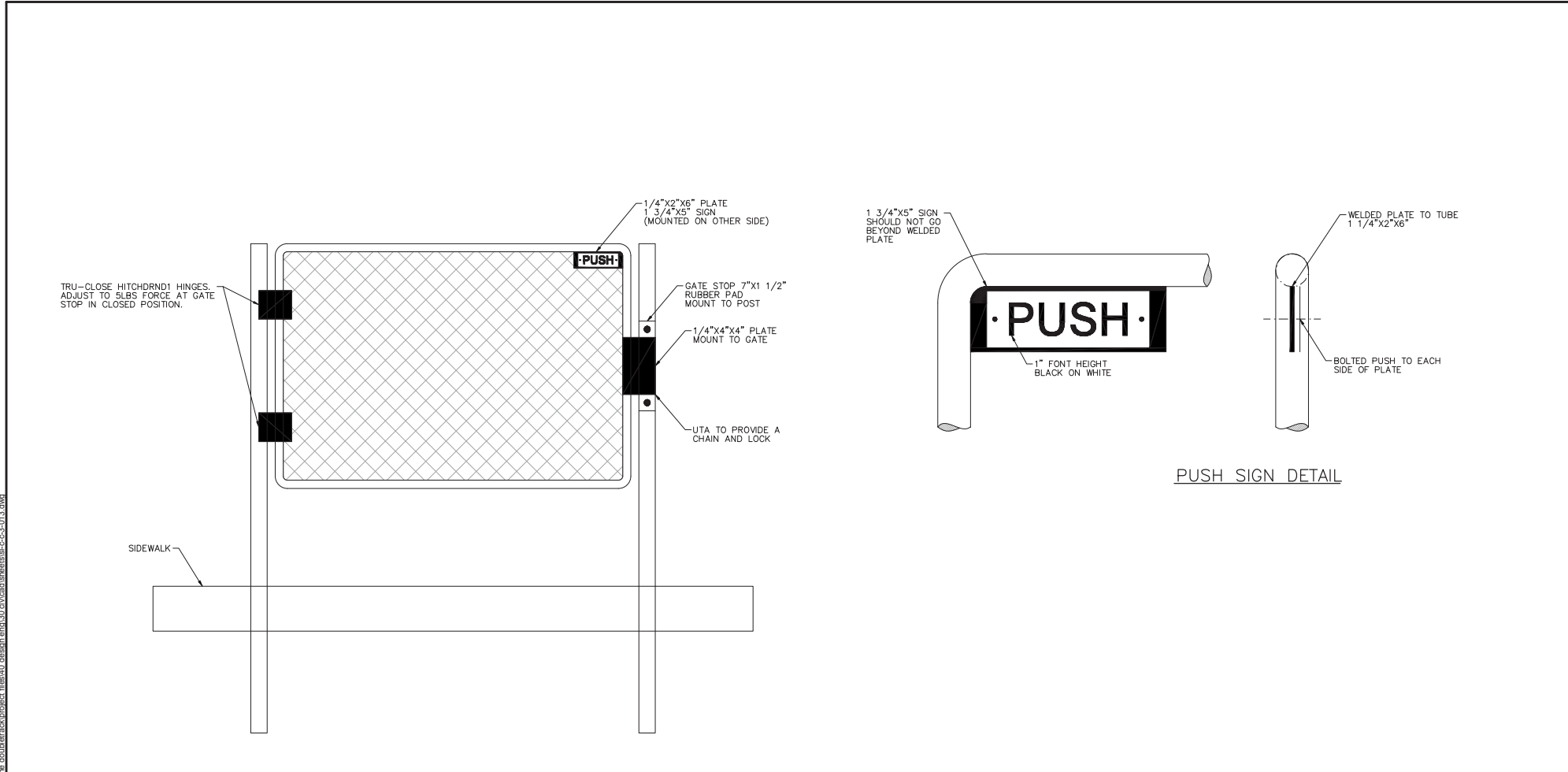
Designed By:
M. HARTMANN
Drawn By:
M. HARTMANN
Checked By:
A. DIGIROLAMO
Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT

CIVIL
CURB TRANSITIONS AND DETAILS

State	NTS
CADD Filename:	SL-C-3-011.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C3011
Sheet No.:	

Submitted By: _____ Approved By: _____



GATE DETAIL

PUSH SIGN DETAIL

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△			
△			
△			
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REV	DATE	Description	



Submitted By: _____

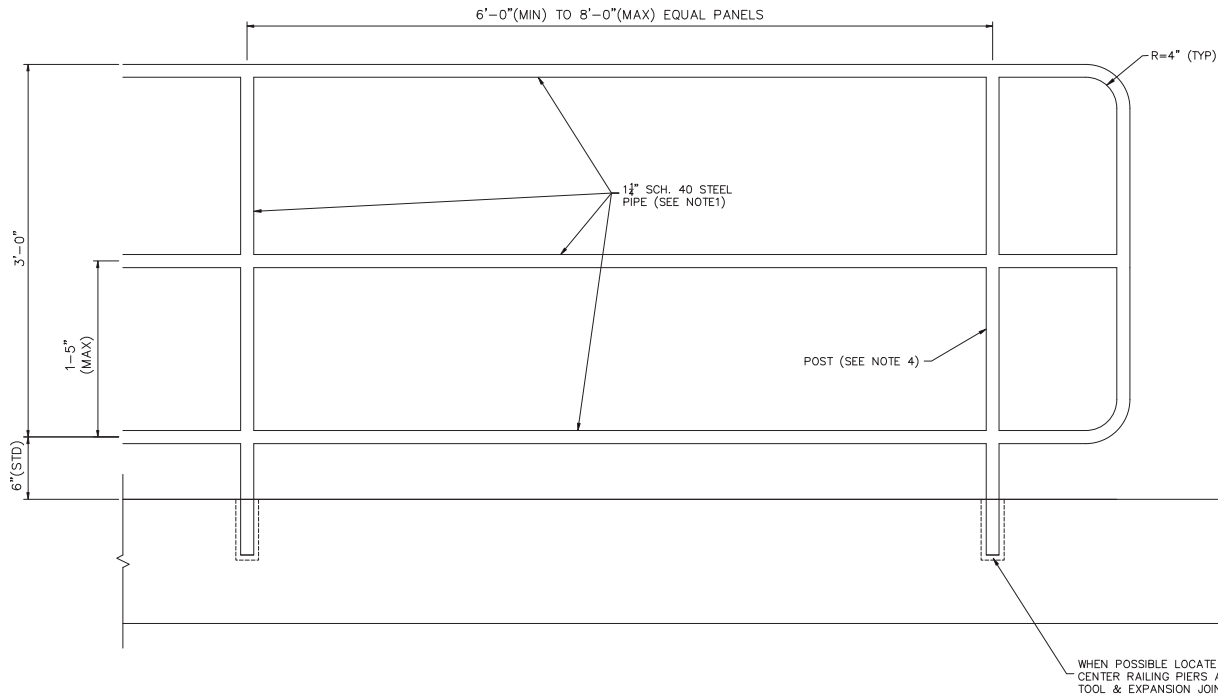
Approved By: _____

Designed By	T. COVEYOU
Drawn By	T. COVEYOU
Checked By	A. DIGIROLAMO
Approved By	F. NANNENGA

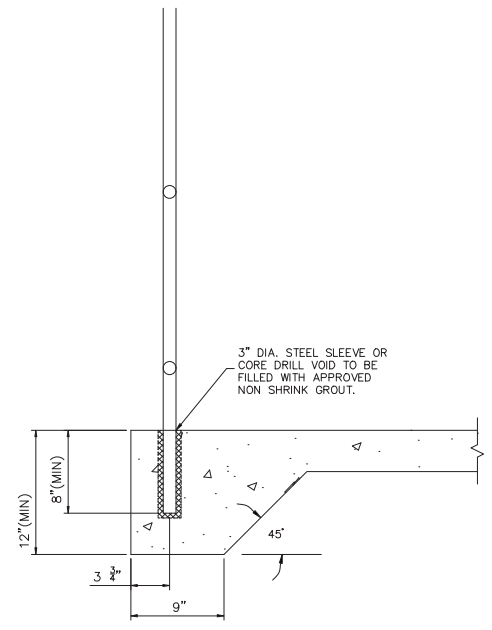
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
CIVIL
GATE DETAILS

State	NTS
CADD Filename	SL-C-3-013.dwg
Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	C3013
Sheet No.	

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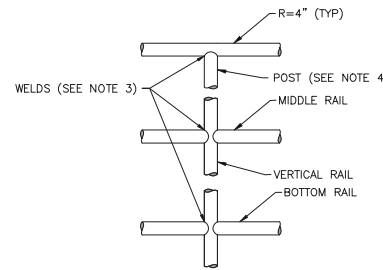
PLAN VIEW



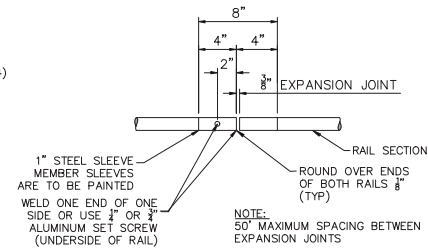
SECTION VIEW

NOTES:

1. CONSTRUCT PROPOSED STEEL PIPE RAIL OF 1 1/4" SCHEDULE 40 PLAIN END STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A53.
2. CONSTRUCT STEEL PIPE IN ACCORDANCE WITH SECTION 05520 HANDRAILS AND RAILINGS STANDARD SPECIFICATION.
3. WELD IN ACCORDANCE WITH 05520 HANDRAILS AND RAILINGS STANDARD SPECIFICATIONS.
4. ALL POST SECTIONS ARE TO BE CONSTRUCTED PLUMB, NOT PERPENDICULAR TO THE SIDEWALK.
5. USE APPROVED NON-SHRINK GROUT IN ACCORDANCE WITH SECTION 05520 HANDRAILS AND RAILINGS STANDARD SPECIFICATIONS FOR HANDRAIL FOOTINGS.
6. PLACEMENT OF HANDRAIL IN RELATION TO WALL AND SIDEWALK MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.
7. PIPE SURFACE TO BE PREPARED BEFORE PRIMING IN ACCORDANCE WITH 05520 HANDRAILS AND RAILINGS STANDARD SPECIFICATIONS.
8. PIPE TO BE DELIVERED TO WORK SITE PRIMED AND PAINTED.



RAIL CONNECTION



RAILING EXPANSION JOINT

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REV	DATE	Description

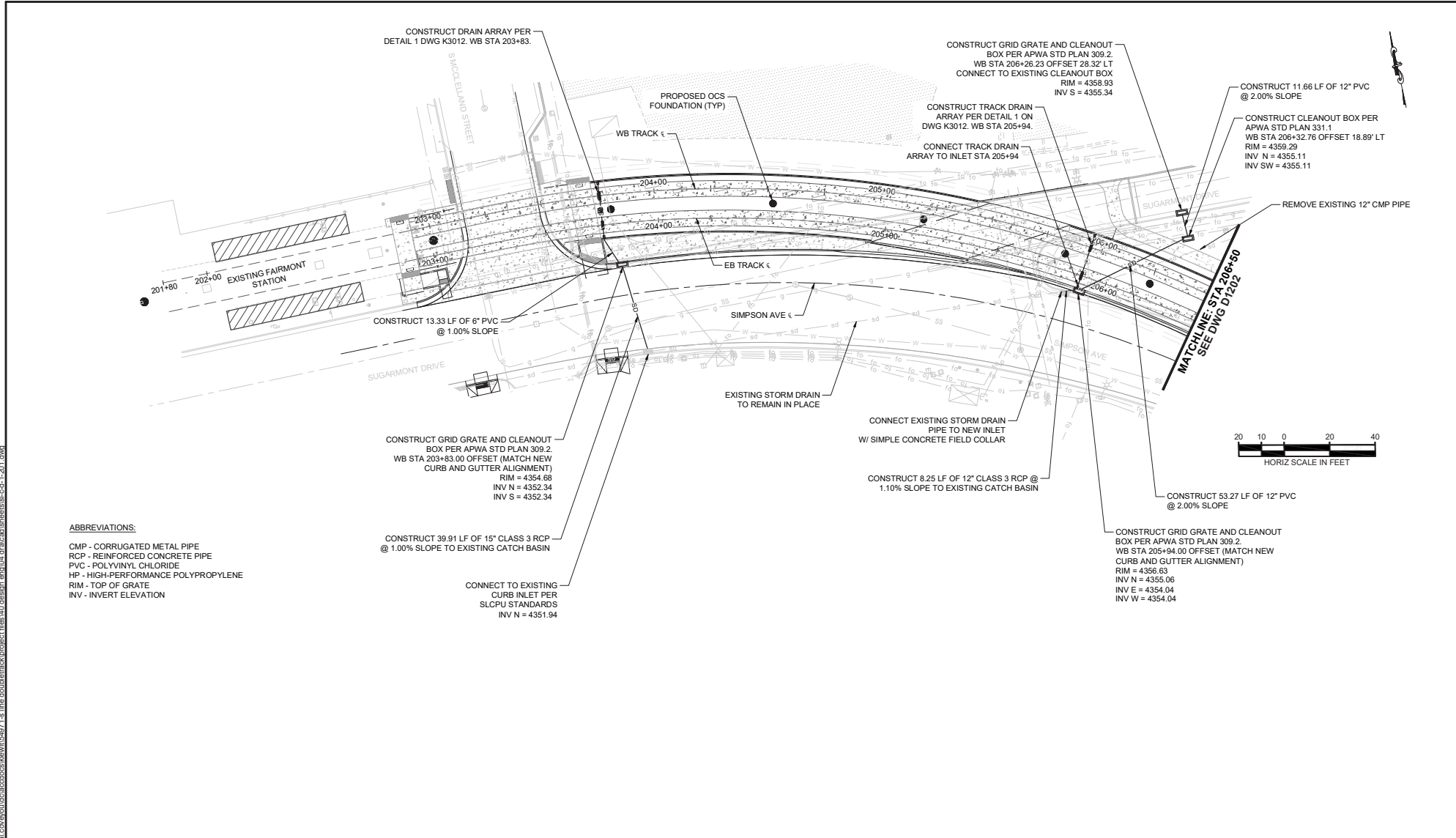


Designed By	M. HARTMANN
Drawn By	M. HARTMANN
Checked By	A. DIGIROLAMO
Approved By	F. NANNENGA

S-LINE EXTENSION PROJECT	
STANDARD DRAWINGS	
CIVIL PEDESTRIAN SAFETY RAILING	

State	NTS
CADD Filename	SL-C-3-014.dwg
Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	C3014
Sheet No.	

Submitted By: _____ Approved By: _____



- ABBREVIATIONS:**
- CMP - CORRUGATED METAL PIPE
 - RCP - REINFORCED CONCRETE PIPE
 - PVC - POLYVINYL CHLORIDE
 - HP - HIGH-PERFORMANCE POLYPROPYLENE
 - RIM - TOP OF GRATE
 - INV - INVERT ELEVATION



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 1/16/2020 8



PKS Kiewit

Submitted By: _____

UTA

UTAH TRANSIT AUTHORITY

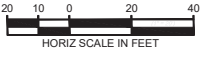
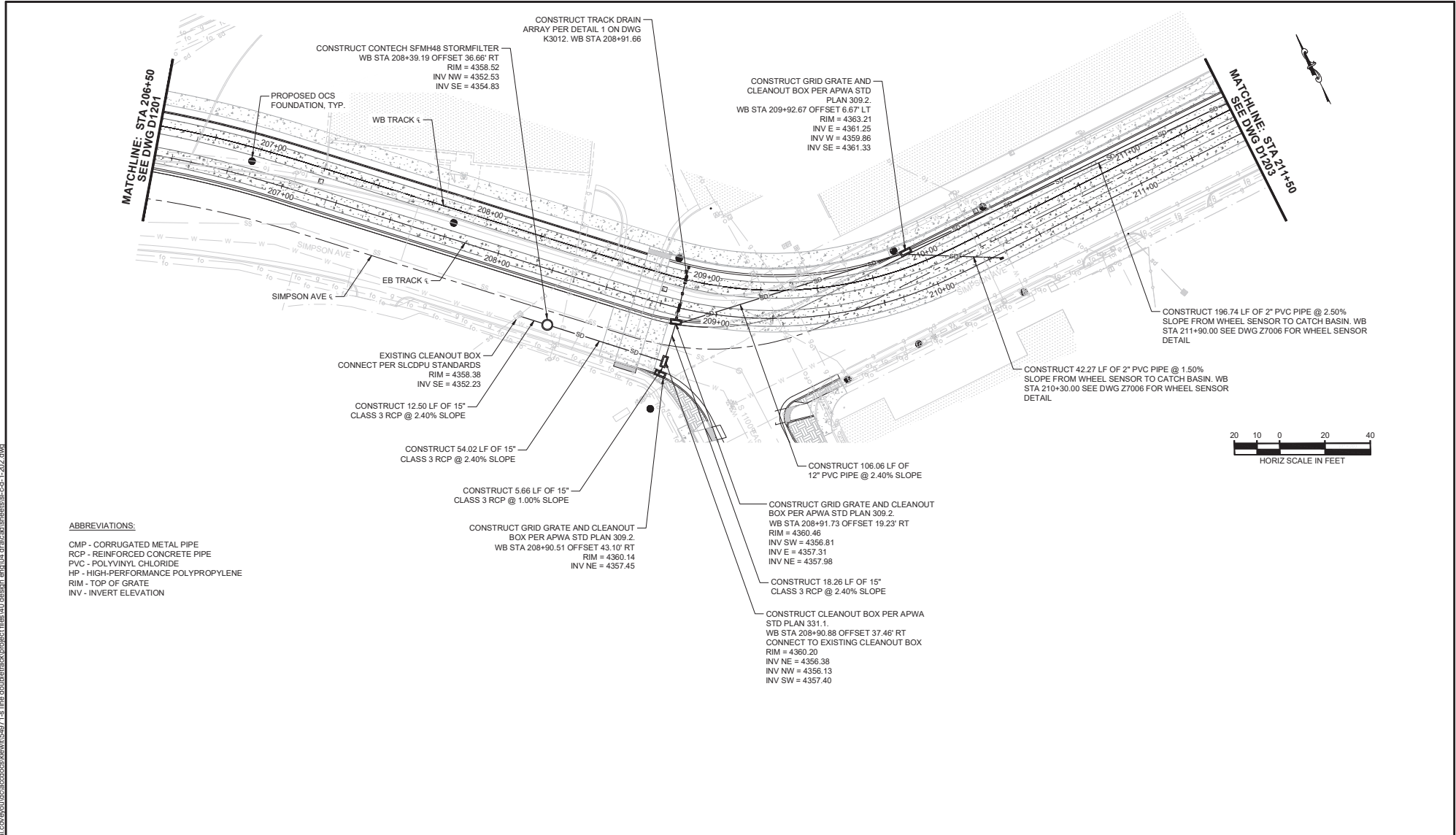
Approved By: _____

Designed By:	E. JONES
Drawn By:	E. JONES
Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT

DRAINAGE PLAN
WB STA 201+80.27 TO WB STA 206+50

Scale:	1" = 20'
CADD Filename:	SL-C-D-1-201.dwg
Submit Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	D1201
Sheet No.:	



- ABBREVIATIONS:**
- CMP - CORRUGATED METAL PIPE
 - RCP - REINFORCED CONCRETE PIPE
 - PVC - POLYVINYL CHLORIDE
 - HP - HIGH-PERFORMANCE POLYPROPYLENE
 - RIM - TOP OF GRATE
 - INV - INVERT ELEVATION

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REV	DATE	DESCRIPTION	



Designed By:
E. JONES

Drawn By:
E. JONES

Checked By:
A. DIGIROLAMO

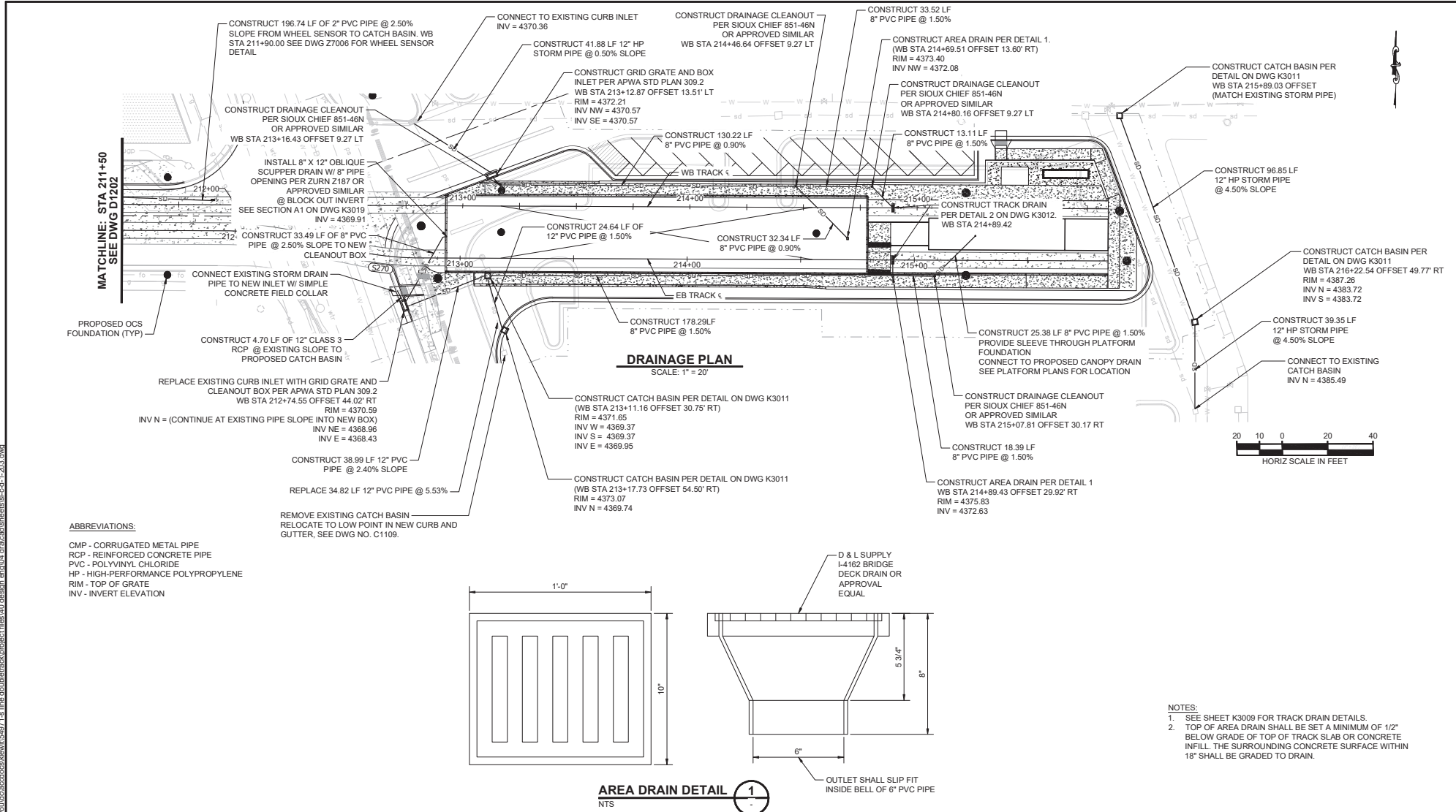
Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT

DRAINAGE PLAN
WB STA 206+50 TO WB STA 211+50

Scale	1" = 20'
CADD Filename	SL-C-D-1-202.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	D1202
Sheet No.	

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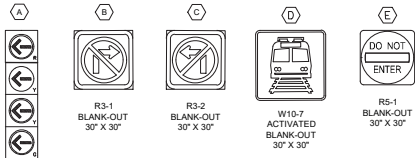
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REV	DATE	Description

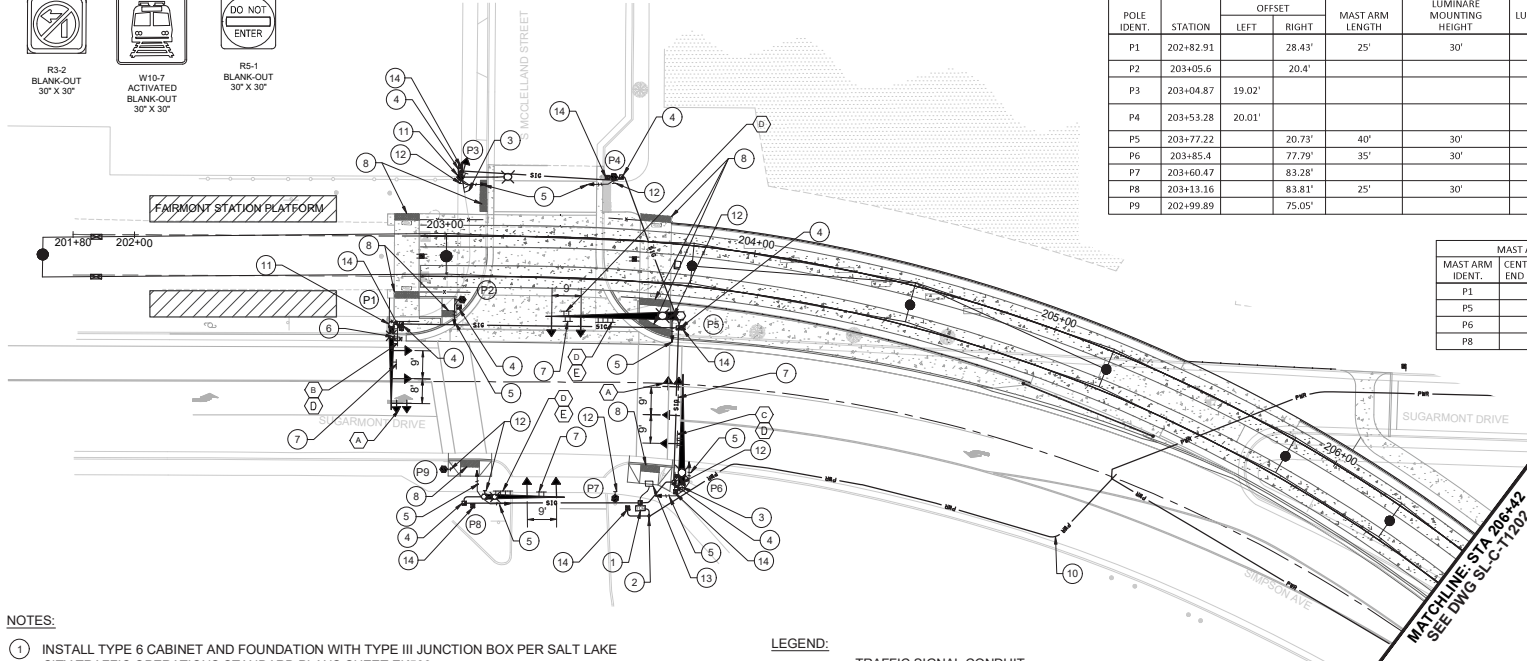


Designed By:	E. JONES
Drawn By:	E. JONES
Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT		State:	AS SHOWN
		CADD Filename:	SL-C-D-1-203.dwg
		Submitted Date:	01-16-26
		UTA Contract No.:	24-03849
		Drawing No.:	D1203
		Sheet No.:	



TYPE VI (FLA) LEFT-TURN
ARROW LENS DETAIL



POLE IDENT.	STATION	OFFSET		MAST ARM LENGTH	LUMINARE MOUNTING HEIGHT	LUMINARE ARM LENGTH	NOTES
		LEFT	RIGHT				
P1	202+82.91		28.43'	25'	30'	10'	30' MAST ARM TO BE FIELD CUT. INSTALL UTA LUMINARE
P2	203+05.6		20.4'				11' PEDESTRIAN POLE
P3	203+04.87	19.02'				10'	TYPE A MAST ARM POLE W/ TYPE 1 PRE SIGNAL
P4	203+53.28	20.01'					11' BREAKAWAY POLE
P5	203+77.22		20.73'	40'	30'	15'	45' MAST ARM TO BE FIELD CUT
P6	203+85.4		77.79'	35'	30'	10'	
P7	203+60.47		83.28'				4.5' PEDESTRIAN POLE
P8	203+13.16		83.81'	25'	30'	10'	30' MAST ARM TO BE FIELD CUT
P9	202+99.89		75.05'				4.5' PEDESTRIAN POLE

MAST ARM MOUNTED SIGN SCHEDULE		
MAST ARM IDENT.	CENTER OF SIGN TO END OF MAST ARM	A-2 SIGN W/G 8" "C" TEXT
P1	13.5'	MCCLELLAND
P5	5.5'	SUGARMOUNT
P6	5.5'	MCCLELLAND
P8	5.5'	SUGARMOUNT

NOTES:

- 1 INSTALL TYPE 6 CABINET AND FOUNDATION WITH TYPE III JUNCTION BOX PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARD PLANS SHEET EK506.
- 2 INSTALL UNDERGROUND SERVICE PEDESTAL PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARD PLAN SHEET EK509
- 3 LIDAR DETECTION MOUNTED ON TRAFFIC SIGNAL POLE.
- 4 INSTALL TYPE II JUNCTION BOX PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARD PLANS SHEET EK505.
- 5 INSTALL PEDESTRIAN SIGNAL HEAD ON POLE PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARDS SHEET EK507.
- 6 CCTV CAMERA MOUNTED ON TRAFFIC SIGNAL POLE OR MAST ARM AS SHOWN.
- 7 MOUNT STREET NAME SIGN ON MAST ARM.
- 8 INSTALL TACTILE WARNING DEVICE (TRUNCATED DOMES)
- 9 POWER CABLE TO BE INSTALLED BY ROCKY MOUNTAIN POWER
- 10 REMOVE EXISTING UTA LUMINARE, POLE, AND FOUNDATION.
- 11 INSTALL AUDIBLE PUSH BUTTON ON POLE PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARDS SHEET EK507.
- 12 UDOT/SLC FIBER PULL BOX TYPE 2
- 13 INSTALL TYPE I JUNCTION BOX FOR LIGHTING CIRCUIT

LEGEND:

- TRAFFIC SIGNAL CONDUIT
- TRAFFIC SIGNAL POLE AND MAST ARM WITH LUMINARE
- ☼ UTA PLATFORM LUMINARE
- SIGNAL POLE
- OCS POLE
- TYPE I JUNCTION BOX
- TYPE II JUNCTION BOX
- ▣ TYPE III JUNCTION BOX
- TCB TYPE 6 CABINET
- ◇ UNDERGROUND SERVICE PEDESTAL
- CCV CCTV CAMERA
- △ LIDAR DETECTION
- ← SIGNAL HEADS TYPE I
- ↑↑ SIGNAL HEADS TYPE VI
- ↑ PEDESTRIAN SIGNAL HEAD
- ↑ PEDESTRIAN PUSH BUTTON
- ↑ MASTARM MOUNTED SIGNS

CONSTRUCTION NOTES:

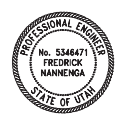
- 1. PROVIDE AND INSTALL SIGNAL HEADS WITH LENSES AS SHOWN.
- 2. ALL SIGNAL HEADS SHOWN SHALL BE TYPE I UNLESS OTHERWISE NOTED.
- 3. PROVIDE ADEQUATE CONDUCTOR SLACK IN MAST ARM TO ALLOW FOR VERTICAL ADJUSTMENTS OF SIGNAL WITHIN FULL RANGE OF MOUNTING BRACKET.
- 4. CONTRACTOR SHALL VERIFY AND ENSURE MAST ARM MINIMUM HEIGHT REQUIREMENTS ARE MET PRIOR TO CASTING POLE FOUNDATIONS.
- 5. TAG EACH SET OF CABLES AT EACH CONDUIT END LABELING EACH CIRCUIT.
- 6. USE SIGNAL HEAD BRACKET MOUNTS FOR MOUNTING ALL SIGNAL HEADS. BOTTOM OF SIGNAL HEAD ASSEMBLY SHALL BE A MINIMUM OF 17.5' AND A MAXIMUM OF 19.5 ABOVE ROADWAY SURFACE.
- 7. PRIMARY CONDUITS BETWEEN SIGNAL JUNCTION BOXES SHALL CONTAIN 6-2" PVC CONDUIT EXCEPT WHERE NOTED.
- 8. POLES TO BE CONSTRUCTED PER SALT LAKE CITY TRAFFIC OPERATION STANDARDS UNLESS OTHERWISE NOTED.
- 9. ALL CITY ITEMS TO BE REMOVED ARE TO BE RETURNED TO THE CITY "AS IS".



**MATCHLINE: STA 206+42
SEE DWG SL-C-T1202**

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REV	DATE	Description



Designed By:	J. GONZALES
Drawn By:	J. GONZALES
Checked By:	L. B. KHAN
Approved By:	F. NANNENGA

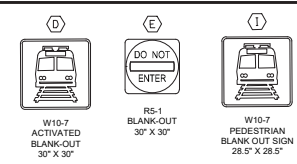
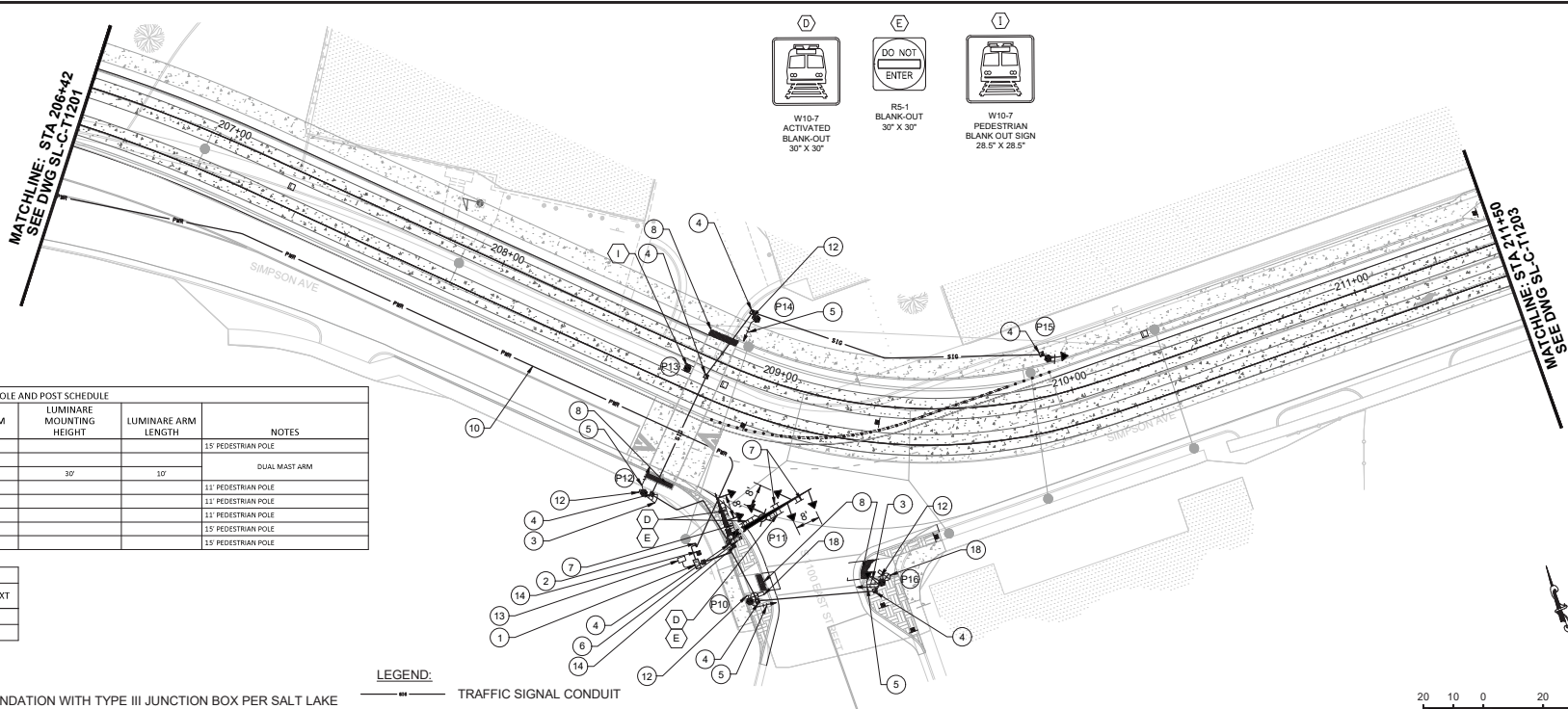
S-LINE EXTENSION PROJECT

TRAFFIC SIGNAL PLANS
WB STA 201+60 TO WB STA 206+42

Scale:	1" = 20'
CADD Filename:	SL-C-T-1-201.dwg
Submital Date:	1-16-26
UTA Contract No.:	24-03849
Drawing No.:	T1201
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POLE AND POST SCHEDULE							
POLE IDENT.	STATION	OFFSET		MAST ARM LENGTH	LUMINARE MOUNTING HEIGHT	LUMINARE ARM LENGTH	NOTES
		LEFT	RIGHT				
P10	209+07.33		83.93'				15' PEDESTRIAN POLE
P11	208+93.58		64.35'	15'	30'	10'	DUAL MAST ARM
P12	208+79.1		51.25'				11' PEDESTRIAN POLE
P13	208+80.11		6.3'				11' PEDESTRIAN POLE
P14	208+84.42	18.04'					11' PEDESTRIAN POLE
P15	209+91.61	9.49'					15' PEDESTRIAN POLE
P16	209+35.15		46.36'				15' PEDESTRIAN POLE

MAST ARM MOUNTED SIGN SCHEDULE		
MAST ARM IDENT.	CENTER OF SIGN TO END OF MAST ARM	A-Z SIGN W/G 8" "C" TEXT
P11	12'	SUGARMOUNT
	5'12"	SIMPSON

NOTES:

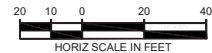
- 1 INSTALL TYPE 6 CABINET AND FOUNDATION WITH TYPE III JUNCTION BOX PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARD PLANS SHEET EK506.
- 2 INSTALL UNDERGROUND SERVICE PEDESTAL PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARD PLAN SHEET EK509
- 3 LIDAR DETECTION MOUNTED ON TRAFFIC SIGNAL POLE.
- 4 INSTALL TYPE II JUNCTION BOX PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARD PLANS SHEET EK505.
- 5 INSTALL PEDESTRIAN SIGNAL HEAD ON POLE PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARDS SHEET EK507.
- 6 CCTV CAMERA MOUNTED ON TRAFFIC SIGNAL POLE OR MAST ARM AS SHOWN.
- 7 MOUNT STREET NAME SIGN ON MAST ARM.
- 8 INSTALL TACTILE WARNING DEVICE (TRUNCATED DOMES)
- 10 POWER CABLE TO BE INSTALLED BY ROCKY MOUNTAIN POWER
- 12 INSTALL AUDIBLE PUSH BUTTON ON POLE PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARDS SHEET EK507.
- 13 UDOT/SLC FIBER PULL BOX TYPE 2
- 14 INSTALL TYPE I JUNCTION BOX FOR LIGHTING CIRCUIT
- 16 INSTALL UTA PTZ CAMERA ON POLE.

LEGEND:

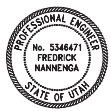
- TRAFFIC SIGNAL CONDUIT
- TRAFFIC SIGNAL POLE AND MAST ARM WITH LUMINARE
- PEDESTRIAN SIGNAL POLE
- OCS POLE
- TYPE I JUNCTION BOX
- TYPE II JUNCTION BOX
- TYPE III JUNCTION BOX
- TYPE 6 CABINET
- UNDERGROUND SERVICE PEDESTAL
- CCTV CAMERA
- LIDAR DETECTION
- SIGNAL HEADS TYPE I
- SIGNAL HEADS TYPE VI
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- MAST ARM MOUNTED SIGNS
- RAISED PAVEMENT MARKER
- UTA PTZ CAMERA

CONSTRUCTION NOTES:

1. PROVIDE AND INSTALL SIGNAL HEADS WITH LENSES AS SHOWN.
2. ALL SIGNAL HEADS SHOWN SHALL BE TYPE I UNLESS OTHERWISE NOTED.
3. PROVIDE ADEQUATE CONDUCTOR SLACK IN MAST ARM TO ALLOW FOR VERTICAL ADJUSTMENTS OF SIGNAL WITHIN FULL RANGE OF MOUNTING BRACKET.
4. CONTRACTOR SHALL VERIFY AND ENSURE MAST ARM MINIMUM HEIGHT REQUIREMENTS ARE MET PRIOR TO CASTING POLE FOUNDATIONS.
5. TAG EACH SET OF CABLES AT EACH CONDUIT END LABELING EACH CIRCUIT.
6. USE SIGNAL HEAD BRACKET MOUNTS FOR MOUNTING ALL SIGNAL HEADS. BOTTOM OF SIGNAL HEAD ASSEMBLY SHALL BE A MINIMUM OF 17.5' AND A MAXIMUM OF 19.5' ABOVE ROADWAY SURFACE.
7. PRIMARY CONDUITS BETWEEN SIGNAL JUNCTION BOXES SHALL CONTAIN 6-2" PVC CONDUIT EXCEPT WHERE NOTED.
8. POLES TO BE CONSTRUCTED PER SALT LAKE CITY TRAFFIC OPERATION STANDARDS.
9. PTZ CAMERA REQUIRES NEMA BOX WITH A SWITCH AND SHALL WIRED FROM THE NEAREST PCC FIBER BOX.
10. INSTALL PEDESTRIAN BLANK OUT SIGN. SEE SHEET 3213
11. ALL CITY ITEMS TO BE REMOVED ARE TO BE RETURNED TO THE CITY "AS IS".



REV	DATE	Description

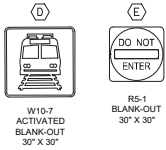


Designed By:	J. GONZALES
Drawn By:	J. GONZALES
Checked By:	B. KHAN
Approved By:	F. NANNENGA

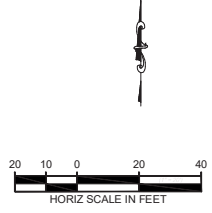
S-LINE EXTENSION PROJECT
 TRAFFIC SIGNAL PLANS
 WB STA 206+42 TO WB STA 211+50

Scale:	1" = 20'
CADD Filename:	SL-C-T-1-202.dwg
Submital Date:	1-16-26
UTA Contract No.:	24-03849
Sheet No.:	T1202

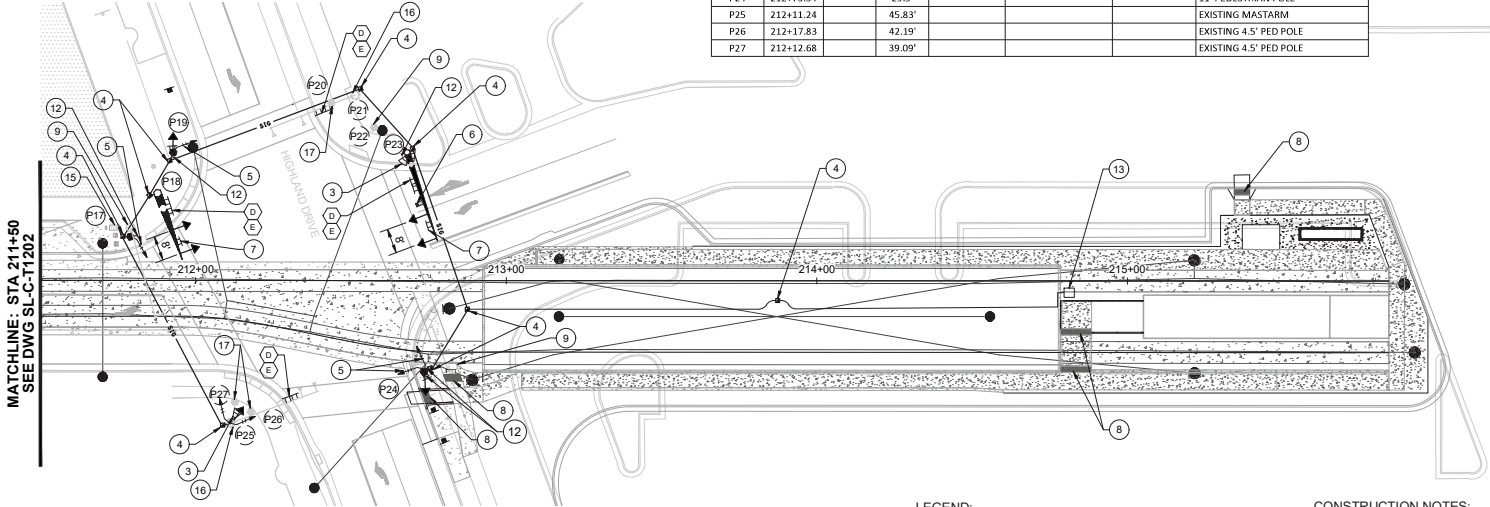
Submitted By: _____ Approved By: _____



POLE IDENT.	STATION	OFFSET		MAST ARM LENGTH	LUMINARE MOUNTING HEIGHT	LUMINARE ARM LENGTH	NOTES
		LEFT	RIGHT				
P17	211+79.01	14.14'					11' PEDESTRIAN POLE
P18	211+87.36	28.02'		20'			
P19	211+92.70	41.15'					11' PEDESTRIAN POLE
P20	212+43.69	57.26'					EXISTING 4.5' PED POLE
P21	212+51.38	59.7'					EXISTING MAST ARM
P22	212+43.69	57.26'					EXISTING 4.5' PED POLE
P23	212+57.9	41.16'		30'	30'	10'	
P24	212+73.54		29.5'				11' PEDESTRIAN POLE
P25	212+11.24		45.83'				EXISTING MASTARM
P26	212+17.83		42.19'				EXISTING 4.5' PED POLE
P27	212+12.68		39.09'				EXISTING 4.5' PED POLE



MAST ARM MOUNTED SIGN SCHEDULE		
MAST ARM IDENT.	CENTER OF SIGN TO END OF MAST ARM	A-2 SIGN W/G 8" "C" TEXT
P18	5'	HIGHLAND
P22	5'	HIGHLAND



- NOTES:**
- LIDAR DETECTION MOUNTED ON TRAFFIC SIGNAL POLE.
 - INSTALL TYPE II JUNCTION BOX PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARD PLANS SHEET EK505.
 - INSTALL PEDESTRIAN SIGNAL HEAD ON POLE PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARDS SHEET EK507.
 - CCTV CAMERA MOUNTED ON TRAFFIC SIGNAL POLE OR MAST ARM AS SHOWN.
 - MOUNT STREET NAME SIGN ON MAST ARM.
 - INSTALL TACTILE WARNING DEVICE (TRUNCATED DOMES)
 - REMOVE, SALVAGE, AND RETURN ALL CITY OWNED POLES, SIGNS, PED PUSH BUTTONS AND SIGNAL RELATED PARTS TO SALT LAKE CITY TRAFFIC SIGNAL CREW. OBLITERATE EXISTING FOUNDATION.
 - INSTALL AUDIBLE PUSH BUTTON ON POLE PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARDS SHEET EK507.
 - UDOT/SLC FIBER PULL BOX TYPE 2
 - EXISTING SIGNAL CABINET AND CONTROLLER (PROTECT IN PLACE)
 - EXISTING SIGNAL POLE, MAST ARM, EQUIPMENT, AND STREET NAME SIGN (PROTECT IN PLACE)
 - EXISTING PEDESTRIAN POLE AND PUSH BUTTON (PROTECT IN PLACE).

- LEGEND:**
- TRAFFIC SIGNAL CONDUIT
 - TRAFFIC SIGNAL POLE AND MAST ARM WITH LUMINARE
 - UTA PLATFORM LUMINARE
 - PEDESTRIAN SIGNAL POLE
 - OCS POLE
 - TYPE II JUNCTION BOX
 - TYPE III JUNCTION BOX
 - TYPE 6 CABINET
 - UNDERGROUND SERVICE PEDESTAL
 - CCTV CAMERA
 - LIDAR DETECTION
 - SIGNAL HEADS TYPE I
 - SIGNAL HEADS TYPE VI
 - PEDESTRIAN SIGNAL HEAD
 - PEDESTRIAN PUSH BUTTON
 - EXISTING TRAFFIC SIGNAL MAST ARM
 - ROADSIDE SIGN AND POST
 - BLANK OUT SIGNS (R3-1, R3-2, R5-1, W10-7)

- CONSTRUCTION NOTES:**
- PROVIDE AND INSTALL SIGNAL HEADS WITH LENSES AS SHOWN.
 - ALL SIGNAL HEADS SHOWN SHALL BE TYPE I UNLESS OTHERWISE NOTED.
 - PROVIDE ADEQUATE CONDUCTOR SLACK IN MAST ARM TO ALLOW FOR VERTICAL ADJUSTMENTS OF SIGNAL WITHIN FULL RANGE OF MOUNTING BRACKET.
 - CONTRACTOR SHALL VERIFY AND ENSURE MAST ARM MINIMUM HEIGHT REQUIREMENTS ARE MET PRIOR TO CASTING POLE FOUNDATIONS.
 - TAG EACH SET OF CABLES AT EACH CONDUIT END LABELING EACH CIRCUIT.
 - USE SIGNAL HEAD BRACKET MOUNTS FOR MOUNTING ALL SIGNAL HEADS. BOTTOM OF SIGNAL HEAD ASSEMBLY SHALL BE A MINIMUM OF 17.5' AND A MAXIMUM OF 19.5' ABOVE ROADWAY SURFACE.
 - PRIMARY CONDUITS BETWEEN SIGNAL JUNCTION BOXES SHALL CONTAIN 6-2" PVC CONDUIT EXCEPT WHERE NOTED.
 - POLES TO BE CONSTRUCTED PER SALT LAKE CITY TRAFFIC OPERATION STANDARDS.

REV	DATE	Description



Designed By: J. GONZALES
Drawn By: J. GONZALES
Checked By: B. KHAN
Approved By: F. NANNENGA

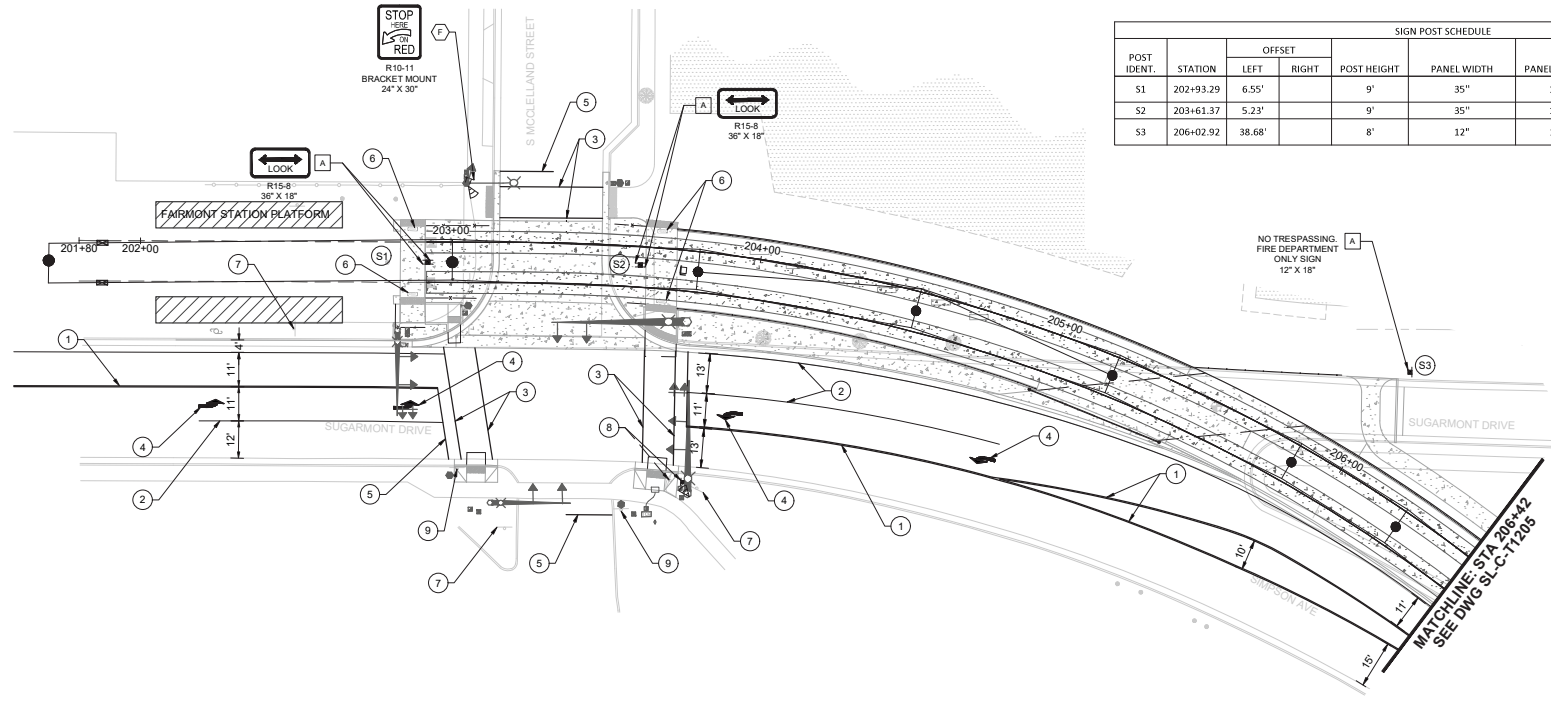
S-LINE EXTENSION PROJECT

TRAFFIC SIGNAL PLANS
WB STA 211+50 TO WB STA 215+85

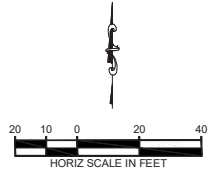
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Submitted Date: 1-16-26
UTA Contract No.: 24-03849
Drawing No.: T1203
Sheet No.:

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POST IDENT.	STATION	OFFSET		POST HEIGHT	PANEL WIDTH	PANEL HEIGHT	NOTES
		LEFT	RIGHT				
S1	202+93.29	6.55'		9'	35"	18"	TWO "LOOK" SIGNS BACK TO BACK
S2	203+61.37	5.23'		9'	35"	18"	TWO "LOOK" SIGNS BACK TO BACK
S3	206+02.92	38.68'		8'	12"	18"	"NO TRESPASSING FIRE DEPARTMENT ACCESS ONLY"



NOTES:

- [A] MOUNT SIGNS TO 2 INCH SQUARE 12-GUAGE METAL POLE WITH T1 BREAKAWAY ANCHOR. SEE UDOT 2025 STANDARD DRAWINGS SN 8B FOR FOUNDATION.
- (1) 4" DOUBLE YELLOW SOLID STRIPE
- (2) 8" SOLID WHITE STRIPE
- (3) 12" SOLID WHITE CROSSWALK STRIPE TO BE INSTALLED PER 2009 MUTCD 3B-16.
- (4) INSTALL TURN ARROW MARKING PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARD PLANS SHEET EK514
- (5) 24" SOLID WHITE STRIPE TO BE INSTALLED PER 2009 MUTCD 3B-16. STRIPE TO BE INSTALLED A MINIMUM OF 4' IN ADVANCE OF NEAREST CROSSWALK.
- (6) "STOP" PAVEMENT MESSAGE TO BE AFFIXED DIRECTLY BEHIND TACTILE WARNING DEVICE (WHITE LETTERING ON RED BACKGROUND).
- (7) EXISTING SIGN (PROTECT IN PLACE).
- (8) RELOCATE EXISTING SIGN AS SHOWN
- (9) REMOVE, SALVAGE, AND RETURN ALL CITY OWNED SIGNS AND POSTS TO SALT LAKE CITY TRAFFIC SIGNAL CREW. OBLITERATE EXISTING FOUNDATION.

LEGEND:

- [Symbol] ROADSIDE SIGN AND POST
- [Symbol] BRACKET MOUNTED SIGN
- [Symbol] TURN ARROW
- [Symbol] THRU ARROW
- [Symbol] THRU-TURN ARROW
- [Symbol] CHEVRON MARKING FOR RAISED CROSSWALK
- [Symbol] MASTARM MOUNTED SIGNS

CONSTRUCTION NOTES:

1. MINIMUM SIGN HEIGHT SHALL BE SEVEN FEET MEASURED FROM BOTTOM OF SIGN TO STREET PAVEMENT, EXCEPT WHERE NOTED.
2. ALL NEW TRAFFIC PAVEMENT MARKINGS SHALL BE REFLECTIVE TAPE OR REFLECTIVE ACRYLIC PAINT AS SPECIFIED BY UDOT STANDARDS.
3. REMOVE ANY CONFLICTING PAVEMENT MARKINGS.
4. STRIPING TO CONTINUE TO CONSTRUCTION EXTENTS (MATCH EXISTING).
5. ALL CITY ITEMS TO BE REMOVED ARE TO BE RETURNED TO THE CITY "AS IS".

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Designed By: J. GONZALES
Drawn By: J. GONZALES
Checked By: B. KHAN
Approved By: R. NANNENGA

S-LINE EXTENSION PROJECT

STRIPING & SIGNING PLANS

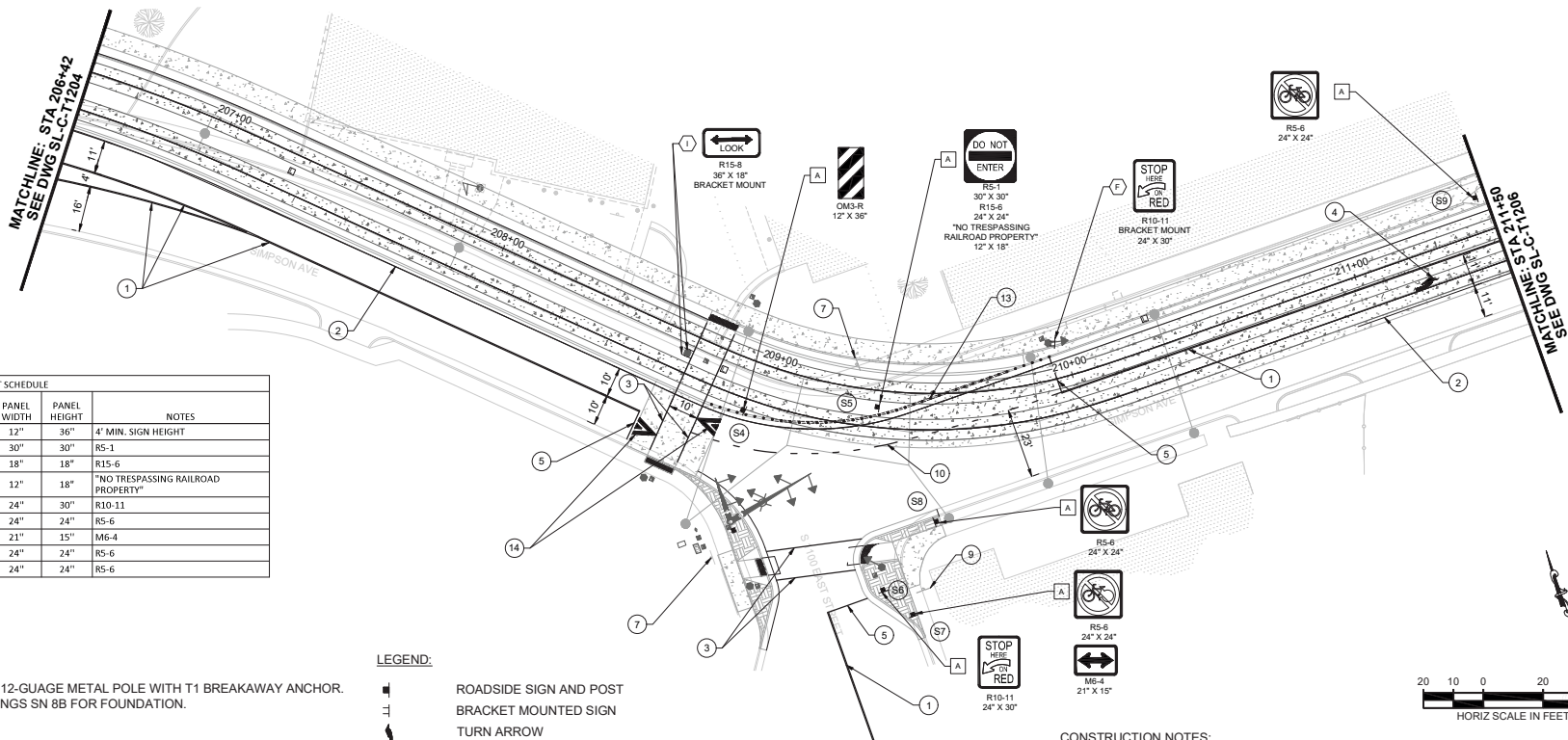
WB STA 201+60 TO WB STA 206+42

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Submission Date:	1-16-26
UTA Contract No.:	24-03849
Drawing No.:	T1204
Sheet No.:	

Submitted By: _____

Approved By: _____

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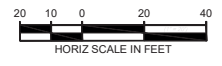


POST IDENT.	STATION	OFFSET		POST HEIGHT	PANEL		NOTES
		LEFT	RIGHT		WIDTH	HEIGHT	
S4	208+94.07		16.87'	7'	12"	36"	4' MIN. SIGN HEIGHT
S5	209+35.48		53.56'	10"	30"	30"	RS-1
					18"	18"	"NO TRESPASSING RAILROAD PROPERTY"
					12"	18"	
S6	209+41.02		66.14'	10"	24"	30"	R10-11
S7	209+48.49		73.91'	11'	24"	24"	RS-6
					21"	15"	M6-4
S8	209+53.42		43.'	9'	24"	24"	RS-6
S9	211+45.9	11.82'		9'	24"	24"	RS-6

- NOTES:**
- A MOUNT SIGNS TO 2 INCH SQUARE 12-GUAGE METAL POLE WITH T1 BREAKAWAY ANCHOR. SEE UDOT 2025 STANDARD DRAWINGS SN 8B FOR FOUNDATION.
 - 1 4" DOUBLE YELLOW SOLID STRIPE
 - 2 8" SOLID WHITE STRIPE
 - 3 12" SOLID WHITE CROSSWALK STRIPE TO BE INSTALLED PER 2009 MUTCD 3B-16.
 - 4 INSTALL TURN ARROW MARKING PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARD PLANS SHEET EK514
 - 5 24" SOLID WHITE STRIPE TO BE INSTALLED PER 2009 MUTCD 3B-16. STRIPE TO BE INSTALLED A MINIMUM OF 4' IN ADVANCE OF NEAREST CROSSWALK.
 - 7 EXISTING SIGN (PROTECT IN PLACE).
 - 8 RELOCATE EXISTING SIGN AS SHOWN
 - 9 REMOVE, SALVAGE, AND RETURN ALL CITY OWNED SIGNS AND POSTS TO SALT LAKE CITY TRAFFIC SIGNAL CREW. OBLITERATE EXISTING FOUNDATION.
 - 10 4" YELLOW DOTTED STRIPE.
 - 13 INSTALL RAISED PAVEMENT MARKERS WITH 3' SPACING.
 - 14 INSTALL CHEVRONS ON APPROACH SIDE OF RAISED CROSSWALKS.

- LEGEND:**
- ROADSIDE SIGN AND POST
 - BRACKET MOUNTED SIGN
 - TURN ARROW
 - THRU ARROW
 - THRU-TURN ARROW
 - CHEVRON MARKING FOR RAISED CROSSWALK
 - RAISED PAVEMENT MARKER

- CONSTRUCTION NOTES:**
1. MINIMUM SIGN HEIGHT SHALL BE SEVEN FEET MEASURED FROM BOTTOM OF SIGN TO STREET PAVEMENT, EXCEPT WHERE NOTED.
 2. ALL NEW TRAFFIC PAVEMENT MARKINGS SHALL BE REFLECTIVE TAPE OR REFLECTIVE ACRYLIC PAINT AS SPECIFIED BY UDOT STANDARDS.
 3. REMOVE ANY CONFLICTING PAVEMENT MARKINGS.
 4. STRIPING TO CONTINUE TO CONSTRUCTION EXTENTS (MATCH EXISTING).
 5. ALL CITY ITEMS TO BE REMOVED ARE TO BE RETURNED TO THE CITY "AS IS".



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REV	DATE	Description	

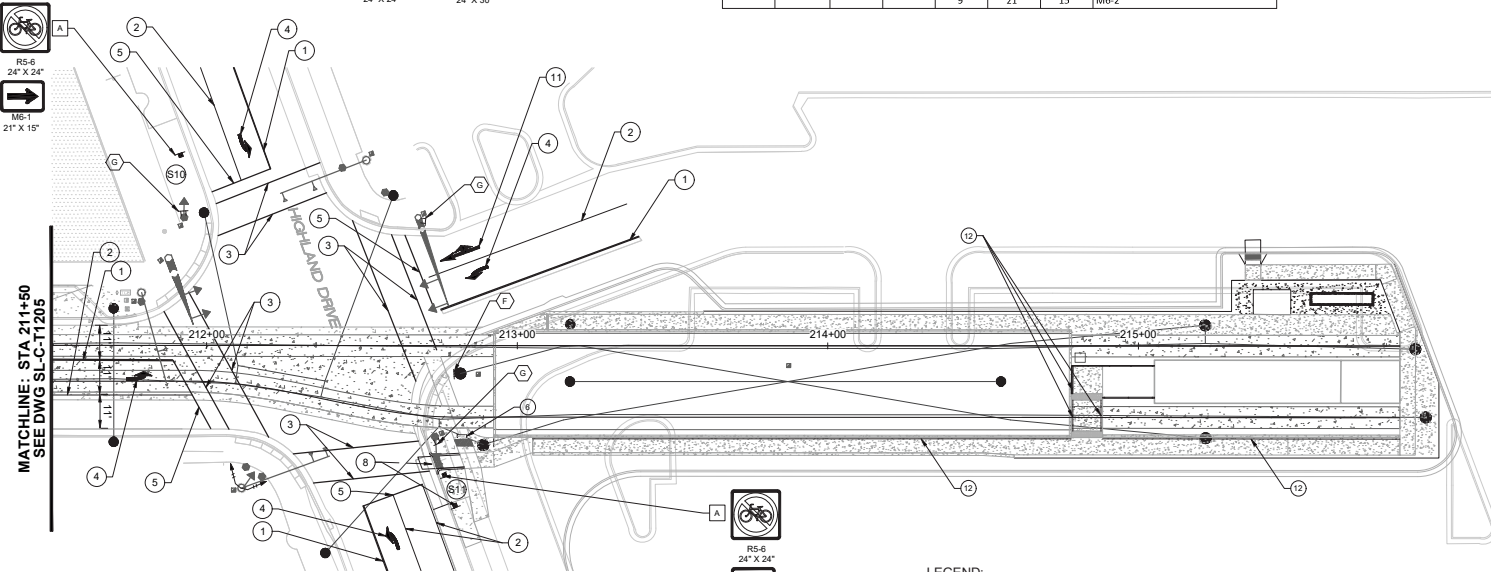
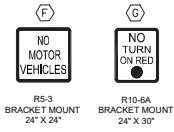


Designed By: J. GONZALES
 Drawn By: J. GONZALES
 Checked By: B. KHAN
 Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT
 STRIPING & SIGNING PLANS
 WB STA 206+42 TO WB STA 211+50

Scale:	1" = 20'
CADD Filename:	SL-C-T-1-205.dwg
Submitted Date:	1-16-26
UTA Contract No.:	24-03849
Drawing No.:	T1205
Sheet No.:	

POST IDENT.	STATION	OFFSET		POST HEIGHT	PANEL WIDTH	PANEL HEIGHT	NOTES
		LEFT	RIGHT				
S10	211+91.53	6.21'		9'	24"	24"	R5-6
					9'	21"	15"
S11	212+76.39		41.05'	9'	24"	24"	R5-6
					9'	21"	15"



NOTES:

- (A)** MOUNT SIGN TO 2 INCH SQUARE 12-GUAGE METAL POST PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARD PLANS SHEET EK511.
- (1)** 4" DOUBLE YELLOW SOLID STRIPE
- (2)** 8" SOLID WHITE STRIPE
- (3)** 12" SOLID WHITE CROSSWALK STRIPE TO BE INSTALLED PER 2009 MUTCD 3B-16.
- (4)** INSTALL TURN ARROW MARKING PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARD PLANS SHEET EK514
- (5)** 24" SOLID WHITE STRIPE TO BE INSTALLED PER 2009 MUTCD 3B-16. STRIPE TO BE INSTALLED A MINIMUM OF 4' IN ADVANCE OF NEAREST CROSSWALK.
- (6)** "STOP" PAVEMENT MESSAGE TO BE AFFIXED DIRECTLY BEHIND TACTILE WARNING DEVICE (WHITE LETTERING ON RED BACKGROUND).
- (8)** RELOCATE EXISTING SIGN AS SHOWN
- (11)** INSTALL THRU-RIGHT ARROW MARKING PER UTAH MUTCD.
- (12)** 4" SOLID WHITE LINE

LEGEND:

- ROADSIDE SIGN AND POST
- BRACKET MOUNTED SIGN
- TURN ARROW
- THRU ARROW
- THRU-TURN ARROW
- CHEVRON, ARKING FOR RAISED CROSSWALK
- RAISED PAVEMENT MARKER

CONSTRUCTION NOTES:

1. MINIMUM SIGN HEIGHT SHALL BE SEVEN FEET MEASURED FROM BOTTOM OF SIGN TO STREET PAVEMENT, EXCEPT WHERE NOTED.
2. ALL NEW TRAFFIC PAVEMENT MARKINGS SHALL BE REFLECTIVE TAPE OR REFLECTIVE ACRYLIC PAINT AS SPECIFIED BY UDOT STANDARDS.
3. REMOVE ANY CONFLICTING PAVEMENT MARKINGS.
4. STRIPING TO CONTINUE TO CONSTRUCTION EXTENTS (MATCH EXISTING).
5. ALL CITY ITEMS TO BE REMOVED ARE TO BE RETURNED TO THE CITY "AS IS".

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Designed By: J. GONZALES
Drawn By: J. GONZALES
Checked By: B. KHAN
Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT

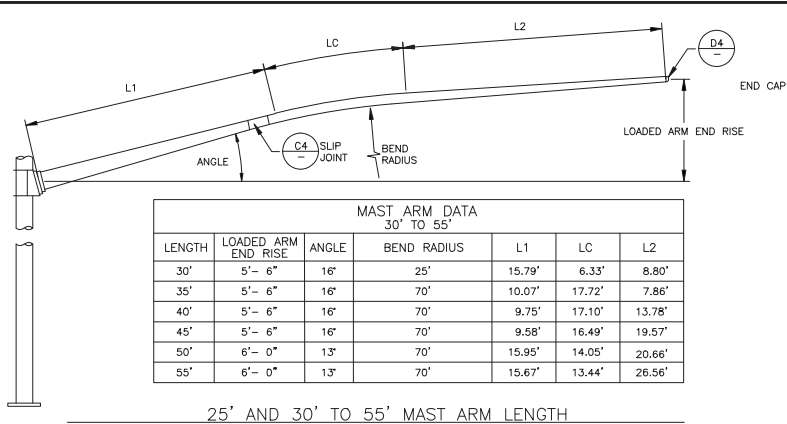
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 WB STA 211+50 TO WB STA 215+85

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Drawing No.: T1206
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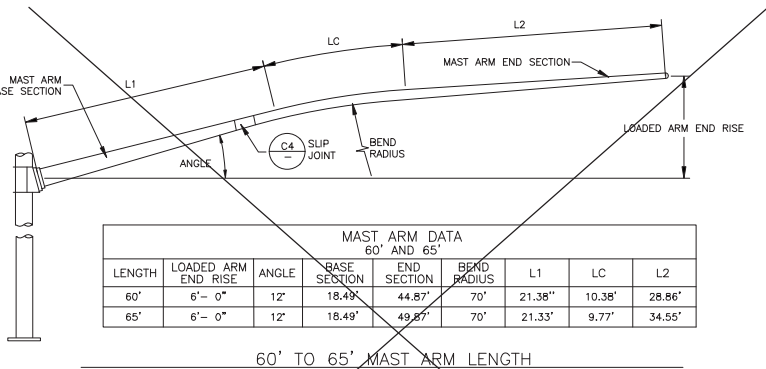
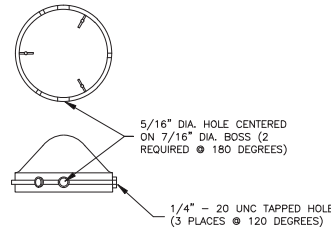
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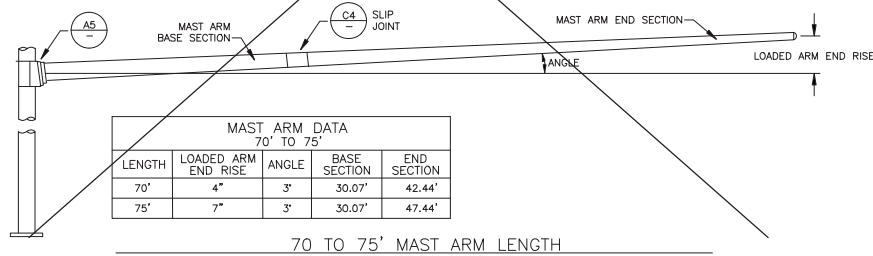
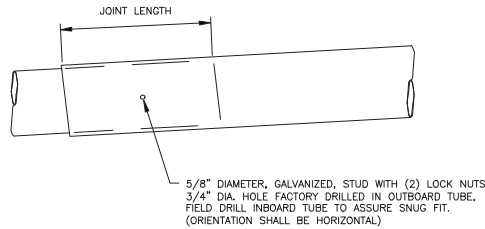
1/1/2020



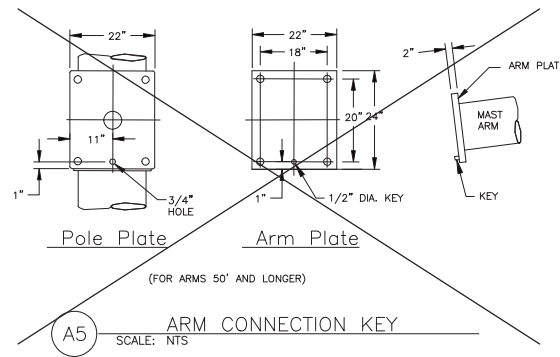
MAST ARM DATA 30' TO 55'						
LENGTH	LOADED ARM END RISE	ANGLE	BEND RADIUS	L1	LC	L2
30'	5'- 6"	16°	25'	15.79'	6.33'	8.80'
35'	5'- 6"	16°	70'	10.07'	17.72'	7.86'
40'	5'- 6"	16°	70'	9.75'	17.10'	13.78'
45'	5'- 6"	16°	70'	9.58'	16.49'	19.57'
50'	6'- 0"	13°	70'	15.95'	14.05'	20.66'
55'	6'- 0"	13°	70'	15.67'	13.44'	26.56'



MAST ARM DATA 60' AND 65'								
LENGTH	LOADED ARM END RISE	ANGLE	BASE SECTION	END SECTION	BEND RADIUS	L1	LC	L2
60'	6'- 0"	12°	18.49'	44.87'	70'	21.38"	10.38'	28.86'
65'	6'- 0"	12°	18.49'	49.87'	70'	21.33"	9.77'	34.55'



MAST ARM DATA 70' TO 75'				
LENGTH	LOADED ARM END RISE	ANGLE	BASE SECTION	END SECTION
70'	4"	3°	30.07'	42.44'
75'	7"	3°	30.07'	47.44'



GENERAL SHEET NOTES

STEEL

- GRADE C STEEL (ASTM A 570).
- ALL STEEL MATERIALS ARE HOT-DIPPED GALVANIZED (ASTM A 123).

POLE

- INSTALL POLE PLUMB. DO NOT RAKE POLE TO INCREASE SIGNAL HEAD CLEARANCE.

PAINT

- POWDER COAT GLOSS BLACK.
- DO NOT DAMAGE PAINT FINISH DURING TRANSPORT OR PLACEMENT.

BOLTS

- TORQUE BOLTS TO 40 FT-LBS., RELEASE, THEN TORQUE TO 80 FT-LBS.

SHEET KEYNOTES

1 SLIP JOINT

- FIELD ASSEMBLE TWO-PIECE MAST ARM SLIP JOINT TO ACHIEVE A SNUG FIT.
- APPLY ANTI-SIEZE COMPOUND.
- PROVIDE MINIMUM OVERLAP NOT LESS THAN 1.5 TIMES INSIDE DIAMETER OF END SECTION.

DETAILS PROVIDED ON THIS SHEET ARE APPLICABLE STANDARD DETAILS DESIGNED AND DRAWN BY SALT LAKE CITY TRANSPORTATION DIVISION.

REV	DATE	Description



Designed By:
J. GONZALES

Drawn By:
J. GONZALES

Checked By:
B. KHAN

Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS

MAST ARM DETAIL

Scale: 1" = 40'

CADD Filename:
SL-C-T-3-201.dwg

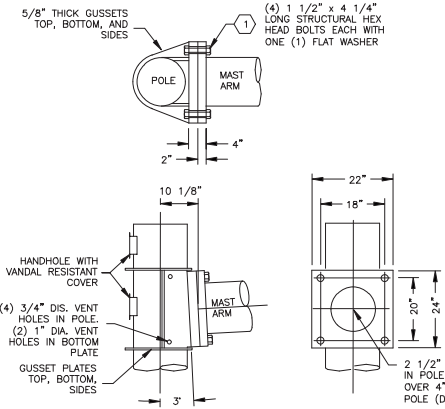
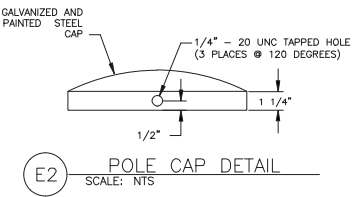
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1-16-26

UTA Contract No.:
24-03849

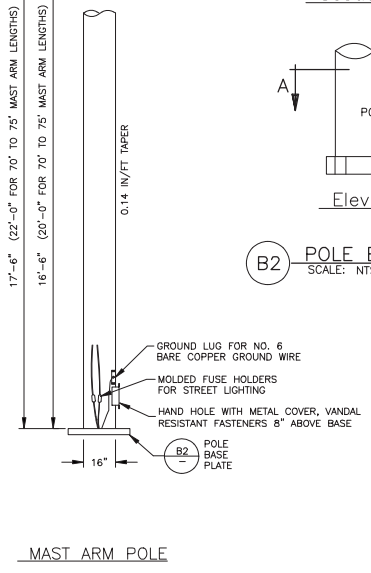
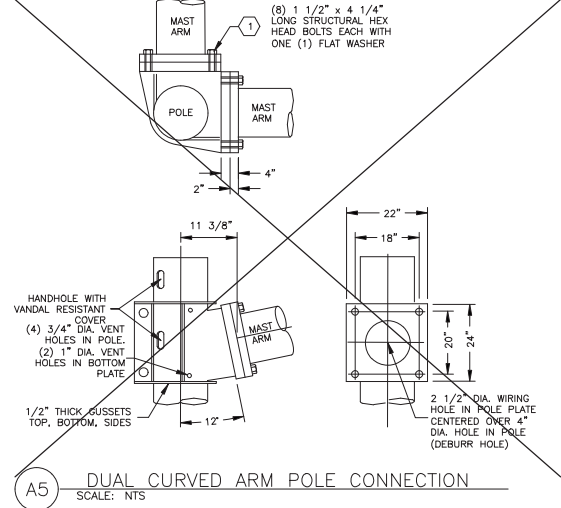
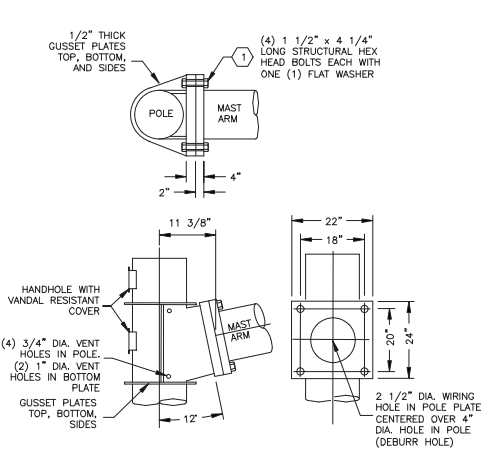
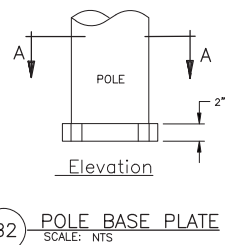
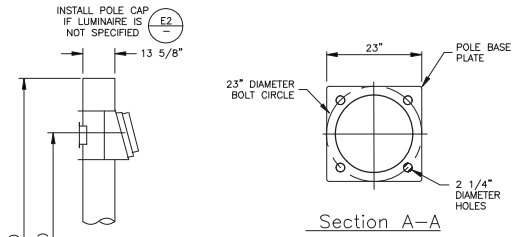
Drawing No.:
T3201

Sheet No.:

GENERAL SHEET NOTES	
STEEL	
◦ GRADE C STEEL (ASTM A 570).	
◦ ALL STEEL MATERIALS ARE HOT-DIPPED GALVANIZED (ASTM A 123).	
POLE	
◦ INSTALL POLE PLUMB. DO NOT RAKE POLE TO INCREASE SIGNAL HEAD CLEARANCE.	
PAINT	
◦ POWDER COAT GLOSS BLACK.	
◦ DO NOT DAMAGE PAINTED FINISH DURING TRANSPORT OR PLACEMENT.	
SHEET KEYNOTES	
1 BOLTS	
◦ TORQUE BOLTS TO 40 FT-LBS., RELEASE, THEN TORQUE TO 80 FT-LBS.	



DETAILS PROVIDED ON THIS SHEET ARE APPLICABLE STANDARD DETAILS DESIGNED AND DRAWN BY SALT LAKE CITY TRANSPORTATION DIVISION.



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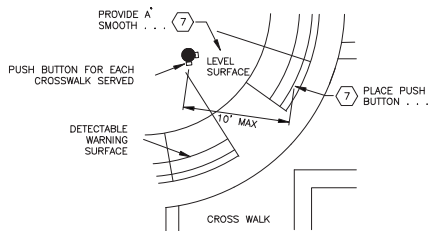
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Designed By:	J. GONZALES
Drawn By:	J. GONZALES
Checked By:	B. KHAN
Approved By:	F. NANNENGA

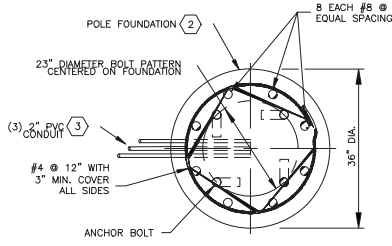
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		UTA Contract No.:	24-03849
		Drawing No.:	T3202

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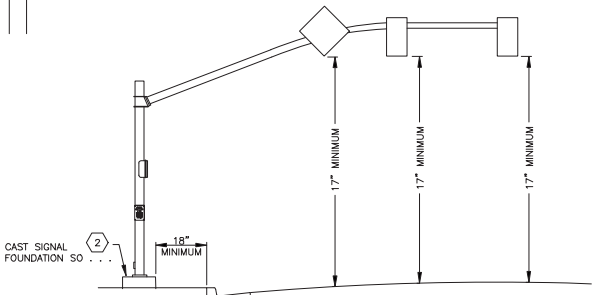


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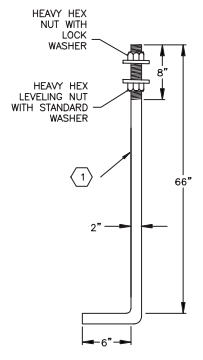
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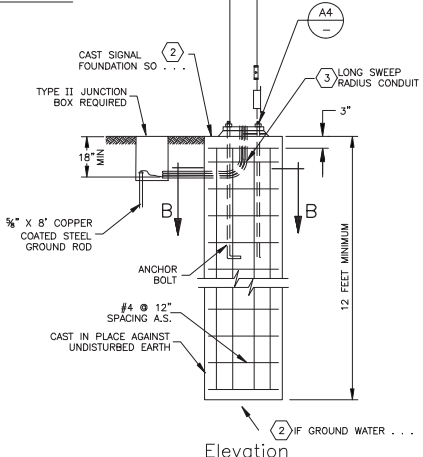
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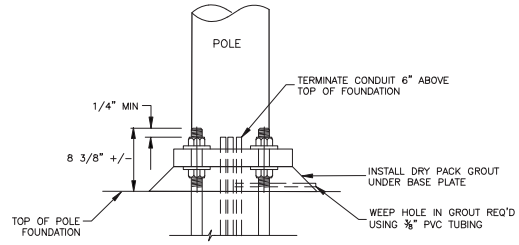
C3 FOUNDATION ELEVATION
SCALE: NTS



Anchor Bolt Detail



Elevation



A4 POLE BASE CONNECTION
SCALE: NTS

- GENERAL SHEET NOTES**
- STEEL**
 - GRADE C STEEL (ASTM A 570).
 - ALL STEEL MATERIALS ARE HOT-DIPPED GALVANIZED (ASTM A 123).
 - PAINT**
 - POWDER COAT GLOSS BLACK.
 - DO NOT DAMAGE PAINTED FINISH DURING TRANSPORT OR PLACEMENT.
 - VEGETATION**
 - APPROVAL FROM ENGINEER AND CITY FORESTER IS REQUIRED BEFORE TRIMMING OR CUTTING ANY TREE OR SHRUB.

- SHEET KEYNOTES**
- 1 ANCHOR BOLT
 - STEEL (ASTM A 307).
 - GALVANIZED (ASTM A 123).
 - DO NOT WELD ANCHOR BOLTS TO REINFORCING STEEL.
 - INSTALL BOLTS SQUARE WITH ROADWAY OR AT ANGLE SPECIFIED ON PLAN SHEETS.
 - INSTALL POLE PLUMB. DO NOT RAKE POLE TO INCREASE SIGNAL HEAD CLEARANCE.
 - TIGHTEN NUTS TO 150 FT-LBS.
 - 2 FOUNDATION
 - EPOXY COATED OR GALVANIZED DEFORMED STEEL BAR CAGE (ASTM A 36). DO NOT WELD REINFORCING STEEL.
 - CONCRETE CLASS 4000.
 - CAST SIGNAL FOUNDATION SO TOP OF FOUNDATION IS AT THE ELEVATION OF THE CROWN OF THE ROAD OR FLUSH WITH SIDEWALK, WHICHEVER IS HIGHER.
 - CAST ALL FOUNDATIONS IN PLACE AGAINST UNDISTURBED EARTH WITH 12 FEET OF ITS LENGTH BELOW FINISH GRADE.
 - USE A CIRCULAR FORM FOR THE TOP 18" OF FOUNDATION EMBEDMENT.
 - IF GROUND WATER IS ENCOUNTERED DURING FOUNDATION EXCAVATION, PROVIDE FULL LENGTH CIRCULAR FORM FOR FOUNDATION, EXCAVATE ADDITIONAL 2' DEEP BELOW FOUNDATION, INSTALL 2" SEWER ROCK BELOW FOUNDATION, DEWATER PRIOR TO PLACING CONCRETE, AND FILL ANNULAR SPACE BETWEEN CIRCULAR FORM AND EXCAVATION SIDES WITH CLSM (CONTROLLED LOW STRENGTH MATERIAL) (FLOWABLE FILL).
 - 3 CONDUIT
 - PLACE ALL CONDUIT IN SAME TRENCH WHERE POSSIBLE.
 - CAP ON BOTH ENDS PRIOR TO CONCRETE POUR.
 - 4 PUSH BUTTON
 - PROVIDE A SMOOTH, LEVEL, HARD SURFACE WITHIN 12 HORIZONTAL INCHES OF A PUSH BUTTON FOR WHEEL CHAIR ACCESS.
 - PLACE PUSH BUTTON WITHIN TEN FEET OF THE CENTER OF THE CURB CUT OR THE CENTER OF THE CROSS WALK IF THE CURB CUT EXCEEDS CROSS WALK WIDTH.
 - IF A PUSH BUTTON CANNOT BE MOUNTED ON THE POLE AND STILL COMPLY WITH THE 10 FEET MAXIMUM DISTANCE REQUIREMENT, A PEDESTRIAN PUSH BUTTON POLE MUST BE PROVIDED.

REV	DATE	Description



Designed By:
J. GONZALES
Drawn By:
J. GONZALES
Checked By:
B. KHAN
Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
MAST ARM POLE FOUNDATION DETAILS

Scale	1" = 40'
CADD Filename	SL-C-T-3-203.dwg
Submital Date	1-16-26
UTA Contract No.	24-03849
Sheet No.	T3203

Submitted By: _____

Approved By: _____

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1/15/2026

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REV	DATE	Description	



Designed By:
J. GONZALES
Drawn By:
J. GONZALES
Checked By:
B. KHAN
Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
MAST ARM POLE POLE EXTENSION
FOR LUMINAIRE DETAIL

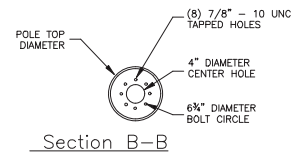
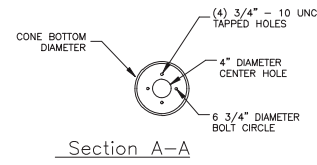
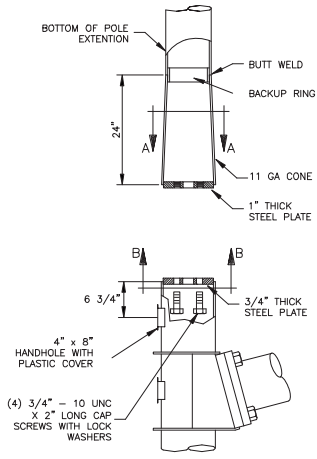
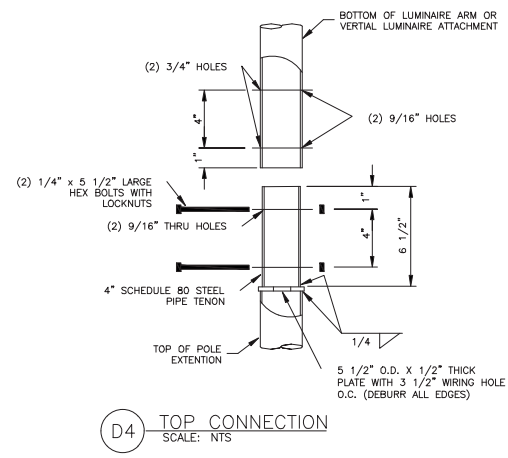
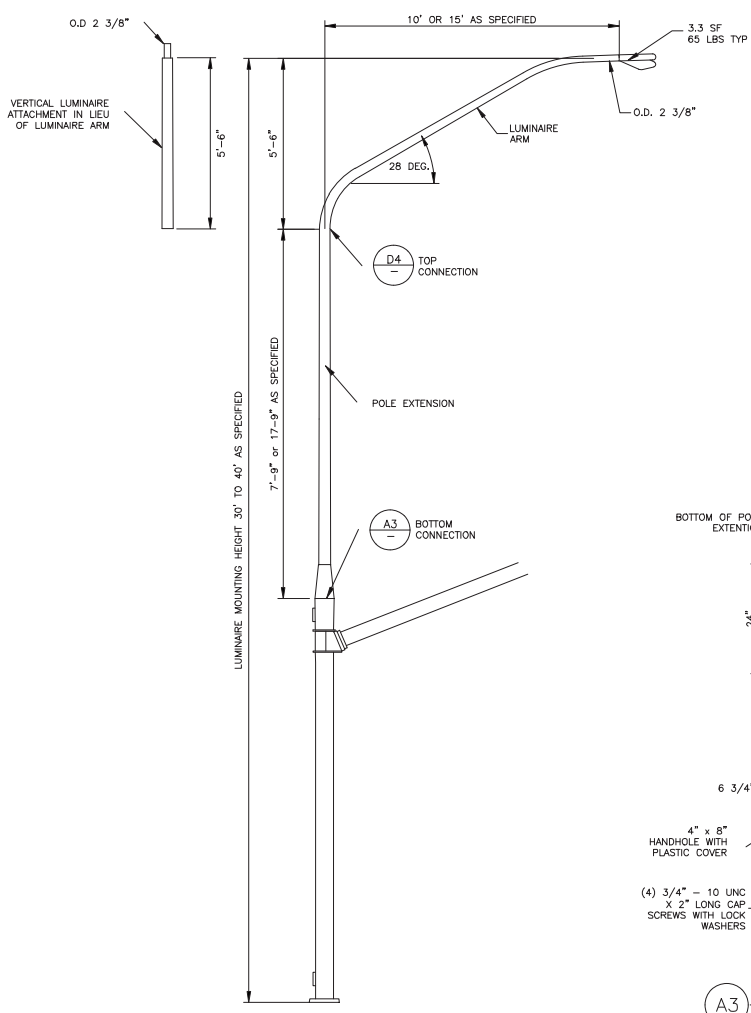
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CADD Filename	SL-C-T-3-204.dwg
Submit Date	1-16-26
UTA Contract No.	24-03849
Drawing No.	T3204
Sheet No.	

GENERAL SHEET NOTES

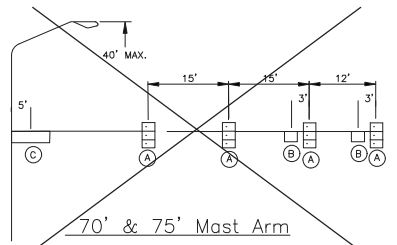
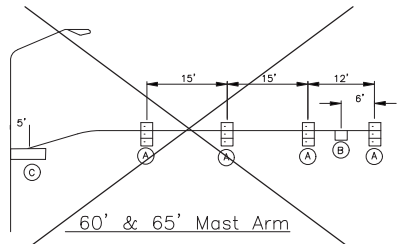
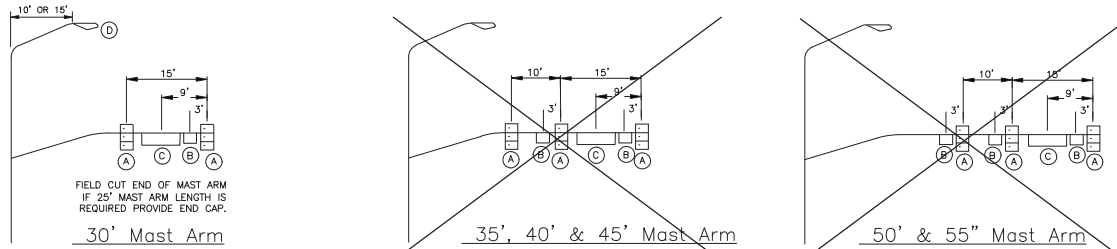
GENERAL

- MAINTAIN AT LEAST 10' CLEARANCE FROM ALL LUMINAIRE HARDWARE TO OVERHEAD POWER LINES.
- CONTRACTOR MUST RECEIVE APPROVAL FROM ENGINEER AND CITY FORESTER BEFORE TRIMMING ANY TREES OR SHRUBS.
- LUMINAIRE ARM OR EXTENSION, AND RELATED HARDWARE ARE CONTRACTOR FURNISHED ITEMS.
- ALL STEEL MATERIALS ARE HOT-DIPPED GALVANIZED. PAINT
- POWDER COAT GLOSS BLACK.
- DO NOT DAMAGE PAINTED FINISH DURING TRANSPORT AND PLACEMENT.

DETAILS PROVIDED ON THIS SHEET ARE APPLICABLE STANDARD DETAILS DESIGNED AND DRAWN BY SALT LAKE CITY TRANSPORTATION DIVISION.



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GENERAL SHEET NOTES

GENERAL

- MAINTAIN AT LEAST 10' CLEARANCE FROM ALL SIGNAL HARDWARE TO OVERHEAD POWER LINES.
- CONTRACTOR MUST RECEIVE APPROVAL FROM ENGINEER AND CITY FORESTER BEFORE TRIMMING TREES OR SHRUBS.

PAINT

- VISORS: GLOSS BLACK 12" x 12" TUNNEL TYPE.
- HEADS: GLOSS BLACK.
- BACK PLATE: FLAT BLACK.
- DO NOT DAMAGE PAINTED FINISH DURING TRANSPORT OR PLACEMENT.

SIGNAL LIGHT HEAD

- ONE-PIECE DIE-CAST ALUMINUM HOUSING.
- ALUMINUM DOOR WITH STAINLESS STEEL HINGE PINS. DOOR SWINGS 180 DEGREES.
- ONE-PIECE ALUMINUM VISOR SECURED TO THE DOOR WITH STAINLESS STEEL HARDWARE AND REMOVABLE.
- SIZED FOR 1 1/2" MOUNTING FIXTURES AT EACH END AND ATTACHING BACK-PLATES.

BACK PLATE

- PROVIDE AND INSTALL FOR ALL TYPE I, II, III, AND TYPE IV SIGNAL HEADS.

TERMINAL BLOCK

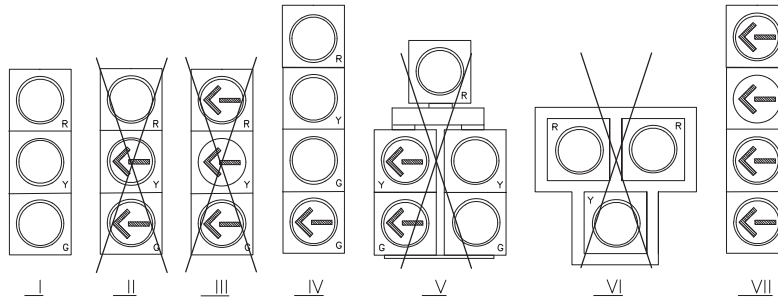
- LOCATED IN TOP SECTION FOR TYPE I, II, AND III SIGNAL HEADS.

LED MODULES

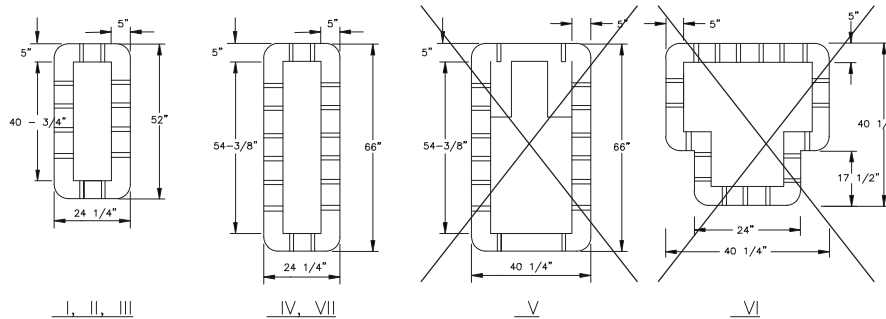
- PROVIDE LED MODULES IN ALL HEADS.
- ORIENT LED LENSES FOR TOP UPWARD ALIGNMENT.

INSTALLATION

- INSTALL TYPE V ASSEMBLIES SO HINGED SIGNAL FACE SWINGS OPEN TO THE OUTSIDE.
- PROVIDE 17"-0" MINIMUM CLEARANCE FROM BOTTOM OF SIGNAL HEAD ASSEMBLY TO FINISHED ROADWAY SURFACE. ASSEMBLY INCLUDES SIGNAL HEAD, BACK PLATE AND SIGNAL HEAD MOUNTING HARDWARE.
- LOCATE CENTER OF END SIGNAL HEAD 1 FOOT FROM END OF MAST ARM. FOR NON-TYPICAL INSTALLATIONS PROVIDE NOT LESS THAN 8'-0" SPACING.



C4 SCALE: NTS SIGNAL HEAD TYPES



A4 SCALE: NTS LOUVERED BACK PLATE TYPES
NOTE: FINISH IS FLAT BLACK

DEVICE	DESCRIPTION/SIZE	PROJECTED AREA (SF)	WEIGHT (LBS)
(A) SIGNAL	12", 3-SECTION WITH BACK PLATE	8.7	55
(B) SIGN	REGULATORY 24" X 30"	5.0	20
(C) SIGN	STREET NAME 16' x 96" (MAX)	10.7	43
(D) LUMINAIRE	ROADWAY LUMINAIRE	3.3	65

A1 SCALE: NTS TYPICAL PLACEMENTS

DETAILS PROVIDED ON THIS SHEET ARE APPLICABLE STANDARD DETAILS DESIGNED AND DRAWN BY SALT LAKE CITY TRANSPORTATION DIVISION.

GENERAL NOTES (THIS SHEET ONLY):

- DIMENSIONS BETWEEN SIGNAL HEADS AS SHOWN ON PLAN SHEETS SHALL BE USED.

REV	DATE	Description



Designed By:
J. GONZALES
Drawn By:
J. GONZALES
Checked By:
B. KHAN
Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
SIGNAL HEAD FOR VEHICLES DETAIL

Scale	1" = 40'
CADD Filename	SL-C-T-3-205.dwg
Submit Date	1-16-26
UTA Contract No.	24-03849
Drawing No.	T3205
Sheet No.	

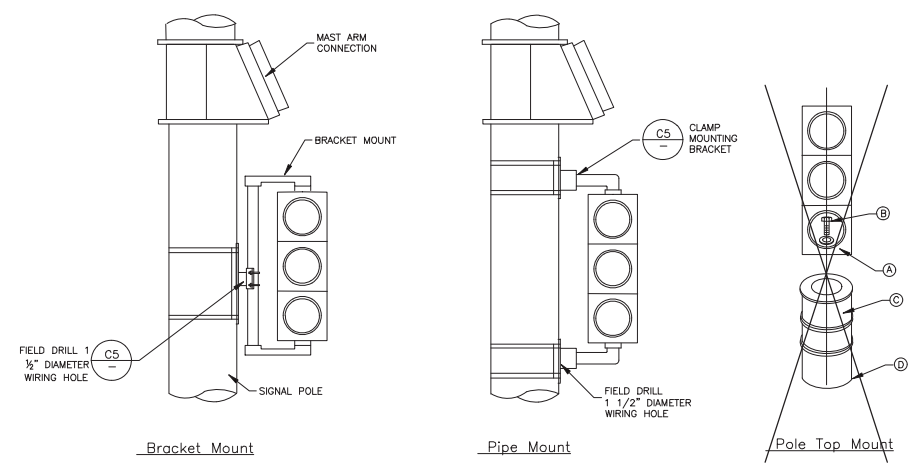
Submitted By: _____

Approved By: _____

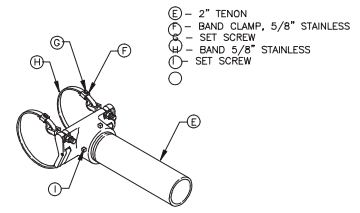
GENERAL SHEET NOTES

- POLE TOP MOUNT**
- BRONZE FITTINGS, GALVANIZED STEEL PIPE INSTALLATION
- FIELD DRILL 1-1/2" DIAMETER WIRING HOLE ALONG THE HORIZONTAL CENTROID OF MAST ARM AT EACH SIGNAL HEAD LOCATION. DEBURR AND INSTALL NEOPRENE GROMMET FOR WIRE PROTECTION PRIOR TO INSTALLING SIGNAL HEAD BRACKET
- PROVIDE PIPE MOUNT WHEN ATTACHING SIGNAL HEADS TO SIDES OF POLES
- PAINT
- GLOSS BLACK POWDER COAT.
- DO NOT DAMAGE PAINTED FINISH DURING TRANSPORT OR PLACEMENT
- GOOSE NECK HANGER
- 2 1/8" I.D. THREADED FOR TENON.
- LOCK BOLT, 3/8" X 4" STAINLESS STEEL OR ZINC PLATED WITH STAINLESS STEEL DOUBLE HEX NUTS, WASHERS AND LOCK WASHERS.

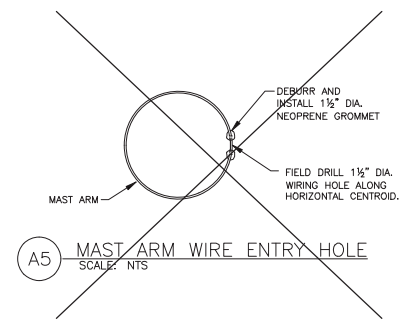
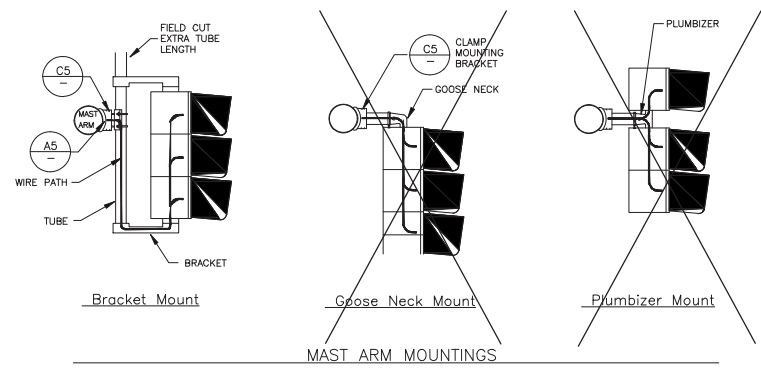
DETAILS PROVIDED ON THIS SHEET ARE APPLICABLE STANDARD DETAILS DESIGNED AND DRAWN BY SALT LAKE CITY TRANSPORTATION DIVISION.



- (A) - 1-1/2" NEOPRENE WASHER
- (B) - 1-1/2" LOCK NIPPLE
- (C) - 4-1/2" INSIDE DIAMETER POLE TOP MOUNTED TERMINAL COLLAR
- (D) - TRAFFIC SIGNAL POLE



(C5) CLAMP MOUNTING BRACKET
SCALE: NTS



(A5) MAST ARM WIRE ENTRY HOLE
SCALE: NTS

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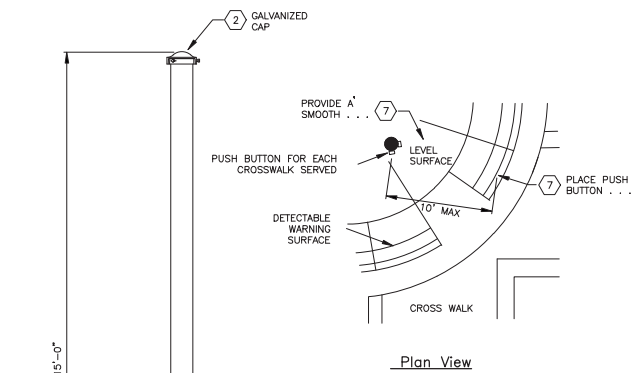
Designed By:	J. GONZALES
Drawn By:	J. GONZALES
Checked By:	B. KHAN
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT
 STANDARD DRAWINGS
 SIGNAL HEAD MOUNTING DETAIL

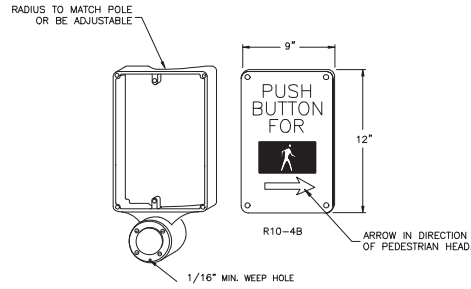
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UTA Contract No.:	24-03849
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Sheet No.:	

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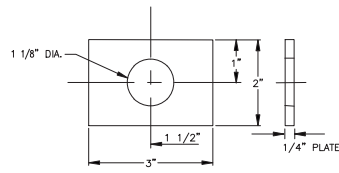
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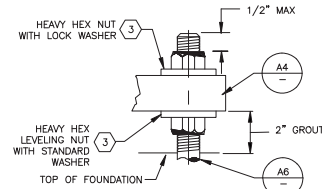
Plan View



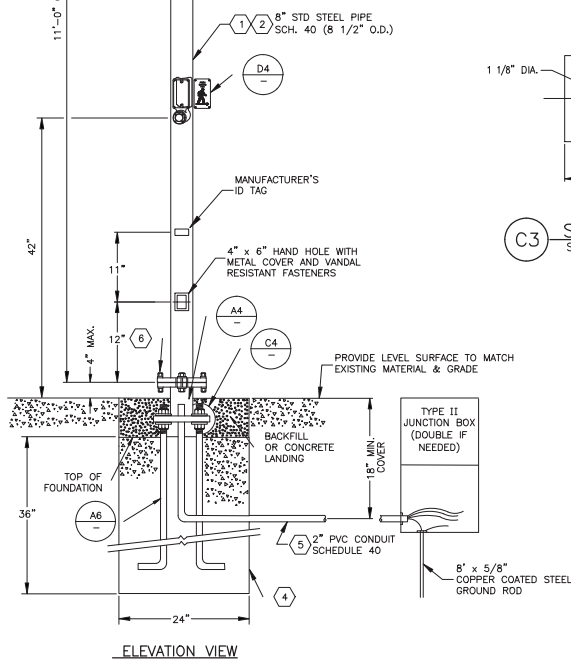
D4 FRAME AND BRACKET ASSEMBLY
SCALE: NTS



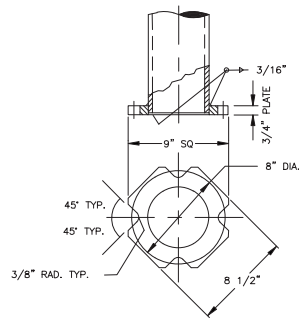
C3 SLIP BOLT WASHER
SCALE: NTS



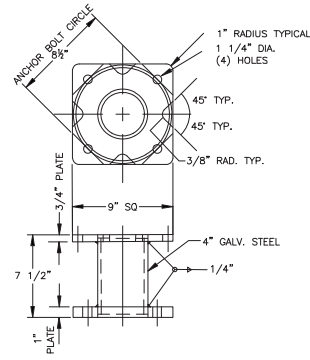
C4 POLE LEVELING
SCALE: NTS



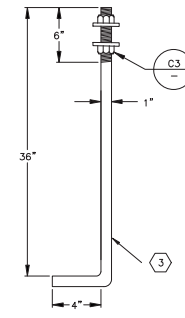
A1 BREAKAWAY POLE
SCALE: NTS



A3 POLE BASE
SCALE: NTS



A4 BREAKAWAY SPOOL
SCALE: NTS



A6 ANCHOR BOLT
SCALE: NTS

GENERAL SHEET NOTES

WHEN PUSH BUTTON POLE IS REQUIRED
 IF A PUSH BUTTON CANNOT BE MOUNTED ON THE POLE AND STILL COMPLY WITH 10 FEET MAXIMUM DISTANCE REQUIREMENT, A PEDESTRIAN PUSH BUTTON POLE MUST BE SUPPLIED

SHEET KEYNOTES

- 1 STEEL
 - GRADE C STEEL (ASTM A 570).
 - ALL STEEL MATERIALS ARE HOT-DIPPED GALVANIZED (ASTM A 123).
- 2 PAINT
 - POWDER COAT GLOSS BLACK.
 - DO NOT DAMAGE PAINTED FINISH DURING TRANSPORT OR PLACEMENT.
- 3 ANCHOR BOLT
 - STEEL (ASTM A 307).
 - GALVANIZED (ASTM A 123).
 - DO NOT WELD ANCHOR BOLTS TO REINFORCING STEEL.
 - INSTALL POLE PLUMB, DO NOT RAKE POLE TO INCREASE SIGNAL HEAD CLEARANCE.
 - TIGHTEN NUTS TO 150 FT-LBS.
- 4 CONCRETE (APWA 03 30 04).
 - CLASS 4000.
- 5 CONDUIT
 - CAPPED ON BOTH ENDS PRIOR TO CONCRETE POUR.
- 6 BOLTS
 - 5/8" X 3" STEEL ZINC PLATED (ASTM A 325).
 - TORQUE EACH BOLT TO 90 FT-LBS., RELEASE, THEN TORQUE TO 80 FT-LBS.
- 7 PEDESTRIAN PUSH BUTTON
 - PROVIDE A SMOOTH, LEVEL, HARD SURFACE WITHIN 12 HORIZONTAL INCHES OF A PUSH BUTTON FOR WHEEL CHAIR ACCESS.
 - PLACE PUSH BUTTON WITHIN TEN FEET OF THE CENTER OF THE CURB CUT OR THE CENTER OF THE CROSS WALK IF THE CURB CUT EXCEEDS CROSS WALK WIDTH.

DETAILS PROVIDED ON THIS SHEET ARE APPLICABLE STANDARD DETAILS DESIGNED AND DRAWN BY SALT LAKE CITY TRANSPORTATION DIVISION.

REV	DATE	Description



Designed By: J. GONZALES
Drawn By: J. GONZALES
Checked By: B. KHAN
Approved By: R. NANNENGA

S-LINE EXTENSION PROJECT	
STANDARD DRAWINGS	
SIGNAL POLE BREAK AWAY TYPE DETAIL	
Scale: 1" = 40'	Sheet No. T3207

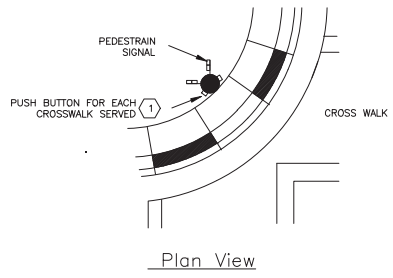
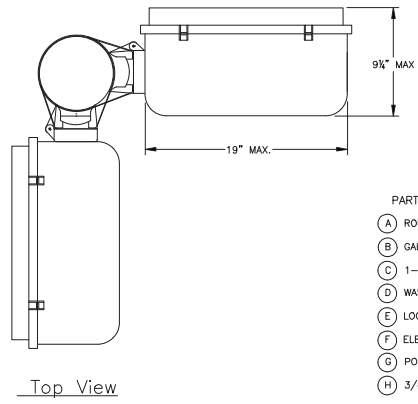
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Submital Date: 1-16-26
UTA Contract No.: 24-03849

GENERAL SHEET NOTES

- PAINT
 - POWDER COAT GLOSS BLACK.
 - DO NOT DAMAGE PAINTED FINISH DURING TRANSPORT OR PLACEMENT.
- SIGNAL HEAD
 - WITH LED COUNTDOWN TIMER AND AUDIBLE.

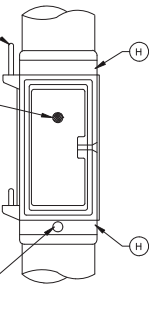
SHEET KEYNOTES

1 PEDESTRIAN PUSH BUTTON
 •MOUNT PUSH BUTTONS 42" ABOVE AND WITHIN 12 INCHES OF A SMOOTH WHEEL CHAIR ACCESSIBLE FLAT SURFACE.

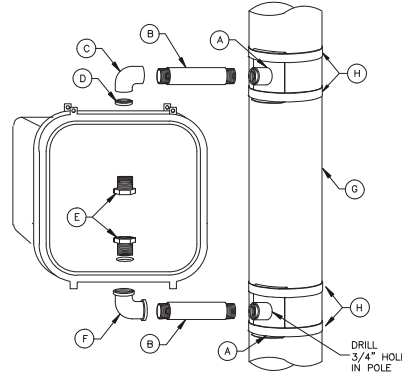


- PARTS LIST**
- (A) ROUND POLE PLATE
 - (B) GALVANIZED PIPE 1-1/2" x 12" THREADED BOTH ENDS
 - (C) 1-1/2" PLAIN ELBOW 90 DEGREES.
 - (D) WASHER, STAINLESS STEEL
 - (E) LOCK NIPPLE, 1-1/2 x 1-3/4"
 - (F) ELBOWS, 90 DEGREE 1-1/2" SERRATED
 - (G) POLE SHAFT
 - (H) 3/4" STAINLES STEEL BANDS

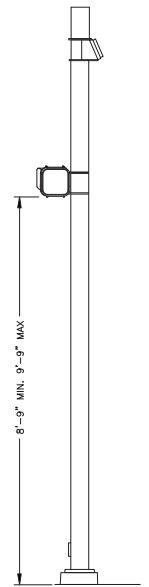
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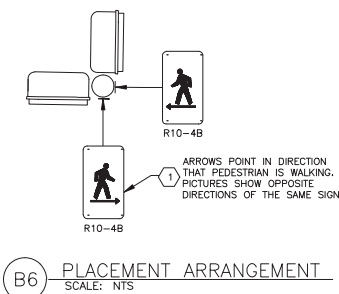
Clamshell Mount



Pipe Mount



A2 POLE MOUNTING
SCALE: NTS



B6 PLACEMENT ARRANGEMENT
SCALE: NTS

A5 SIGNAL HEAD MOUNTING DETAIL
SCALE: NTS

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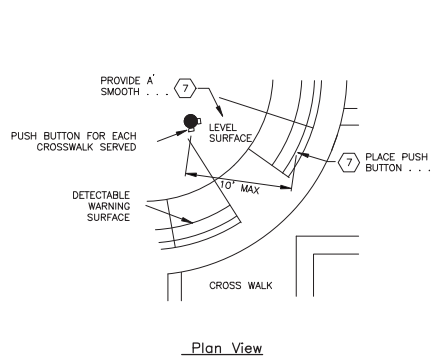
Designed By: J. GONZALES
Drawn By: J. GONZALES
Checked By: B. KHAN
Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT
 STANDARD DRAWINGS
 SIGNAL HEAD FOR PEDESTRIANS DETAIL

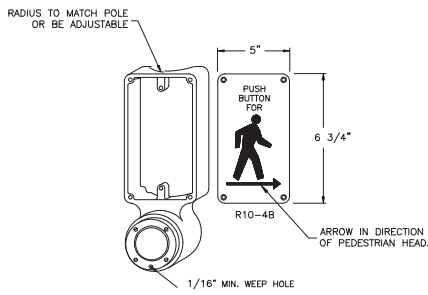
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Submit Date	1-16-26
UTA Contract No.	24-03849
Drawing No.	T3208
Sheet No.	

Submitted By: _____

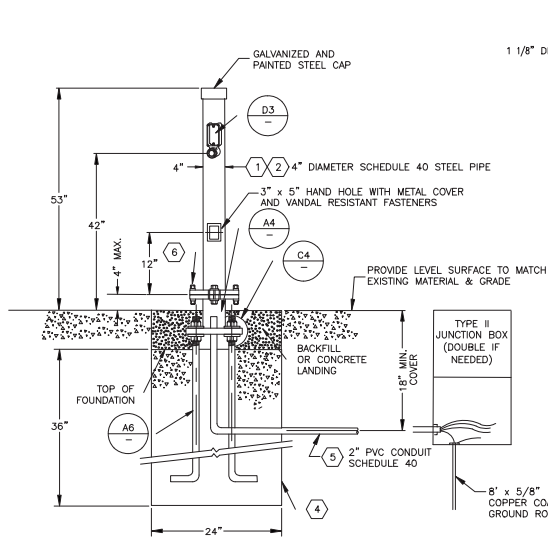
Approved By: _____



Plan View

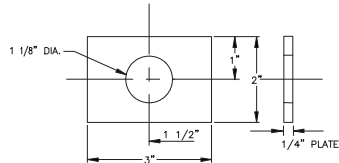


D3 FRAME AND BRACKET ASSEMBLY
SCALE: NTS

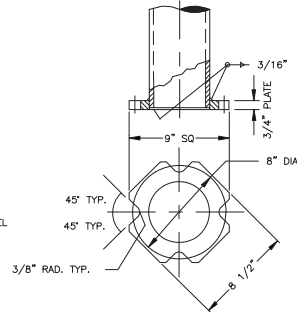


Elevation View

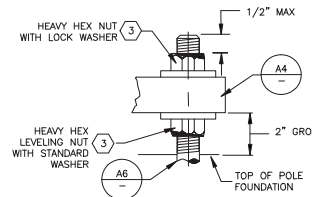
A1 4.5' PEDESTRIAN PUSH BUTTON POLE
SCALE: NTS



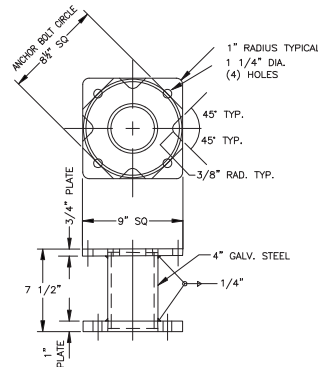
C3 SLIP BOLT WASHER
SCALE: NTS



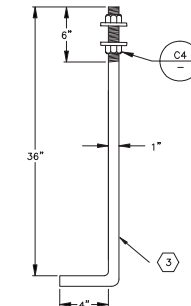
A3 POLE BASE
SCALE: NTS



C4 POLE LEVELING
SCALE: NTS



A4 BREAKAWAY SPOOL
SCALE: NTS



A6 ANCHOR BOLT
SCALE: NTS

- SHEET KEYNOTES**
- 1 POLE
 - GRADE C STEEL (ASTM A 570)
 - GALVANIZED (ASTM A 123)
 - 2 PAINT
 - POWDER COAT GLOSS BLACK.
 - DO NOT DAMAGE PAINTED FINISH DURING TRANSPORT OR PLACEMENT.
 - 3 ANCHOR BOLTS
 - STEEL (ASTM A 307)
 - GALVANIZED (ASTM A 123).
 - DO NOT WELD ANCHOR BOLTS TO REINFORCING STEEL.
 - INSTALL POLE PLUMB. DO NOT RAKE POLE TO INCREASE SIGNAL HEAD CLEARANCE.
 - TIGHTEN NUTS TO 150 FT-LBS.
 - 4 CONCRETE (APWA 03 30 04)
 - CLASS 4000.
 - 5 CONDUIT
 - ENDS CAPPED PRIOR TO CONCRETE POUR.
 - 6 SLIP BOLT
 - 5/8" X 3" ZINC PLATED STEEL (ASTM A 325).
 - TORQUE EACH SLIP BOLT TO 40 FT-LBS, RELEASE, THEN TORQUE TO 80 FT-LBS.
 - 7 FUSH BUTTON
 - PROVIDE A SMOOTH, LEVEL, HARD SURFACE WITHIN 12 HORIZONTAL INCHES OF A PUSH BUTTON FOR WHEEL CHAIR ACCESS.
 - PLACE PUSH BUTTON WITHIN TEN FEET OF THE CENTER OF THE CURB CUT OR THE CENTER OF THE CROSS WALK IF THE CURB CUT EXCEEDS CROSS WALK WIDTH.
 - PROVIDE ONE POLE FOR EACH DIRECTION OF TRAVEL. (TWO PEDESTRIAN PUSH BUTTON FRAMES AND SIGNS WILL NOT FIT ON ONE POLE.)

DETAILS PROVIDED ON THIS SHEET ARE APPLICABLE STANDARD DETAILS DESIGNED AND DRAWN BY SALT LAKE CITY TRANSPORTATION DIVISION.

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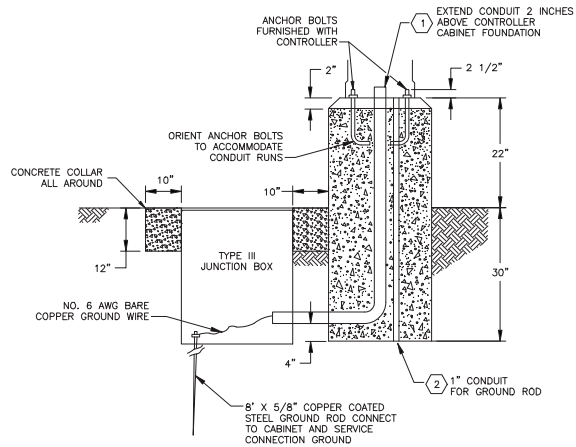
REV	DATE	Description



Designed By: J. GONZALES
 Drawn By: J. GONZALES
 Checked By: B. KHAN
 Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT
 STANDARD DRAWINGS
 SIGNAL PUSH BUTTON DETAIL

Scale	1" = 40'
CADD Filename	SL-C-T-3-209.dwg
Submital Date	1-16-26
UTA Contract No.	24-03849
Drawing No.	T3209
Sheet No.	



GENERAL SHEET NOTES

ORIENTATION

- WHEN THE CABINET DOOR IS OPENED ALL THE WAY, THE ROTATION DOES NOT BLOCK THE SIDEWALK. THERE IS A FLAT AREA FOR A SIGNAL TECHNICIAN TO WORK ON THE CABINET. THE TECHNICIAN IS STANDING IN THE RIGHT-OF-WAY AND THE TECHNICIAN IS NOT STANDING IN SOMEONE'S FLOWER BED.

FINISHING

- FILL THE SPACE BETWEEN FOUNDATION AND SIDEWALK WITH 4" THICK CONCRETE FLATWORK.

TRENCHING

- PLACE ALL CONDUITS IN THE SAME TRENCH WHERE POSSIBLE.

WIRE

- ATTACH THE GROUNDED SIDE OF THE POWER SUPPLY TO THE CONTROL CABINET FIELD TERMINAL.
- IDENTIFY AND LABEL ALL FIELD TERMINALS.

KEYNOTES

1 CONDUIT

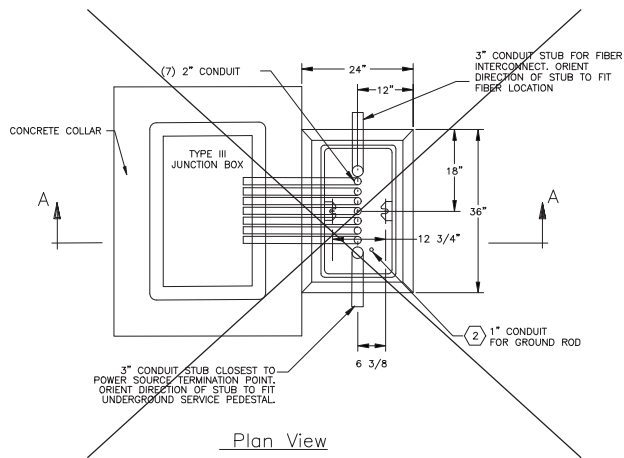
- MAINTAIN 1" MINIMUM SPACING BETWEEN CONDUITS IN CABINET BASE.
- CAP OR PLUG CONDUITS AT BOTH ENDS UNTIL USED.
- SEAL ALL CONDUITS INSIDE JUNCTION BOX AND CABINET AFTER WIRING IS COMPLETE.

2 GROUNDING

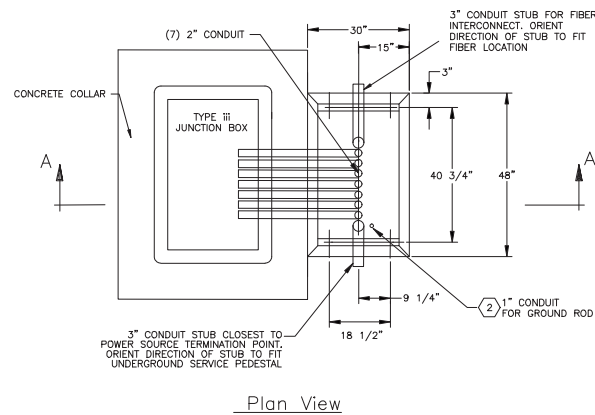
- GROUND CABINET WITH A COPPER COATED STEEL GROUND ROD PLACED IN A 1" PVC CONDUIT FOUNDATION SLEEVE.

DETAILS PROVIDED ON THIS SHEET ARE APPLICABLE STANDARD DETAILS DESIGNED AND DRAWN BY SALT LAKE CITY TRANSPORTATION DIVISION.

Section A-A



A2 CABINET BASE TYPE 5 (24 x 36)
SCALE: NTS



A5 CABINET BASE TYPE 6 (30 X 48)
SCALE: NTS

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REV	DATE	Description	



Designed By: J. GONZALES
Drawn By: J. GONZALES
Checked By: B. KHAN
Approved By: F. NANNENGA

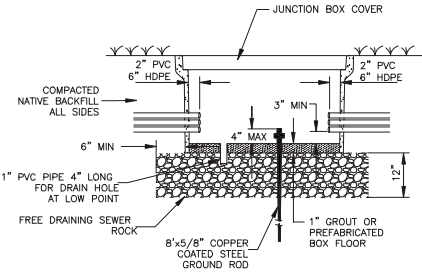
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
SIGNAL CONTROLLER FOUNDATION DETAIL

Scale	1" = 40'
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Submit Date	1-16-26
UTA Contract No.	24-03849
Drawing No.	T3210
Sheet No.	

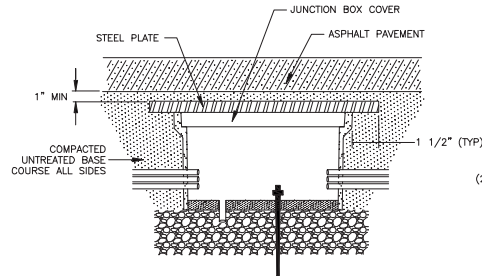
Submitted By: _____

Approved By: _____

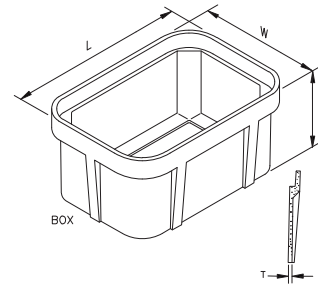
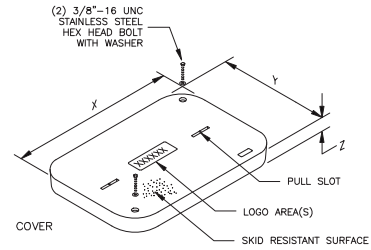
DETAILS PROVIDED ON THIS SHEET ARE APPLICABLE STANDARD DETAILS DESIGNED AND DRAWN BY SALT LAKE CITY TRANSPORTATION DIVISION.



D1 LANDSCAPE BOX DETAIL
SCALE: NTS

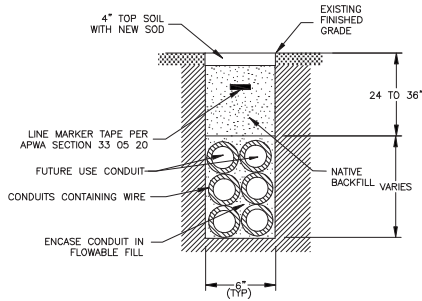


D3 ROADWAY BOX DETAIL
SCALE: NTS

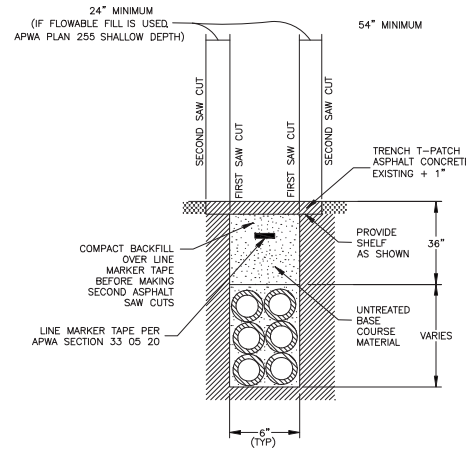


JUNCTION BOX TYPE AND DIMENSIONS							
TYPE	L	W	H	T	X	Y	Z
I	20 1/4	13 3/8	12	1/2	18 1/8	11 1/4	1 3/4
II	32 1/4	19 1/4	18	1 1/4	30 1/2	17 1/2	2
III	37 5/8	26	24	2	35 5/8	24	3
D	49 5/8	32 1/8	24	2	47 5/8	30 1/8	3

A4 JUNCTION BOX AND LID DIMENSIONS
SCALE: NTS



A1 LANDSCAPE TRENCH DETAIL
SCALE: NTS



A3 ROADWAY TRENCH DETAIL
SCALE: NTS

GENERAL SHEET NOTES

GENERAL
 *SET ALL JUNCTION BOXES TO MATCH GRADE OF SURROUNDING TERRAIN.
 *OTHER JUNCTION BOXES SUBJECT TO ENGINEER'S ACCEPTANCE.

JUNCTION BOX
 *MADE FROM POLYMER CONCRETE CONSISTING OF SAND AND AGGREGATE BOUND TOGETHER WITH A POLYMER RESIN COMPLYING WITH THE FOLLOWING PROPERTIES:

PROPERTY	ASTM	POLYMER
TENSILE STRENGTH	C 496	1,700 psi
FLEXURAL STRENGTH	D 790	7,500 psi
IMPACT RESISTANCE	D 2444	72 FOOT-POUNDS
COMPRESSIVE STRENGTH	C 109	11,000 psi
EFFECTS OF ACIDS	D 543	VERY RESISTANT
EFFECT OF ALKALIZES	D 543	VERY RESISTANT
SKID RESISTANCE	COEFFICIENT	0.50

*SUPPORT WHEEL LOAD OF 12000 LBS AND A MAXIMUM DEFLECTION OF 1/2" WITH 8000 LBS. LOAD USING A 10" X 10" LOAD.
 *LOGO AREA
 "SIGNAL" FOR SIGNALS
 "STREET LIGHTING" FOR STREET LIGHTS
 "SIGNAL" FOR INTERCONNECTS
 *CAST CONDUIT HOLES IN JUNCTION BOX AT THE TIME OF CASTING OR DRILL OR PUNCH AT THE TIME OF PLACEMENT WITH NO STRUCTURAL DAMAGE TO BOX.
 *ALL DRILLED HOLES SHALL BE THE SAME DIAMETER AS OUTSIDE DIAMETER OF CONDUIT.

CONDUITS
 *INSTALL CONDUITS THROUGH SIDE OF JUNCTION BOX. DO NOT INSTALL CONDUITS THROUGH BOTTOM. SEAL ALL CONDUIT HOLES USING A RUBBER SLEEVE GASKET AND EXPANDING FOAM.
 *ALL CONDUITS TO CONTAIN 700 POUND FLAT BRAIDED NYLON PULL WIRE IN ADDITION TO CIRCUIT WIRES.
 *PROVIDE SEALING COMPOUND IN ENDS OF EACH CONDUIT RUN.

BACKFILL
 *95 PERCENT OR GREATER DENSITY .
ACCESSORIES
 *STAINLESS STEEL BOLTS, NUTS, WASHERS, ETC.
GROUND
 *USE EXOTHERMIC WELD CONNECTIONS.

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REV	DATE	Description

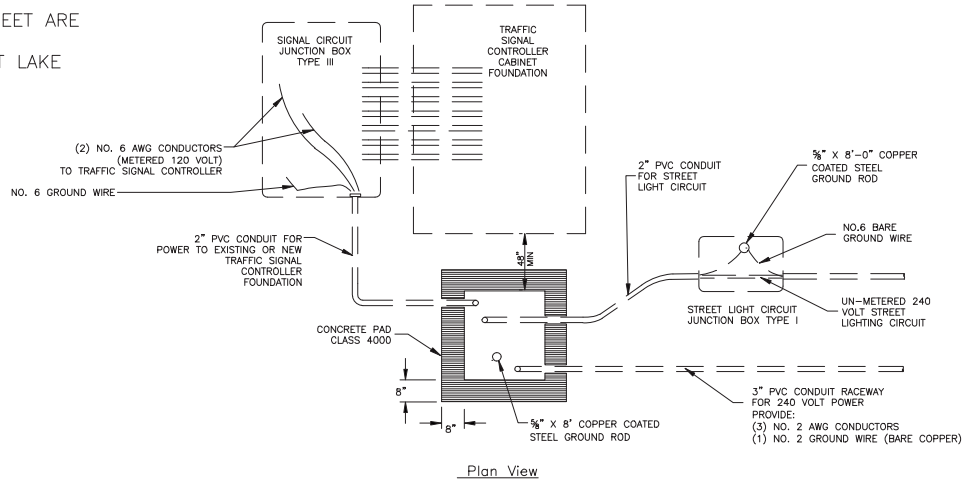


Designed By: J. GONZALES
 Drawn By: J. GONZALES
 Checked By: B. KHAN
 Approved By: F. NANNENGA

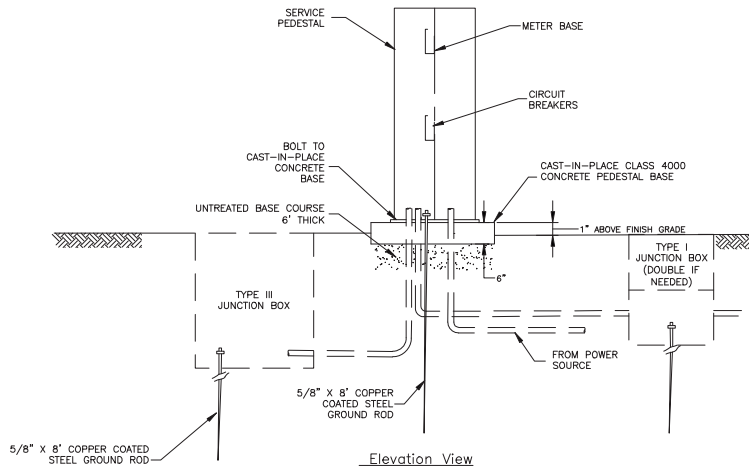
S-LINE EXTENSION PROJECT
 STANDARD DRAWINGS
 JUNCTION BOX AND BURIED RACEWAY DETAIL

Scale:	1" = 40'
CADD Filename:	SL-C-T-3-211.dwg
Submital Date:	1-16-26
UTA Contract No.:	24-03849
Drawing No.:	T3211
Sheet No.:	

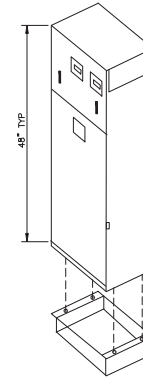
DETAILS PROVIDED ON THIS SHEET ARE APPLICABLE STANDARD DETAILS DESIGNED AND DRAWN BY SALT LAKE CITY TRANSPORTATION DIVISION.



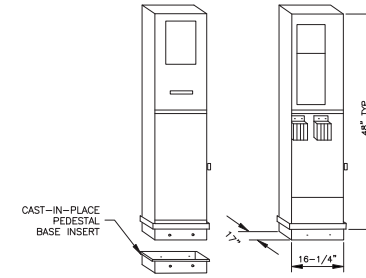
Plan View



Elevation View



UNDERGROUND SERVICE PEDESTAL WITH UNINTERRUPTIBLE POWER SOURCE (WHERE SPECIFIED)



Oblique Views

GENERAL SHEET NOTES

UNDERGROUND SERVICE PEDESTAL
 ORATED 100 AMP AT 120/240 VOLTS.
 PROVIDE FOR 6 FULL SIZE POLES (INCLUDING MAINS) FOR BOTH METERED AND UN-METERED CIRCUIT BREAKER INTERIORS.
 USE PLUG-IN CIRCUIT BREAKERS.
 LABEL ALL BREAKERS.
 USE DETACHABLE BASE FOR PRE-INSTALLATION IN CONCRETE FOUNDATION.
 SECURE PIANO HINGED DOORS WITH MASTER PADLOCK NO. 1B005.

LOCATION
 LOCATE SERVICE PEDESTAL ON EITHER SIDE OF CONTROLLER FOUNDATION.
 LOCATION MAY BE MODIFIED TO BEST SUIT FIELD CONDITIONS AND ENGINEER APPROVAL.
 MAINTAIN 48 INCHES MINIMUM CLEARANCE AROUND EACH UNIT WITH DOORS OPENED TO ANY POSITION.
 LOCATE PEDESTAL SO WATER DRAINS AWAY FROM FOUNDATIONS AND JUNCTION BOXES.
 SITE PREPARATION INCLUDING GRADING, MAY BE REQUIRED BEFORE PLACING EQUIPMENT.

METER SOCKET
 INCLUDE METER SOCKET WITH TEST BLOCK (SAFETY SOCKET) REQUIRED FOR CIRCUIT BREAKERS.

METERS AND CIRCUIT BREAKER

A. LIGHTING - UNMETERED
 50 AMP 2 POLE MAIN CIRCUIT BREAKER
 (1) 20 AMP 2 POLE CIRCUIT BREAKER

B. TRAFFIC SIGNAL - METERED
 70 AMP 2 POLE MAIN CIRCUIT BREAKER
 (1) 40 AMP 1 POLE CIRCUIT BREAKER

UNDERGROUND SERVICE PEDESTAL FOR STREET LIGHTING AND TRAFFIC SIGNAL CURCUIT

1/1/2026			
REV	DATE	Description	



Designed By:
J. GONZALES

Drawn By:
J. GONZALES

Checked By:
B. KHAN

Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS

UNDERGROUND SERVICE PEDESTAL DETAIL

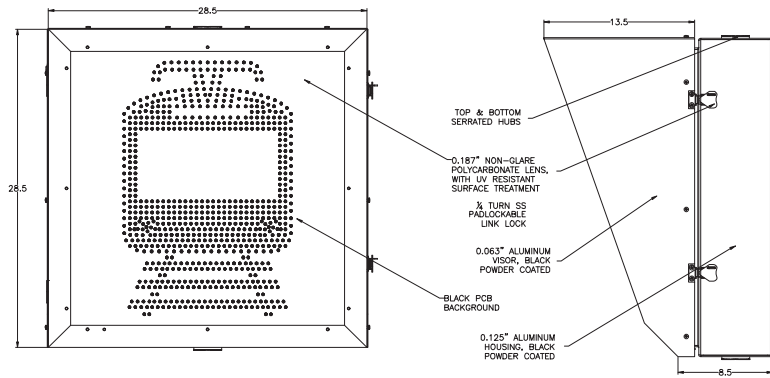
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Submital Date	1-16-26
UTA Contract No.	24-03849
Drawing No.	T3212
Sheet No.	

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1/15/2026

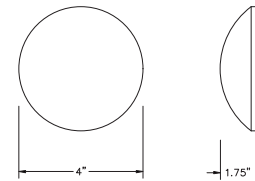


SIGN FEATURES

- * FILLED MESSAGE
- * MADE OF 720 HIGH INTENSITY AMBER LED'S
- * HEADLIGHTS MADE OF 26 HIGH INTENSITY WHITE LED'S
- * PROGRESSIVE DIMMING IN 1000 STEPS

PEDESTRIAN BLANK OUT SIGN

SCALE: NTS

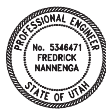


RAISED PAVEMENT MARKER

SCALE: NTS

ALL DIMENSIONS IN INCHES

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REV	DATE	Description	



Submitted By: _____ Approved By: _____

Designed By: J. GONZALES
Drawn By: J. GONZALES
Checked By: K. KHAN
Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
PEDESTRIAN BLANK OUT SIGN AND RAISED
PAVEMENT MARKER DETAILS

Scale: 1" = 40'
CADD Filename: SL-C-T-3-213.dwg
Submital Date: 1-16-26
UTA Contract No.: 24-03849
Drawing No.: T3213
Sheet No.:

NOTES:

PROVIDE AND INSTALL 3" PVC CONDUIT FROM POWER SOURCE TO UNDERGROUND SERVICE PEDESTAL (USP) WITH UNINTERRUPTIBLE POWER SOURCE AS SHOWN. CABLE TO BE INSTALLED BY OTHERS.

COORDINATE POWER SERVICES FROM POWER POLES WITH RMP. SEE UTILITY SERVICES NOTES.

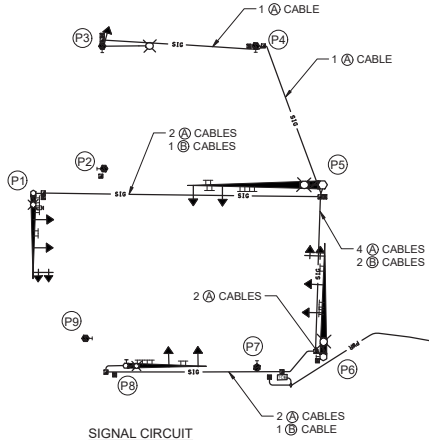
PROVIDE AND INSTALL 120 V POWER SUPPLY FROM USP TO CONTROLLER USING 2 SINGLE-CONDUCTOR NO.10 COPPER CABLES AND NO.6 BARE COPPER GROUND WIRE.

INSTALL TRAFFIC SIGNAL CIRCUIT, PEDESTRIAN SIGNAL CIRCUIT AND DETECTION CIRCUIT CABLE IN SHARED 3" PVC BETWEEN TCS AND TYPE 3 JUNCTION BOX.

INSTALL PEDESTRIAN PUSH BUTTON CIRCUIT IN SEPARATE 2" PVC BETWEEN TCS AND TYPE 3 JUNCTION BOX.

INSTALL LIGHTING CIRCUIT IN SEPARATE 2" PVC BETWEEN USP AND TYPE 1 JUNCTION BOX.

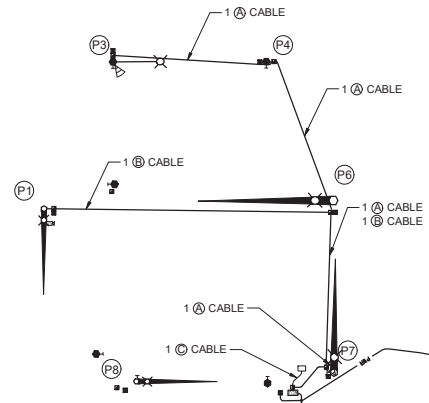
PROVIDE A SINGLE 3" CONDUIT FROM THE FIBER SPLICER JUNCTION BOX TO THE SIGNAL CABINET FOR DROP CABLE.



SIGNAL CIRCUIT
 (A) 7-CONDUCTOR NO.14 AWG CABLE WITH NO.6 BARE COPPER WIRE IN CONDUIT AS SHOWN.
 (B) 2-CONDUCTOR NO. 12 AWG CABLE FOR BLANKOUT SIGN

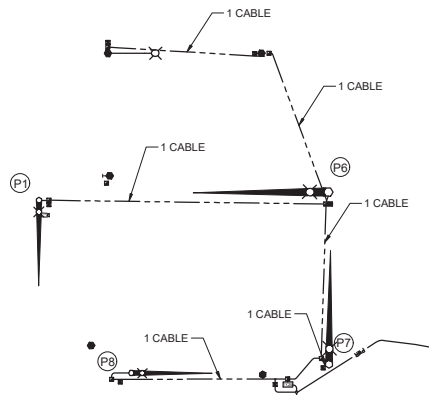
BLANK OUT SIGN CIRCUIT

(B) 2-CONDUCTOR NO. 12 AWG CABLE FOR BLANKOUT SIGN

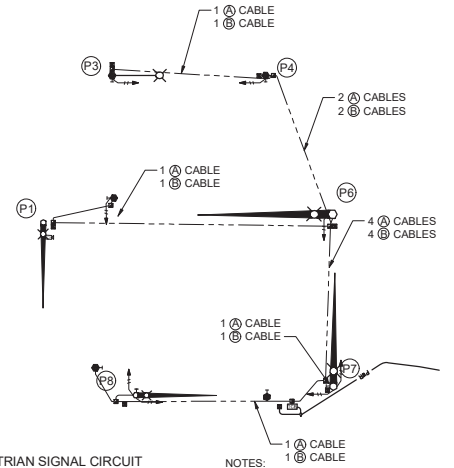


LIDAR DETECTION CIRCUIT
 (A) CAT6 GAME CHANGER ETHERNET CABLE.
CCTV CAMERA CIRCUIT CIRCUIT
 (B) CAT5 ETHERNET PATCH CABLE.

FIBER CONNECTION
 (C) 6-STRAND PRE-TERMINATED DROP CABLE.

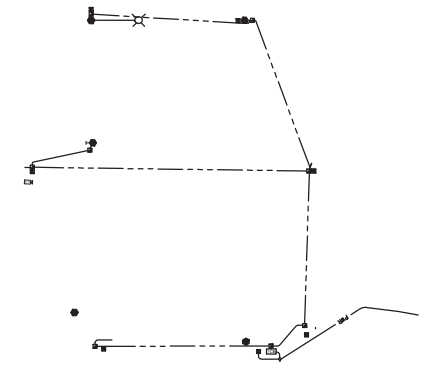


LIGHTING CIRCUIT
 2 SINGLE CONDUCTOR NO.6 COPPER CABLE TYPE RHH-USE2-RHW WITH BARE COPPER NO.6 GROUND WIRE IN 2" CONDUIT.



PEDESTRIAN SIGNAL CIRCUIT
 (A) 7-CONDUCTOR NO.14 AWG CABLE IN THE SAME CONDUIT AS SIGNAL CIRCUIT.
PUSH BUTTON CIRCUIT
 (B) 4-CONDUCTOR NO.14 AWG. WITH NO.6 BARE COPPER GROUND WIRE.

NOTES:
 PEDESTRIAN SIGNAL CONDUCTOR SHALL NOT SHARE CONDUIT WITH PUSH BUTTON CONDUCTOR.



FUTURE USE CONDUIT
 2-2" PVC EACH WITH ONE CONTINUOUS NO.14 AWG COPPER THHH PULL WIRE.

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REV	DATE	Description	



Designed By: J. GONZALES
Drawn By: J. GONZALES
Checked By: B. KHAN
Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT	
SIGNAL CIRCUIT DIAGRAM S MCCLELLAND STREET	
State:	1" = 20'
CADD Filename:	SL-C-T-7-001.dwg
Submission Date:	1-16-26
UTA Contract No.:	24-03849
Drawing No.:	T7001
Sheet No.:	

Submitted By: _____ Approved By: _____

NOTES:

PROVIDE AND INSTALL 3" PVC CONDUIT FROM POWER SOURCE TO UNDERGROUND SERVICE PEDESTAL (USP) WITH UNINTERRUPTIBLE POWER SOURCE AS SHOWN. CABLE TO BE INSTALLED BY OTHERS.

COORDINATE POWER SERVICES FROM POWER POLES WITH RMP. SEE UTILITY SERVICES NOTES.

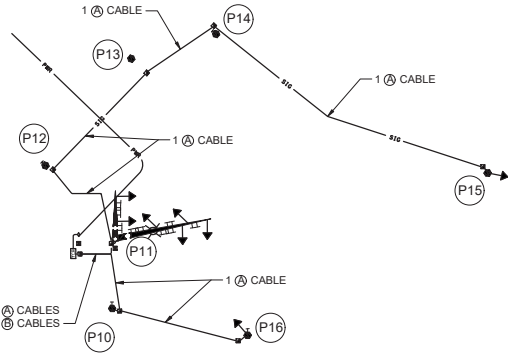
PROVIDE AND INSTALL 120 V POWER SUPPLY FROM USP TO CONTROLLER USING 2 SINGLE-CONDUCTOR NO.10 COPPER CABLES AND NO.6 BARE COPPER GROUND WIRE.

INSTALL TRAFFIC SIGNAL CIRCUIT, PEDESTRIAN SIGNAL CIRCUIT AND DETECTION CIRCUIT CABLE IN SHARED 3" PVC BETWEEN TCS AND TYPE 3 JUNCTION BOX.

INSTALL PEDESTRIAN PUSH BUTTON CIRCUIT IN SEPARATE 2" PVC BETWEEN TCS AND TYPE 3 JUNCTION BOX.

INSTALL LIGHTING CIRCUIT IN SEPARATE 2" PVC BETWEEN USP AND TYPE 1 JUNCTION BOX.

PROVIDE A SINGLE 3" CONDUIT FROM THE FIBER SPLICE JUNCTION BOX TO THE SIGNAL CABINET FOR DROP CABLE.

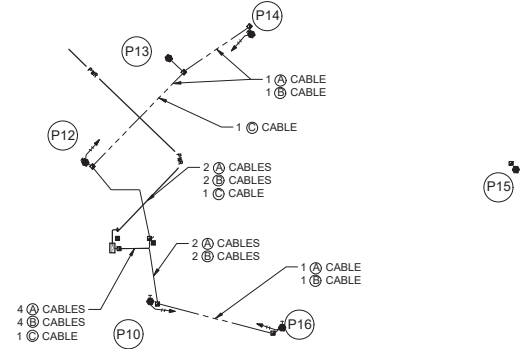


SIGNAL CIRCUIT

A 7-CONDUCTOR NO.14 AWG CABLE WITH NO.6 BARE COPPER WIRE IN CONDUIT AS SHOWN.

BLANK OUT SIGN CIRCUIT

B 2-CONDUCTOR NO. 12 AWG CABLE



PEDESTRIAN SIGNAL CIRCUIT

A 7-CONDUCTOR NO.14 AWG CABLE IN THE SAME CONDUIT AS SIGNAL CIRCUIT.

PUSH BUTTON CIRCUIT

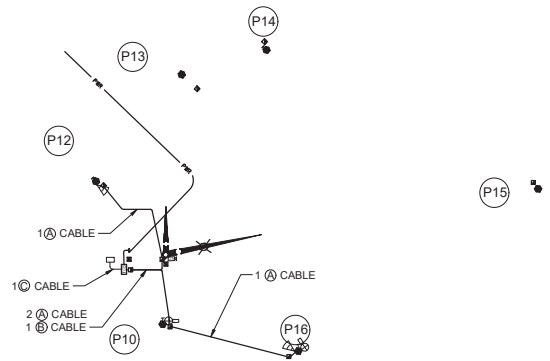
B 4-CONDUCTOR NO.14 AWG. WITH NO.6 BARE COPPER GROUND WIRE.

PEDESTRIAN BLANK OUT SIGN

C 2-CONDUCTOR NO. 12 AWG CABLE IN THE SAME CONDUIT AS SIGNAL CIRCUIT

NOTES:

PEDESTRIAN SIGNAL CONDUCTOR SHALL NOT SHARE CONDUIT WITH PUSH BUTTON CONDUCTOR.



LIDAR DETECTION CIRCUIT

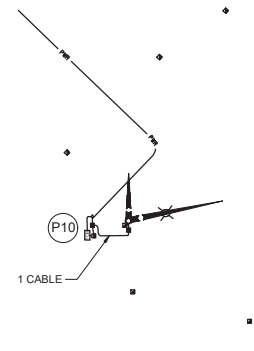
A CAT6 GAME CHANGER ETHERNET CABLE.

CCTV CAMERA CIRCUIT

B CAT5 ETHERNET PATCH CABLE.

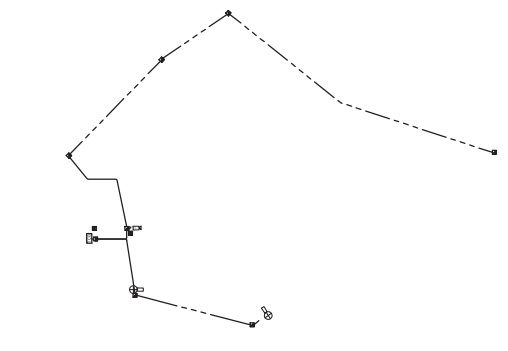
FIBER CONNECTION

C 6-STRAND PRE-TERMINATED DROP CABLE.



LIGHTING CIRCUIT

2 SINGLE CONDUCTOR NO.6 COPPER CABLE TYPE RHH/USE-RHW WITH BARE COPPER NO.6 GROUND WIRE IN 2" CONDUIT.



FUTURE USE CONDUIT

2-2" PVC EACH WITH ONE CONTINUOUS NO.14 AWG COPPER THHH PULL WIRE.

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Designed By J. GONZALES
Drawn By J. GONZALES
Checked By B. KHAN
Approved By F. NANNENGA

S-LINE EXTENSION PROJECT	
SIGNAL CIRCUIT DIAGRAM 1100 EAST STREET	
State 1" = 20'	CADD Filename SL-C-T-7-002.dwg
Submitted Date 1-16-26	UTA Contract No. 24-03849
Drawing No. T7002	Sheet No.

Submitted By: _____

Approved By: _____

NOTES:

PROVIDE AND INSTALL 3" PVC CONDUIT FROM POWER SOURCE TO UNDERGROUND SERVICE PEDESTAL (USP) WITH UNINTERRUPTABLE POWER SOURCE AS SHOWN. CABLE TO BE INSTALLED BY OTHERS.

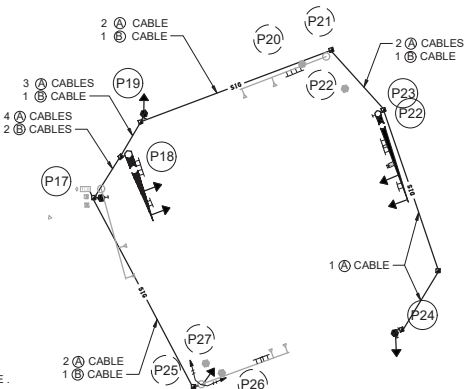
COORDINATE POWER SERVICES FROM POWER POLES WITH RMP. SEE UTILITY SERVICES NOTES.

PROVIDE AND INSTALL 120 V POWER SUPPLY FROM USP TO CONTROLLER USING 2 SINGLE-CONDUCTOR NO.10 COPPER CABLES AND NO.6 BARE COPPER GROUND WIRE.

INSTALL TRAFFIC SIGNAL CIRCUIT, PEDESTRIAN SIGNAL CIRCUIT AND DETECTION CIRCUIT CABLE IN SHARED 3" PVC BETWEEN TCS AND TYPE 3 JUNCTION BOX.

INSTALL PEDESTRIAN PUSH BUTTON CIRCUIT IN SEPARATE 2" PVC BETWEEN TCS AND TYPE 3 JUNCTION BOX.

PROVIDE A SINGLE 3" CONDUIT FROM THE FIBER SPICE JUNCTION BOX TO THE SIGNAL CABINET FOR DROP CABLE.

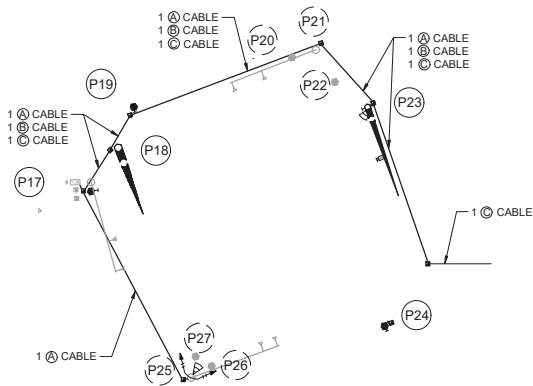


SIGNAL CIRCUIT

- Ⓐ 7-CONDUCTOR NO.14 AWG CABLE WITH NO.6 BARE COPPER WIRE IN CONDUIT AS SHOWN.

BLANK OUT SIGN CIRCUIT

- Ⓑ 2-CONDUCTOR NO. 12 AWG CABLE FOR BLANKOUT SIGN



LIDAR DETECTION CIRCUIT

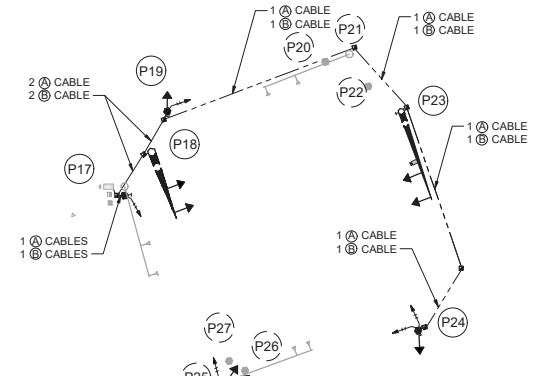
- Ⓐ CAT6 GAME CHANGER ETHERNET CABLE.

CCTV CAMERA CIRCUIT

- Ⓑ CAT5 ETHERNET PATCH CABLE.

FIBER CONNECTION

- Ⓒ 6-STRAND PRE-TERMINATED DROP CABLE.



PEDESTRIAN SIGNAL CIRCUIT

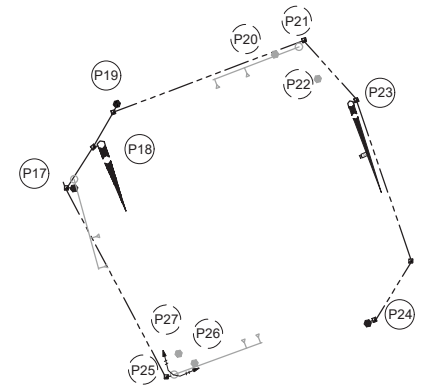
- Ⓐ 7-CONDUCTOR NO.14 AWG CABLE IN THE SAME CONDUIT AS SIGNAL CIRCUIT.

PUSH BUTTON CIRCUIT

- Ⓑ 4-CONDUCTOR NO.14 AWG. WITH NO.6 BARE COPPER GROUND WIRE.

NOTES:

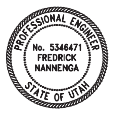
PEDESTRIAN SIGNAL CONDUCTOR SHALL NOT SHARE CONDUIT WITH PUSH BUTTON CONDUCTOR.



FUTURE USE CONDUIT

2-2" PVC EACH WITH ONE CONTINUOUS NO.14 AWG COPPER THHH PULL WIRE.

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Designed By:	J. GONZALES
Drawn By:	J. GONZALES
Checked By:	B. KHAN
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT

**SIGNAL CIRCUIT DIAGRAM
HIGHLAND DRIVE**

Scale:	1" = 20'
CADD Filename:	SL-C-T-7-003.dwg
Submitted Date:	1-16-26
UTA Contract No.:	24-03849
Drawing No.:	T7003
Sheet No.:	

STRUCTURAL ABBREVIATIONS

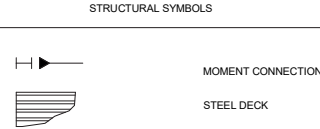
Table with 3 columns: Abbreviation, Description, and Symbol. Includes entries like AT ANCHOR BOLT, SW SYMM, and various structural symbols.

GENERAL:

- 1. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND ALL OTHER DRAWINGS RELATING TO THE WORK.
2. EMBEDDED ITEMS SUCH AS PIPES, INSERTS, SLEEVES AND CONDUITS, AND ANY RECESSES OR OPENINGS REQUIRED FOR UTILITY...

APPLICABLE CODES:

- 1. AS A MINIMUM, THE INTERNATIONAL BUILDING CODE (IBC), CURRENT EDITION AT THE DATE OF ADVERTISEMENT FOR BIDS, WILL GOVERN THE DESIGN, MATERIALS, AND CONSTRUCTION ON THIS PROJECT.
2. IN THE CASE OF SPECIAL TYPES OF CONSTRUCTION, ADDITIONAL SPECIFICATIONS OR CODES MAY ALSO APPLY...



GENERAL STRUCTURAL NOTES

CONCRETE:

- 1. UNLESS NOTED OTHERWISE ON THE DRAWINGS OR SPECIFIED, ALL STRUCTURAL CONCRETE SHALL BE 4000 psi.
2. CONCRETE FOR FOOTINGS AND FOUNDATIONS SHALL BE 4000 psi UNLESS OTHERWISE NOTED.
3. MIXING AND PLACING OF ALL CONCRETE AND SELECTION OF MATERIALS SHALL BE IN ACCORDANCE WITH THE APPLICABLE CODE.

REINFORCING STEEL:

- 1. REINFORCING STEEL SHALL BE DEFORMED STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A615, GRADE 40 FOR #4 AND SMALLER BARS.
2. WIRE MESH SHALL CONFORM TO ASTM A185.
3. WIRE MESH SHALL BE LAPPED 1-1/2 SPACES (9" MINIMUM).

FOUNDATION:

- 1. ALL EXCAVATIONS SHALL BE INSPECTED AND ALL COMPACTIONS OF FILL SHALL BE INSPECTED BY THE CONTRACTORS THIRD PARTY INDEPENDENT INSPECTOR.

STEEL DECKING:

- 1. STEEL ROOF DECKING SHALL CONFORM TO THE REQUIREMENTS OF THE STEEL DECK INSTITUTE SPECIFICATIONS AND APPLICABLE MANUFACTURER'S REQUIREMENTS.
2. STEEL CELLULAR DECKING FOR CANOPY SHALL BE 20/20 GAUGE, 1-1/2" DEEP GALVANIZED METAL FORM DECK WITH MINIMUM MOMENT OF INERTIA 0.30 IN/FT.

STRUCTURAL STEEL AND MISC. METAL:

- 1. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A36, UNLESS NOTED OTHERWISE.
2. ALL STEEL PIPES SHALL BE STANDARD PIPE, SCHEDULE 40 (UNLESS NOTED OTHERWISE), CONFORMING TO ASTM A53, GRADE B.
3. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B, Fy=46 KSI.

WELDING:

- 1. WELD LENGTHS SHOWN ARE EFFECTIVE LENGTH PER CODE, WHERE LENGTHS ARE NOT SHOWN, THE WELD SHALL BE THE FULL LENGTH OF THE JOINT.
2. ALL WELDING REQUIREMENTS SHOWN OR INDICATED ON THE DRAWINGS MAY BE FIELD OR SHOP WELDED AS REQUIRED FOR EFFICIENT ERECTION, SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER.

TOLERANCES:

- 1. FLOOR LEVEL SHALL NOT DEVIATE OVER 1/8" FROM THE THEORETICAL FLOOR LEVELS SHOWN ON THE DRAWINGS.
2. EDGE OF EXTERIOR WALL SHALL BE ON A STRAIGHT OR A CURVED LINE AS SHOWN ON THE PLAN VIEW AND SHALL NOT DEVIATE MORE THAN 1/2" TOTAL FROM THEORETICAL STRAIGHT OF CURVED LINES AS SHOWN ON DRAWINGS.

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Revision table with columns: REV, DATE, Description. Contains a header row and several empty rows.



Approval table with columns: Role, Name. Includes Designer (F. NANNENGA), Designer (T. COVEYOU), Checked By (A. DIGIROLAMO), and Approved By (F. NANNENGA).

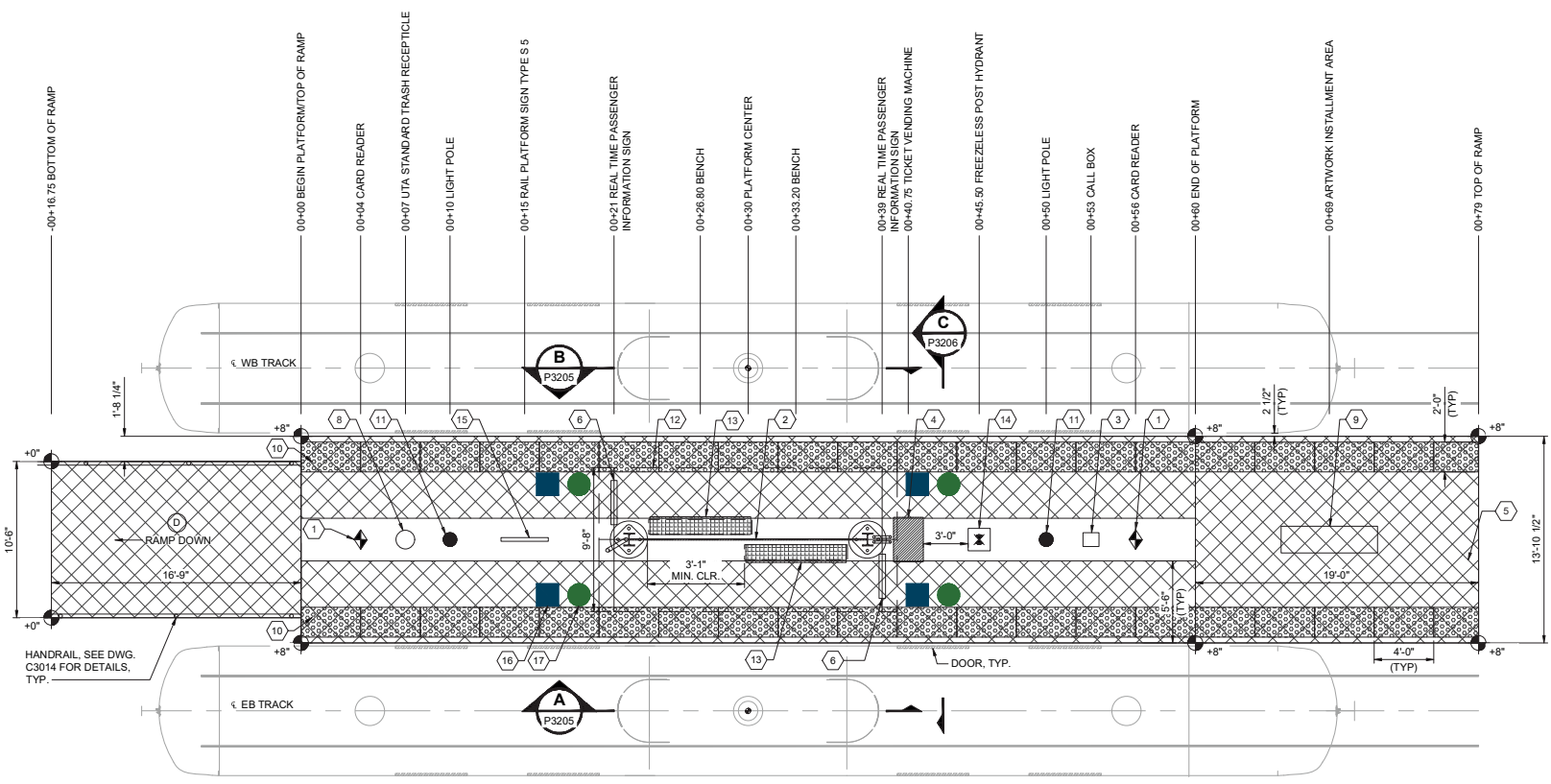
S-LINE EXTENSION PROJECT
STATION
STRUCTURAL SYMBOLS, ABBREVIATIONS, AND NOTES

Project information table with fields: State (NTS), CADD Filename (SL-C-P-0-201.dwg), Submittal Date (01-16-26), UTA Contract No. (24-03849), Drawing No. (P0201), Sheet No.

Submitted By: _____

Approved By: _____

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NOTES

- GENERAL**
- A. ALL HORIZONTAL AND VERTICAL DISTANCES ARE IN FEET AND INCHES EXCEPT STATIONING. PLATFORM STATIONING IS MEASURED IN DECIMAL UNITS FROM THE PLATFORM/TRACK STATION POINT (0+00).
 - B. ELEVATIONS REFER TO DISTANCE ABOVE TOP OF RAIL. PLATFORM SLOPE TO MATCH TOR PROFILE SLOPE.
 - C. REFER TO P3207 FOR CONSTRUCTION AND EXPANSION JOINT LAYOUT.
 - D. PLATFORM ACCESS RAMPS DOWN TO BE CONSTRUCTED AT 1:12 OR LESS.
 - E. NOMINAL PLATFORM WIDTHS GIVEN, VERIFY PLATFORM/TRACK CLEARANCES.
 - F. CONCRETE WALKING SURFACES FINISH IS TO BE ROUGH BROOM.
 - G. CANOPY TO BE SET LEVEL ON PLATFORM WITH MINIMUM CEILING HEIGHT AS SHOWN ON P3206.

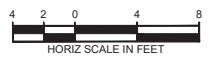
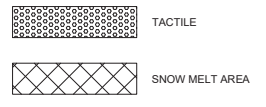
- H. CAMERAS TO BE INSTALLED ON PLATFORM CANOPY. SEE NOTE P.
- I. CONTRACTOR/OWNER TO VERIFY ALL SIGN QUANTITIES.
- J. BICYCLE RULES SIGN TO BE MOUNTED TO SIDE OF TVM.
- K. RIDER INFORMATION SIGN TO BE ATTACHED TO COLUMN FACING RAMP.
- L. USE RESTRICTION SIGN TO BE ATTACHED TO COLUMN ABOVE RIDER INFORMATION SIGN FACING RAMP.
- M. SEE P3217 TO P3220 FOR GRAPHIC SIGN STANDARDS.
- N. SEE UTA WAYFINDING & SIGNAGE SIGN SCHEDULE AND DRAWING PACKAGE v 7 FOR MORE DETAILS.

- O. CARD READER, REAL TIME PASSENGER INFORMATION SIGN, TVM, AND CALL BOX SHALL BE PROVIDED AND INSTALLED BY UTA OR OTHERS.
- P. CAMERAS TO BE PROVIDED, INSTALLED, AND TESTED BY OWNER.

- KEY NOTES:**
1. CARD READER, SEE NOTE O.
 2. SIGN TYPE 2B
 3. CALL BOX, SEE NOTE O.
 4. TICKET (FARE) VENDING MACHINE (TVM), SEE NOTE O.
 5. SNOW MELT AREA
 6. REAL TIME PASSENGER INFORMATION SIGN, TYP. SEE NOTE O.
 7. UTA BEACON SIGN TYPE 14A, LOCATED NEAR HIGHLAND DR. (SEE DWG P3214 DETAIL D).
 8. STANDARD UTA TRASH RECEPTACLE
 9. ARTWORK INSTALLMENT AREA, TBD
 10. TACTILE WARNING STRIP, STANDARD NO-DOME CENTER
 11. LIGHT POLE
 12. CANOPY
 13. BENCH LOCATION. PLACE BENCH TO ONE SIDE OF SPACE AS SHOWN ON PLAN TO ALLOW FOR ADA WAITING AREA.

14. FREEZELESS POST HYDRANT, SEE DWG P3216
15. RAIL PLATFORM SIGN TYPE 5
16. PLATFORM ADA SYMBOL TYPE SS 1, TYP.
17. PLATFORM BICYCLE SYMBOL TYPE SS 2, TYP.

SYMBOL LEGEND



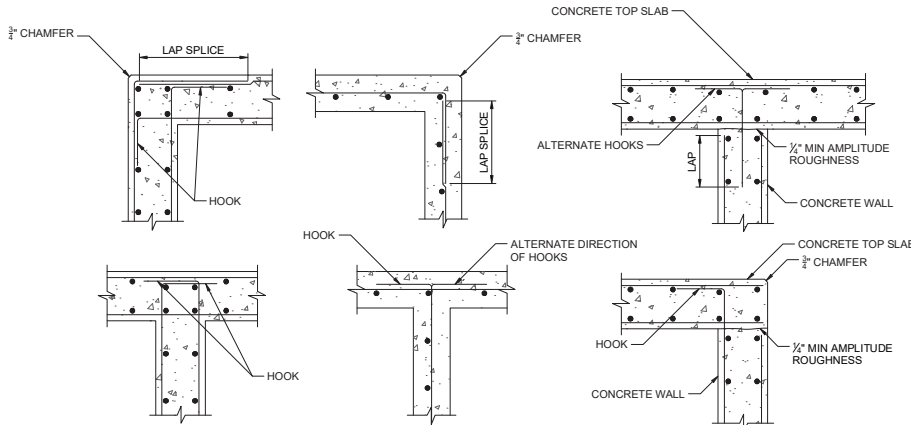
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Designed By:	T. COVEYOU
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT		Scale:	1/4"=1'-0"
SUGAR HOUSE PLATFORM PLAN		CADD Filename:	SL-C-P-1-201.dwg
		Submitted Date:	01-16-26
		UTA Contract No.:	24-03849
		Drawing No.:	P1201
		Sheet No.:	

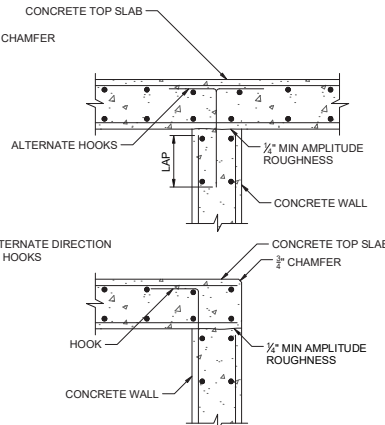
- NOTES:
- SLABS ON GRADE SHALL BE THICKENED TO 12" MIN AT EXPANSION JOINT TO ALLOW SPACE FOR DOWELS.
 - FOR WALLS, FORM ALL JOINT EDGES AT 1/2" CHAMFER.
 - FOR SLABS, PROVIDE 1/2" RADIUS TOOLED EDGES AT TOP SURFACE.
 - "W"=1" WIDE UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
 - USE DETAIL "B" AT UNDERSIDE OF SLABS ON GRADE ONLY. USE DETAIL "A" AT ALL OTHER LOCATIONS.
 - AT EXPANSION JOINTS, GREENSTREAK "SPEED DOWEL" NO. PSD12#7TX (BASE CODE PSD#7B) OR APPROVED EQUAL MAY BE USED IN LIEU OF SMOOTH DOWEL AND PVC ASSEMBLY SYSTEM SHOWN.
 - SEE ARCHITECTURAL PLANS FOR LOCATIONS OF EJS.



NOTES:
1. ALL HOOKS SHALL BE ACI STD 90 DEGREE HOOKS.

TYPICAL WALL REINFORCEMENT AT CORNERS AND INTERSECTIONS 1

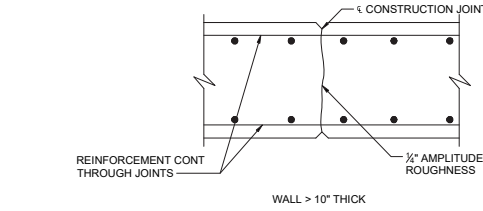
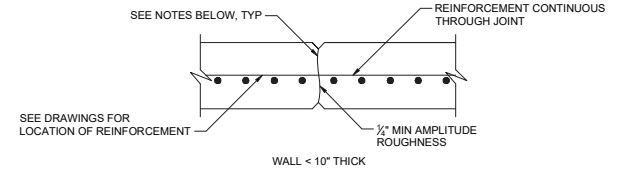
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NOTES:
1. ALL HOOKS SHALL BE ACI STD 90 DEGREE HOOKS.

HINGED TOP SLABS 2

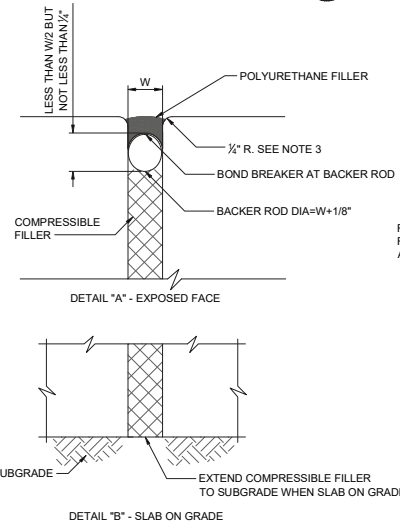
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- NOTES:
- SANDBLAST JOINT PRIOR TO PLACING CONCRETE FOR NEXT SLAB OR WALL.
 - FOR SLABS, EDGE TOP OF EXPOSED JOINT EDGES AT 1/2" RADIUS.
 - FOR WALLS, FORM JOINT EDGES AT 1/2" CHAMFER.
 - CJS SHALL BE PLACED IN THICKENED, REINFORCED FOUNDATION SECTIONS AT SPACING NOT TO EXCEED 36'-6". SEE ARCHITECTURAL DRAWINGS FOR JOINT LAYOUTS.

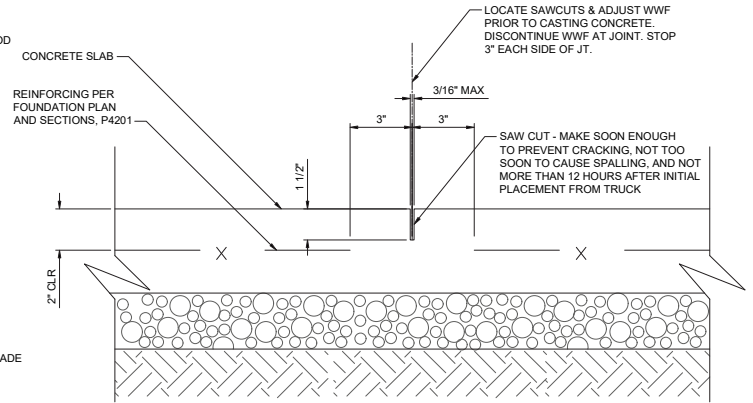
CONSTRUCTION JOINT (CJ) 3

NTS



EXPANSION JOINT (EJ) 4

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CONTROL JOINT (SJ) 5

NTS

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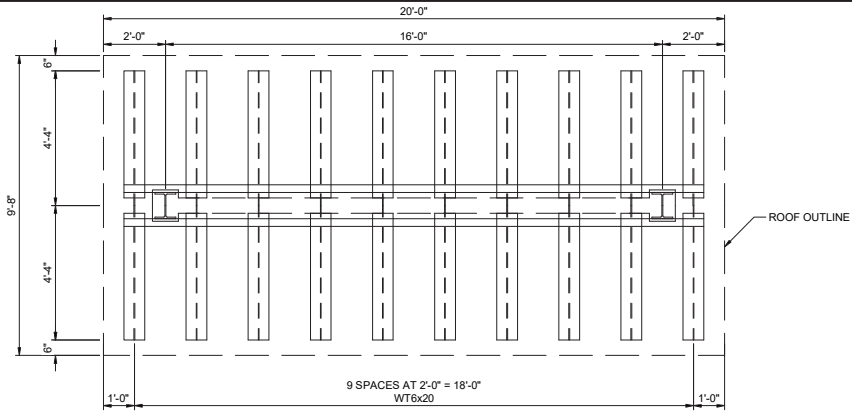


Designed By F. NANNENGA
Drawn By T. COVEYOU
Checked By A. DIGIROLAMO
Approved By F. NANNENGA

S-LINE EXTENSION PROJECT

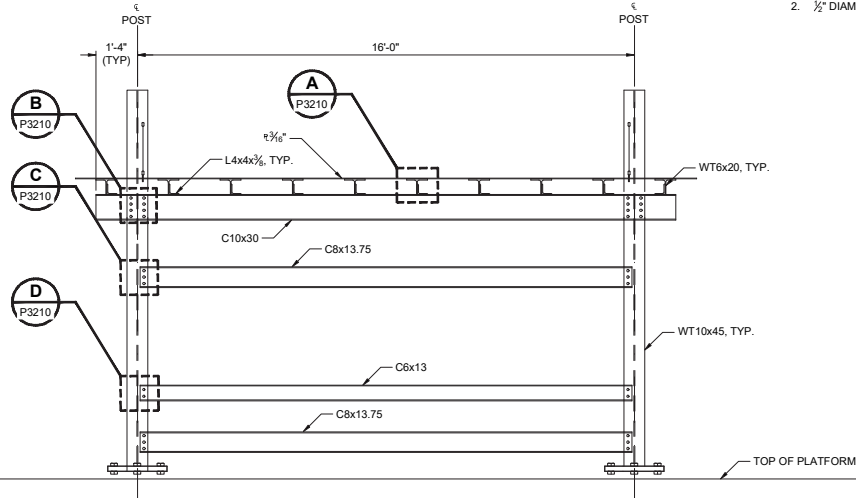
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TYPICAL STRUCTURAL DETAILS

State AS NOTED
CADD Filename SL-C-P-3-201.dwg
Submital Date 01-16-26
UTA Contract No. 24-03849
Drawing No. P3201
Sheet No.

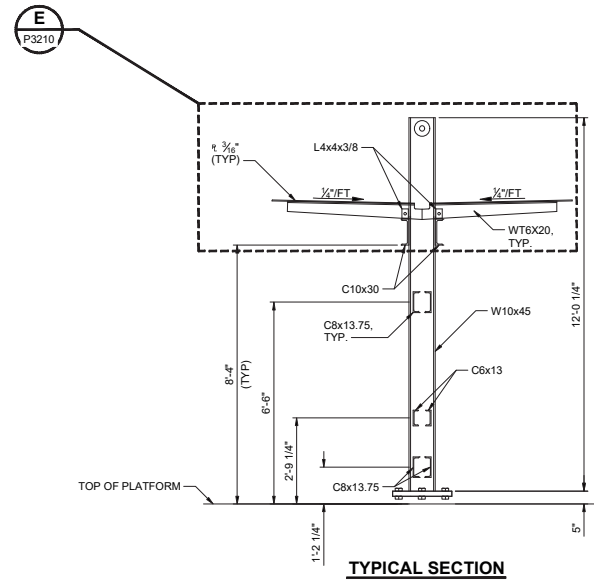


PLAN

- NOTES:
 1. ALL STEEL ELEMENTS TO BE GALVANIZED.
 2. 1/2" DIAMETER CABLE NOT SHOWN



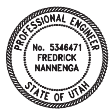
ELEVATION



TYPICAL SECTION

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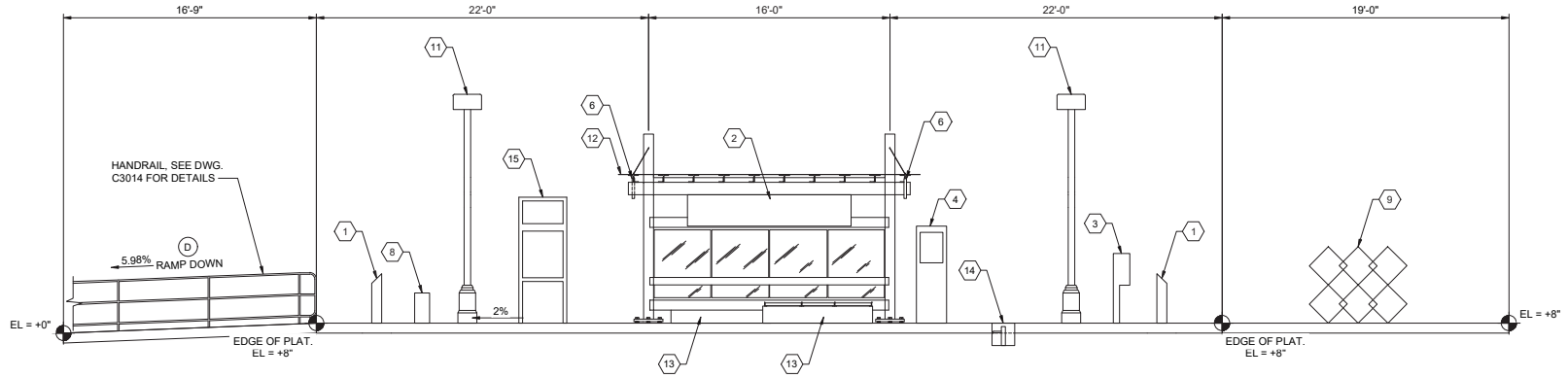
Designed By: F. NANNENGA
Drawn By: T. COVEYOU
Checked By: A. DIGIROLAMO
Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT

STATION
STRUCTURAL DRAWINGS
20'-0" DOUBLE CANOPY

Scale: 1/2"=1'-0"
CADD Filename: SL-C-P-3-202.dwg
Submital Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: P3202
Sheet No.:

Submitted By: _____ Approved By: _____



NOTES

GENERAL

- A. ALL HORIZONTAL AND VERTICAL DISTANCES ARE IN FEET AND INCHES EXCEPT STATIONING. PLATFORM STATIONING IS MEASURED IN DECIMAL UNITS FROM THE PLATFORM/TRACK STATION POINT (0+00).
- B. ELEVATIONS REFER TO DISTANCE ABOVE TOP OF RAIL. PLATFORM SLOPE TO MATCH TOR PROFILE SLOPE.
- C. REFER TO P3207 FOR CONSTRUCTION AND EXPANSION JOINT LAYOUT.
- D. PLATFORM ACCESS RAMP DOWN TO BE CONSTRUCTED AT 1:12 OR LESS.
- E. NOMINAL PLATFORM WIDTHS GIVEN. VERIFY PLATFORM/TRACK CLEARANCES.
- F. CONCRETE WALKING SURFACES FINISH IS TO BE ROUGH BROOM.
- G. CANOPY TO BE SET LEVEL ON PLATFORM WITH MINIMUM CEILING HEIGHT AS SHOWN ON P3206.
- H. CAMERAS TO BE INSTALLED ON PLATFORM CANOPY; SEE NOTE P.
- I. CONTRACTOR/OWNER TO VERIFY ALL SIGN QUANTITIES.
- J. BICYCLE RULES SIGN TO BE MOUNTED TO SIDE OF TVM.

- K. RIDER INFORMATION SIGN TO BE ATTACHED TO COLUMN FACING RAMP.
- L. USE RESTRICTION SIGN TO BE ATTACHED TO COLUMN ABOVE RIDER INFORMATION SIGN FACING RAMP.
- M. SEE P3217 TO P3220 FOR GRAPHIC SIGN STANDARDS.
- N. SEE UTA WAYFINDING & SIGNAGE SIGN SCHEDULE AND DRAWING PACKAGE v 7 FOR MORE DETAILS.
- O. CARD READER, REAL TIME PASSENGER INFORMATION SIGN, TVM, AND CALL BOX SHALL BE PROVIDED AND INSTALLED BY UTA OR OTHERS.
- P. CAMERAS TO BE PROVIDED, INSTALLED, AND TESTED BY OWNER.

KEY NOTES:

- 1. CARD READER, SEE NOTE O.
- 2. SIGN TYPE 2B
- 3. CALL BOX, SEE NOTE O.
- 4. TICKET (FARE) VENDING MACHINE (TVM), SEE NOTE O.
- 5. SNOW MELT AREA
- 6. REAL TIME PASSENGER INFORMATION SIGN, TYP. SEE NOTE O.
- 7. UTA BEACON SIGN TYPE 14A, LOCATED NEAR HIGHLAND DR. (SEE DWG P3214 DETAIL D).
- 8. STANDARD UTA TRASH RECEPTACLE
- 9. ARTWORK INSTALLMENT AREA, TBD
- 10. TACTILE WARNING STRIP, STANDARD NO-DOME CENTER
- 11. LIGHT POLE
- 12. CANOPY
- 13. BENCH LOCATION. PLACE BENCH TO ONE SIDE OF SPACE AS SHOWN ON PLAN TO ALLOW FOR ADA WAITING AREA.
- 14. FREEZELESS POST HYDRANT, SEE DWG P3216
- 15. RAIL PLATFORM SIGN TYPE 5
- 16. PLATFORM ADA SYMBOL TYPE SS 1, TYP.
- 17. PLATFORM BICYCLE SYMBOL TYPE SS 2, TYP.

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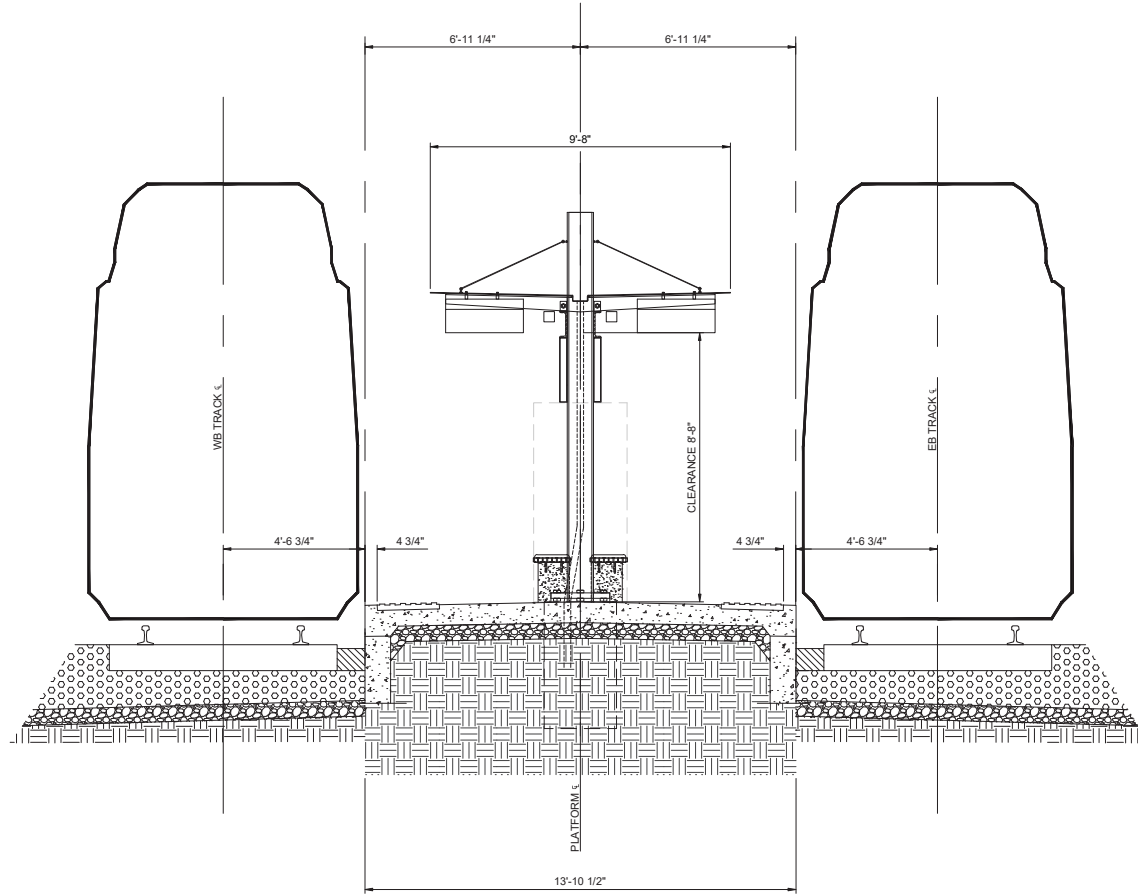
Designed By:	T. COVEYOU
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT

**STATION
SUGAR HOUSE STATION
PLATFORM ELEVATION**

Scale:	1/4"=1'-0"
CADD Filename:	SL-C-P-3-203.dwg
Submittal Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	P3203
Sheet No.:	

- NOTES:
- A. ALL HORIZONTAL AND VERTICAL DISTANCES ARE IN FEET AND INCHES EXCEPT STATIONING. PLATFORM STATIONING IS MEASURED IN DECIMAL UNITS FROM THE PLATFORM/TRACK STATION POINT (0+00).
 - B. NOMINAL PLATFORM WIDTHS GIVEN. VERIFY PLATFORM/TRACK CLEARANCES.
 - C. CONCRETE FINISH IS TO BE ROUGH BROOM.
 - D. CANOPY TO BE SET LEVEL ON PLATFORM WITH MINIMUM CEILING HEIGHT AS SHOWN.



HIGHLAND DRIVE PLATFORM ELEVATION AND SECTION A
 SCALE: 1/2" = 1'-0"



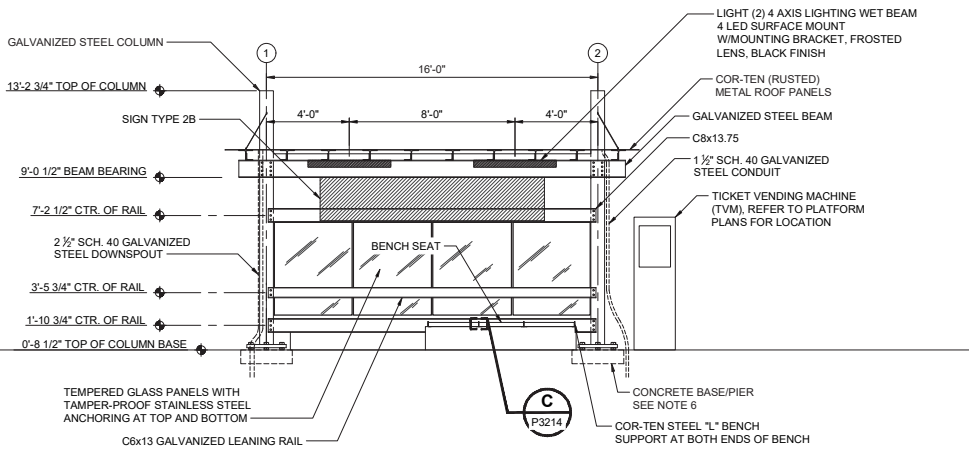
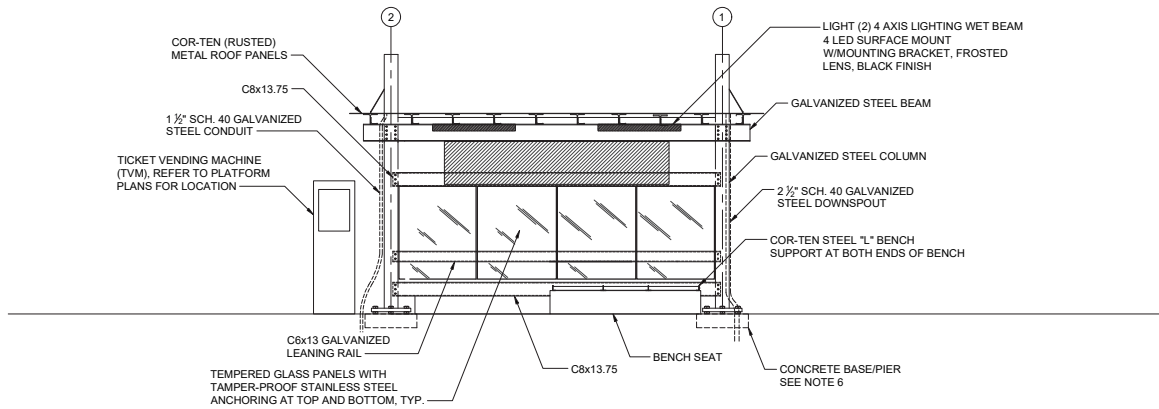
Designed By: F. NANNENGA
Drawn By: T. COVEYOU
Checked By: A. DIGIROLAMO
Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT

**STATION
SUGAR HOUSE STATION
PLATFORM ELEVATION & SECTION**

State: AS NOTED
CADD Filename: SL-C-P-3-204.dwg
Submit Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: P3204
Sheet No.:

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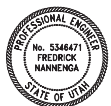


20' DBL CANOPY FRONT ELEVATION
NTS

- GENERAL CANOPY NOTES:
1. EACH CANOPY SHALL HAVE ONE DATA CONDUIT AND ONE POWER CONDUIT. CONDUITS SHALL BE ONE AND ONE HALF INCH GALVANIZED.
 2. DATA CONDUIT SHALL BE PLACED ON PRIMARY VERTICAL POST, ON THE OUTSIDE FLANGE. PLACE CONDUIT ON SIDE OF CANOPY TO ENSURE SHORTEST DISTANCE BETWEEN CONDUIT AND THE PCC.
 3. POWER CONDUIT SHALL BE PLACED ON PRIMARY VERTICAL BEAM, ON THE OUTSIDE FLANGE. PLACE CONDUIT ON THE POST THAT DOES NOT HOUSE THE DATA CONDUIT.
 4. EACH CANOPY SHALL HAVE ONE DOWNSPOUT PLACED ON THE PRIMARY VERTICAL POST OPPOSITE OF THE CONDUIT, ON THE OUTSIDE FLANGE. DOWNSPOUT SHALL BE TWO AND ONE HALF INCH GALVANIZED.
 5. ELEVATIONS REFER TO DISTANCE ABOVE TOP OF RAIL.
 6. SEE DRAWING P3208 FOR CANOPY FOUNDATION DETAILS.

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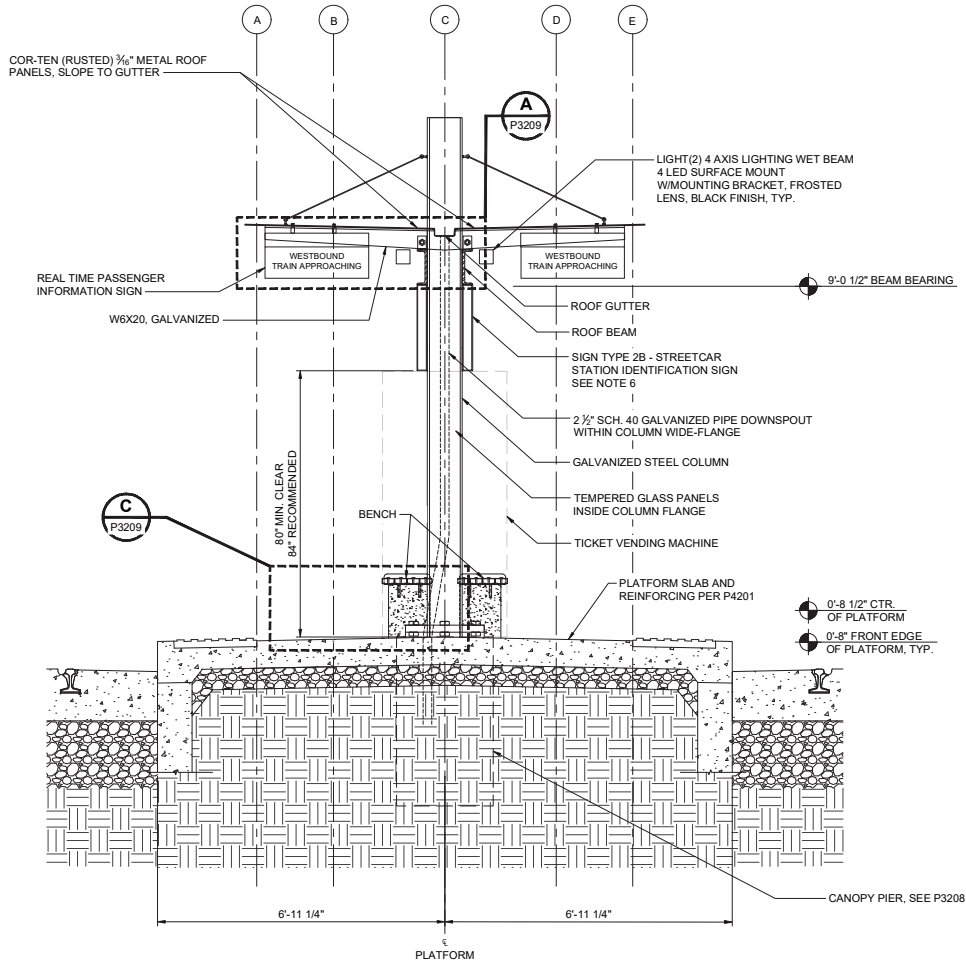


Designed By: F. NANNENGA
Drawn By: T. COVEYOU
Checked By: A. DIGIROLAMO
Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT

STATION
20 FOOT DOUBLE CANOPY
ELEVATIONS

State:	NTS
CADD Filename:	SL-C-P-3-205.dwg
Submit Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	P3205
Sheet No.:	



- GENERAL CANOPY NOTES:
1. EACH CANOPY SHALL HAVE ONE DATA CONDUIT AND ONE POWER CONDUIT. CONDUITS SHALL BE ONE AND ONE HALF INCH GALVANIZED.
 2. DATA CONDUIT SHALL BE PLACED ON PRIMARY VERTICAL POST, ON THE OUTSIDE FLANGE. PLACE CONDUIT ON SIDE OF CANOPY TO ENSURE SHORTEST DISTANCE BETWEEN CONDUIT AND THE PCC.
 3. POWER CONDUIT SHALL BE PLACED ON PRIMARY VERTICAL BEAM, ON THE OUTSIDE FLANGE. PLACE CONDUIT ON THE POST THAT DOES NOT HOUSE THE DATA CONDUIT.
 4. EACH CANOPY SHALL HAVE ONE DOWNSPOUT PLACED ON THE PRIMARY VERTICAL POST OPPOSITE OF THE CONDUIT, ON THE OUTSIDE FLANGE. DOWNSPOUT SHALL BE TWO AND ONE HALF INCH GALVANIZED.
 5. ELEVATIONS REFER TO DISTANCE ABOVE TOP OF RAIL.
 6. SEE DRAWING P3219 FOR SIGN DETAILS.

20' DBL SIDE CANOPY SECTION AT BENCH
NTS

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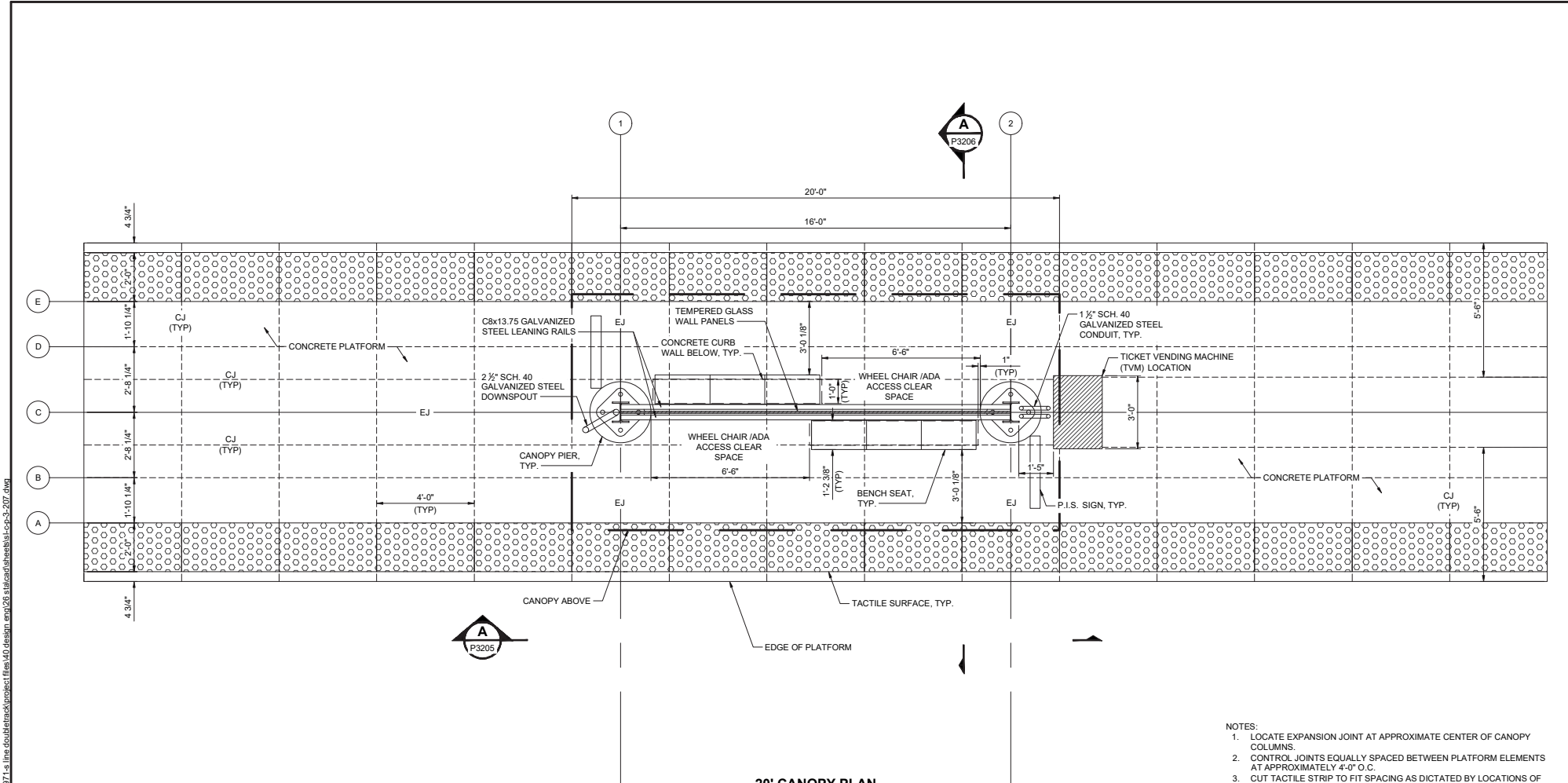


Designed By:	F. NANNENGA
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT	
STATION 20 FOOT DOUBLE CANOPY SECTION	

State:	NTS
CADD Filename:	SL-C-P-3-206.dwg
Submital Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	P3206
Sheet No.:	

Submitted By: _____ Approved By: _____



20' CANOPY PLAN
SCALE: 1" = 2'-0"

- NOTES:
1. LOCATE EXPANSION JOINT AT APPROXIMATE CENTER OF CANOPY COLUMNS.
 2. CONTROL JOINTS EQUALLY SPACED BETWEEN PLATFORM ELEMENTS AT APPROXIMATELY 4'-0" O.C.
 3. CUT TACTILE STRIP TO FIT SPACING AS DICTATED BY LOCATIONS OF CANOPY COLUMNS, TYP.

- TVM NOTES:
1. TICKET VENDING MACHINE (TVM) SHALL BE INSTALLED WITH REAR OF MACHINE SIX INCHES FROM FACE OF ADJACENT OBSTRUCTION TO ALLOW FOR MAINTENANCE ACCESS.

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REV	DATE	Description	

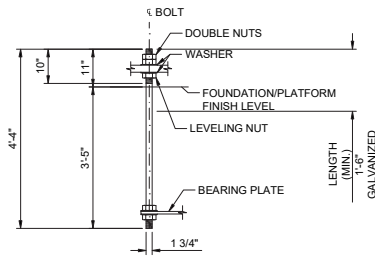
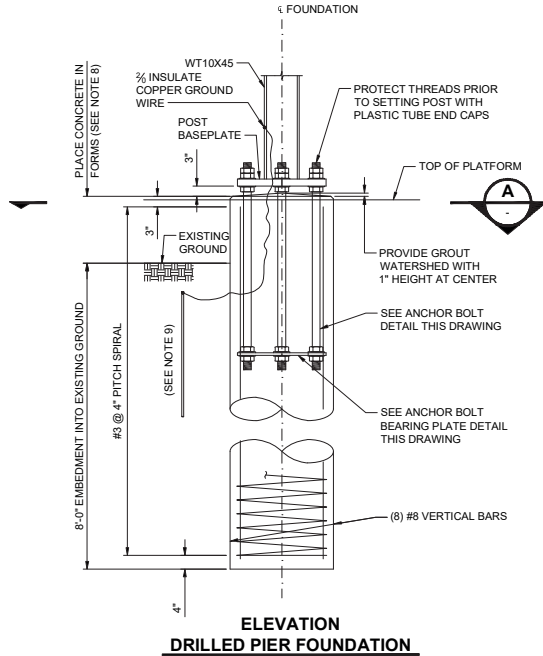


Designed By:
T. COVEYOU
Drawn By:
T. COVEYOU
Checked By:
A. DIGIROLAMO
Approved By:
F. NANNENGA

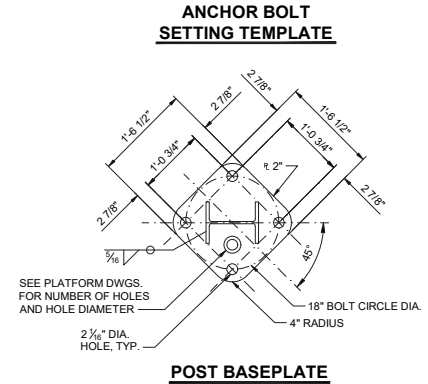
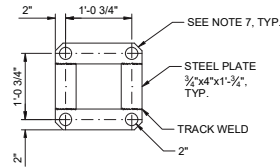
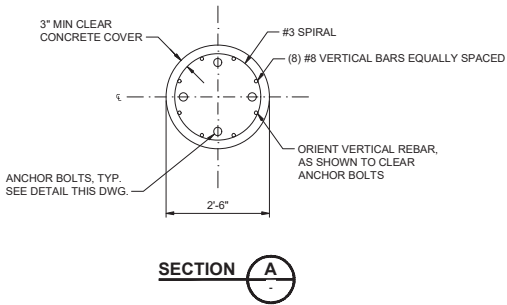
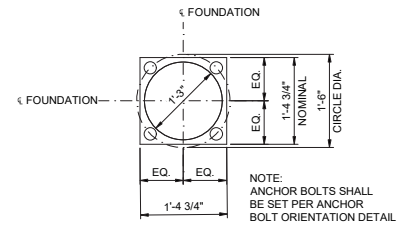
S-LINE EXTENSION PROJECT

STATION
20 FOOT STANDARD CANOPY
FLOOR PLAN

Scale	1" = 2'-0"
CADD Filename	SL-C-P-3-207.dwg
Submitted Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	P3207
Sheet No.	



- NOTES:**
- CONCRETE SHALL DEVELOP A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI.
 - ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 55, HEAVY HEX NUTS SHALL BE ASTM A563, FLAT WASHERS SHALL BE ASTM F436, BOLTS, NUTS, AND WASHERS SHALL BE HOT DIP GALVANIZED PER ASTM A153.
 - REINFORCING BARS SHALL BE ASTM A615 GRADE 60, UNLESS OTHERWISE NOTED.
 - ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR CONCRETE COVER OF 3 INCHES.
 - USE STEEL ANCHOR BOLT SETTING TEMPLATE TO ASSURE CORRECT INSTALLATION OF ANCHOR BOLTS AT TOP OF FOUNDATION.
 - ALL EXPOSED CONCRETE SURFACES SHALL HAVE A 1" CHAMFER.
 - BEARING PLATES FOR ALL FOUNDATIONS SHALL HAVE A 1.5" CHAMFER AT FOUR (4) CORNERS.
 - FOUNDATION INSTALLER TO DETERMINE LENGTH OF FORM REQUIRED BASED ON ACTUAL ELEVATION OF GRADE AT TIME OF CONCRETE PLACEMENT. FORMED SURFACE MUST EXTEND 6" MINIMUM BELOW FINAL GRADE.
 - CONNECT 2/0 INSULATED GROUND WIRE FROM GROUNDING PLATE TO FOUNDATION VERTICAL REBAR TO EXTERNAL 5/8" x 10'-0" LONG COPPER CLAD STEEL GROUND ROD. EXOTHERMIC WELD MUST BE USED TO CONNECT GROUND WIRE TO BOTTOM SURFACE OF GROUNDING PLATE. FOUNDATION REBAR AND EXTERNAL GROUND ROD. ADD ADDITIONAL GROUND RODS AS NECESSARY TO ACHIEVE SPECIFIED RESISTANCE TO EARTH (25 OHMS OR LESS). TESTING SHALL BE WITNESSED BY ENGINEER OR HIS DESIGNEE.



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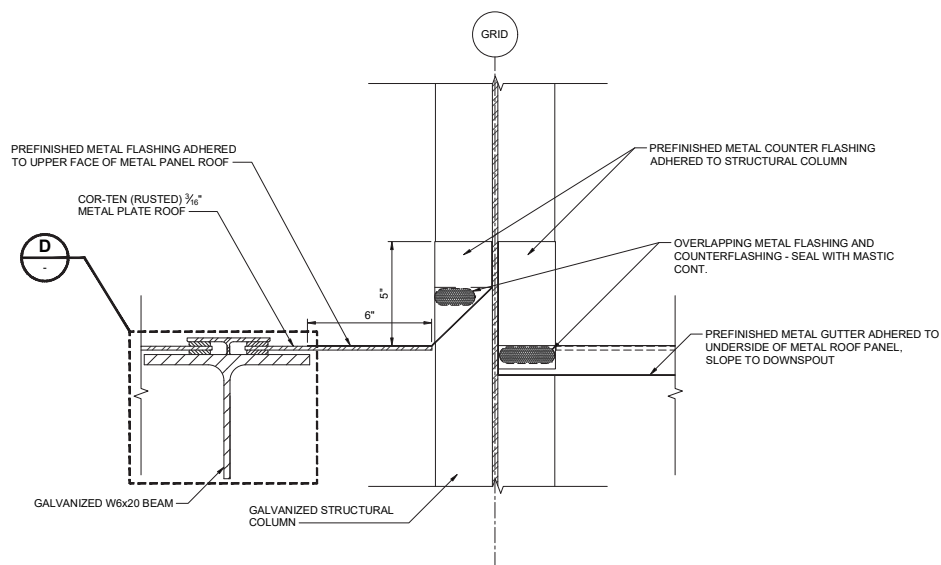
REVISION	DATE	DESCRIPTION



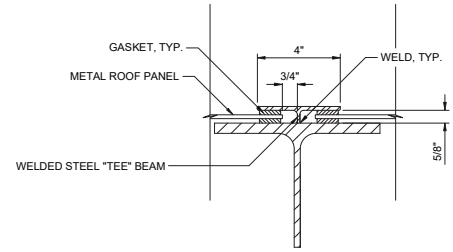
Designed By	F. NANNENGA
Drawn By	T. COVEYOU
Checked By	A. DIGIROLAMO
Approved By	F. NANNENGA

S-LINE EXTENSION PROJECT
STATION
DRILLED SHAFT FOUNDATION
CANOPY DETAILS

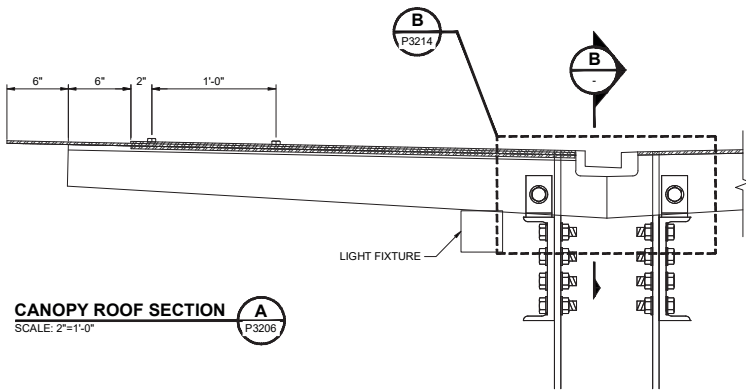
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Submission Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	P3208
Sheet No.	



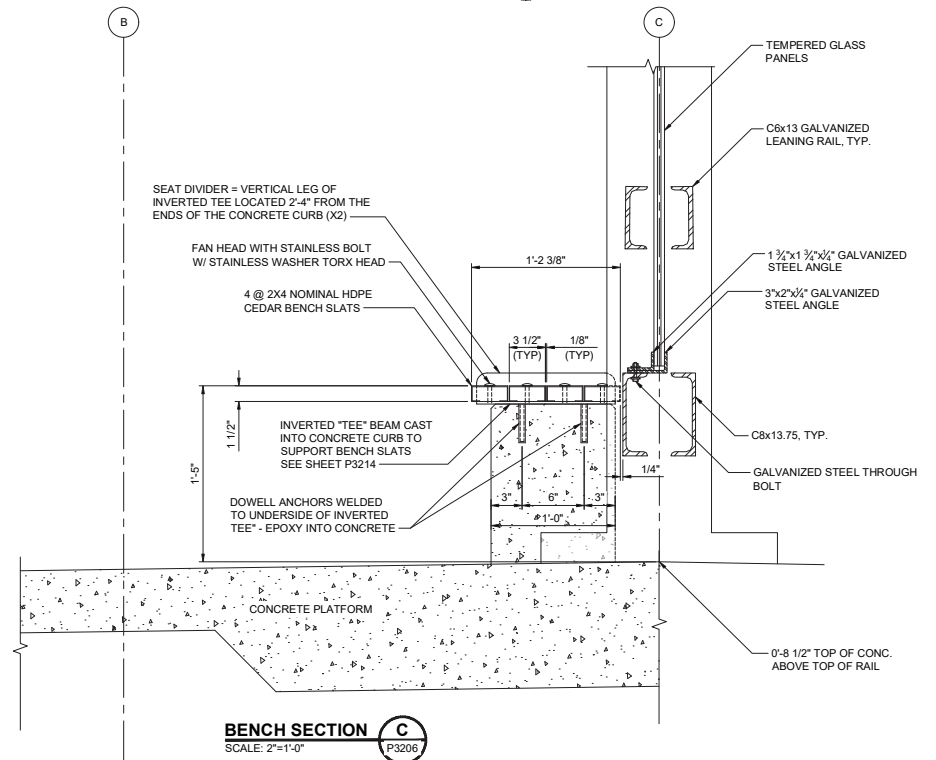
ROOF FLASHING DETAIL B
SCALE: 4"=1'-0"



PANEL ATTACHMENT DETAIL D
SCALE: 8"=1'-0"



CANOPY ROOF SECTION A
SCALE: 2"=1'-0"



BENCH SECTION C
SCALE: 2"=1'-0"

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REV	DATE	Description



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 F. NANNENGA
 Drawn By:
 T. COVEYOU
 Checked By:
 A. DIGIROLAMO
 Approved By:
 F. NANNENGA

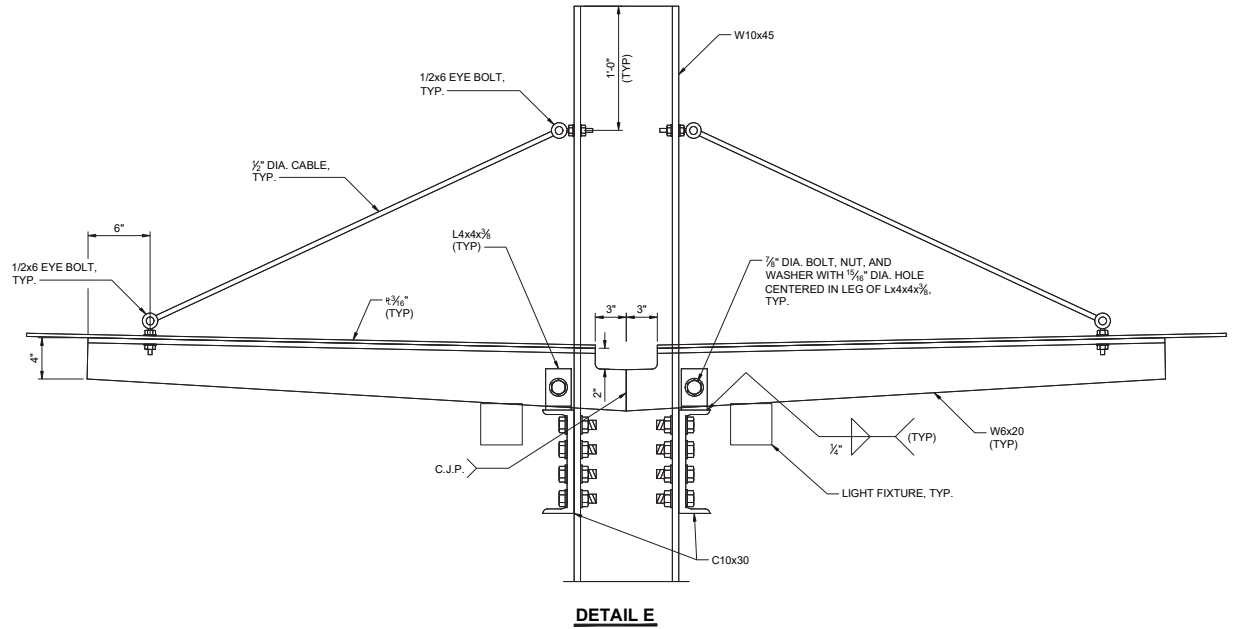
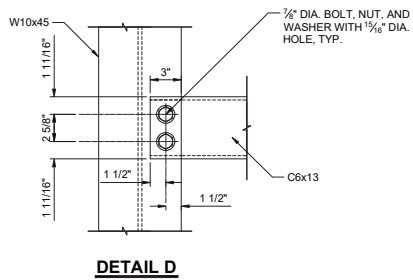
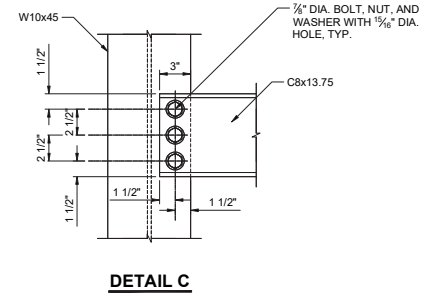
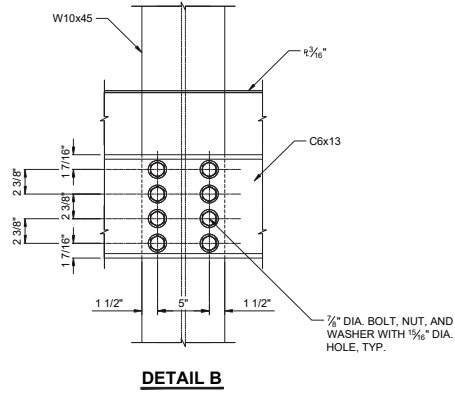
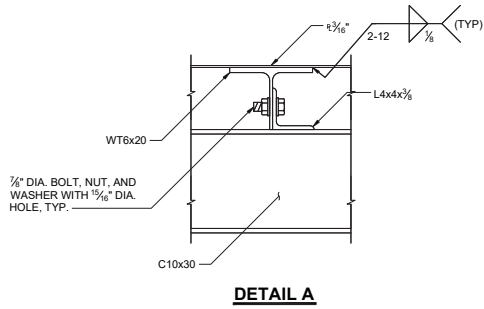
S-LINE EXTENSION PROJECT

STATION
 20 FOOT DOUBLE CANOPY
 DETAILS

State	AS NOTED
CADD Filename	SL-C-P-3-209.dwg
Submission Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	P3209
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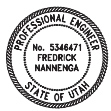
Submitted By: _____

Approved By: _____



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Drawn By:
T. COVEYOU
Checked By:
A. DIGIROLAMO
Approved By:
F. NANNENGA

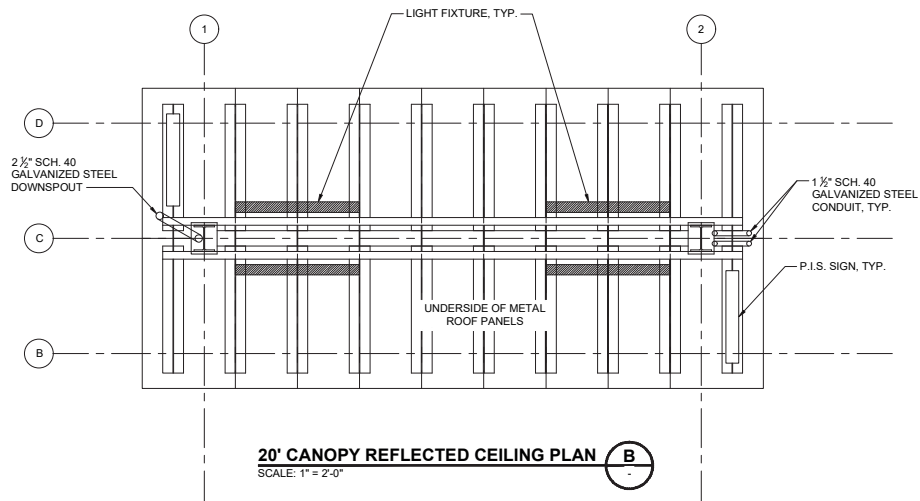
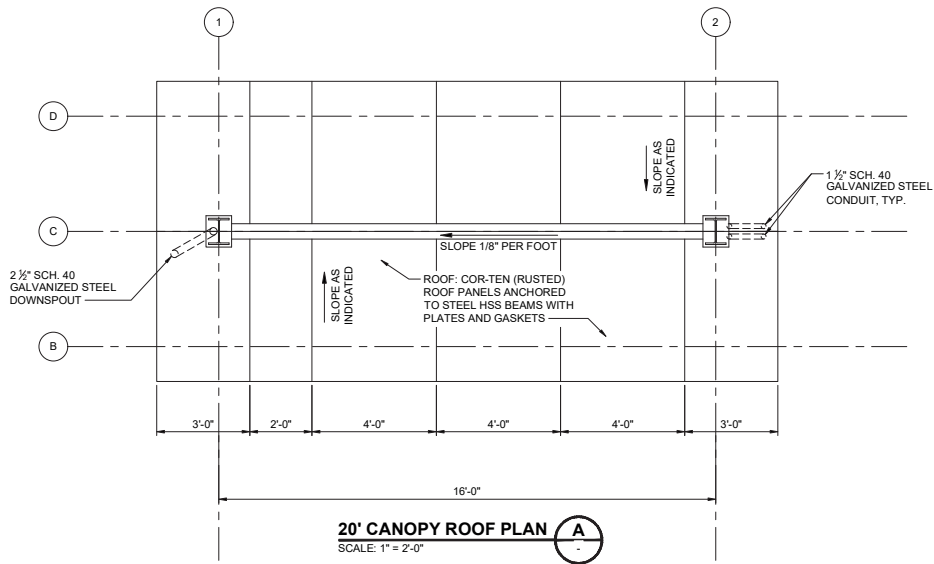
S-LINE EXTENSION PROJECT

STATION
STRUCTURAL DRAWINGS
CANOPY DETAILS

State	NTS
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Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	P3210
Sheet No.	

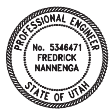
Submitted By: _____

Approved By: _____



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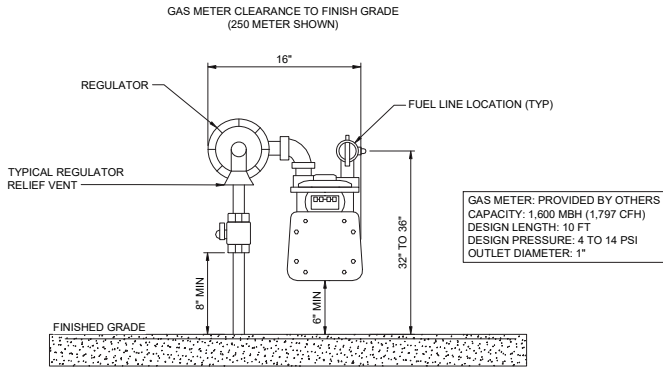
Approved By: _____

Designed By: F. NANNENGA
Drawn By: T. COVEYOU
Checked By: A. DIGIROLAMO
Approved By: F. NANNENGA

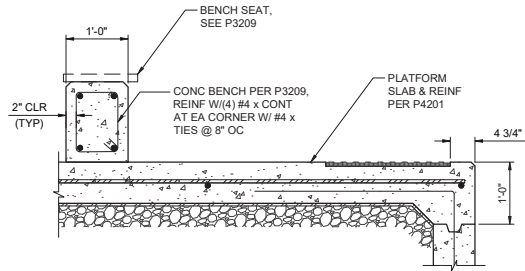
S-LINE EXTENSION PROJECT

STATION
20 FOOT DOUBLE CANOPY
REFLECTED CEILING & ROOF PLANS

Scale 1" = 2'-0"
CADD Filename SL-C-P-3-211.dwg
Submit Date 01-16-26
UTA Contract No. 24-03849
Drawing No. P3211
Sheet No.



TYPICAL GAS METER LAYOUT FOR STATION PLATFORM SNOW MELT **1**
NTS

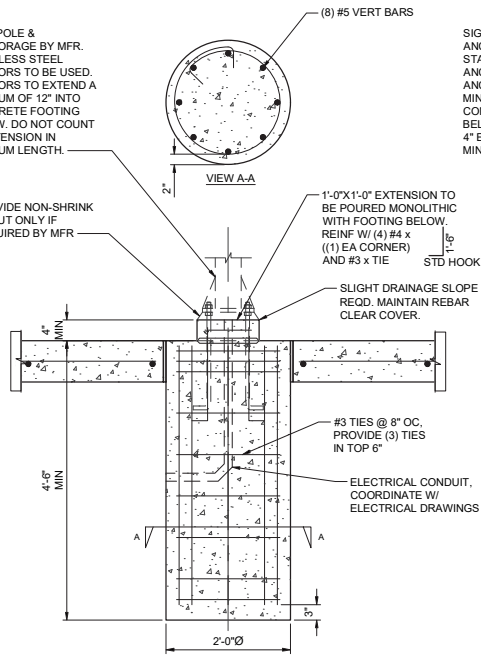


BENCH CONCRETE CURB **B**
SCALE: 1" = 1'

NOTE: FOOTING BASED ON A NON-CONSTRAINED CONDITION. 150 PSF/FT LATERAL BEARING UTILIZED.

SIGN POLE & ANCHORAGE BY MFR. STAINLESS STEEL ANCHORS TO BE USED. ANCHORS TO EXTEND A MINIMUM OF 12" INTO CONCRETE FOOTING BELOW. DO NOT COUNT 4" EXTENSION IN MINIMUM LENGTH.

PROVIDE NON-SHRINK GROUT ONLY IF REQUIRED BY MFR

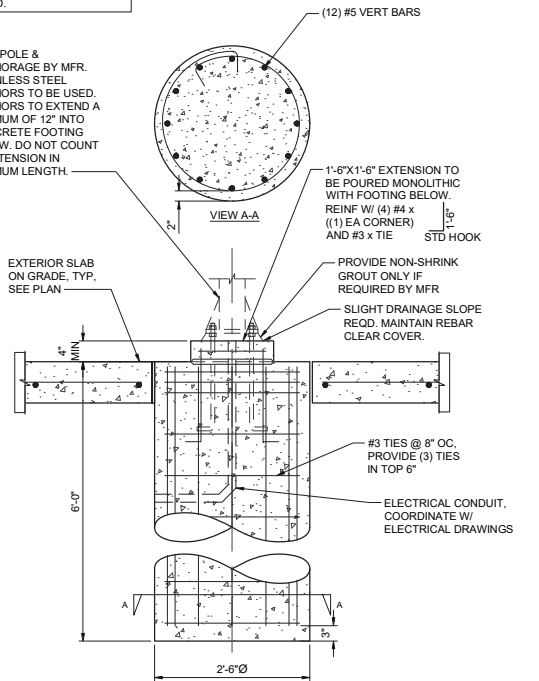


TYPE 4 SIGN FOUNDATION **A1**
SCALE: 1" = 1'

NOTE: FOOTING BASED ON A NON-CONSTRAINED CONDITION. 150 PSF/FT LATERAL BEARING UTILIZED.

SIGN POLE & ANCHORAGE BY MFR. STAINLESS STEEL ANCHORS TO BE USED. ANCHORS TO EXTEND A MINIMUM OF 12" INTO CONCRETE FOOTING BELOW. DO NOT COUNT 4" EXTENSION IN MINIMUM LENGTH.

EXTERIOR SLAB ON GRADE, TYP. SEE PLAN



14A SIGN FOUNDATION **A2**
SCALE: 1" = 1'

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REVISION	DATE	DESCRIPTION



Designed By	F. NANNENGA
Drawn By	T. COVEYOU
Checked By	A. DIGIROLAMO
Approved By	F. NANNENGA

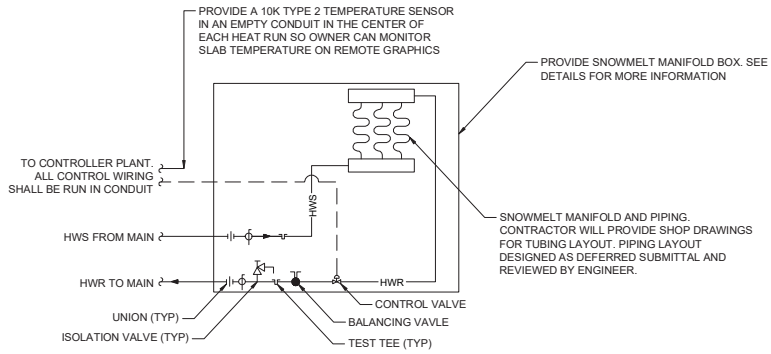
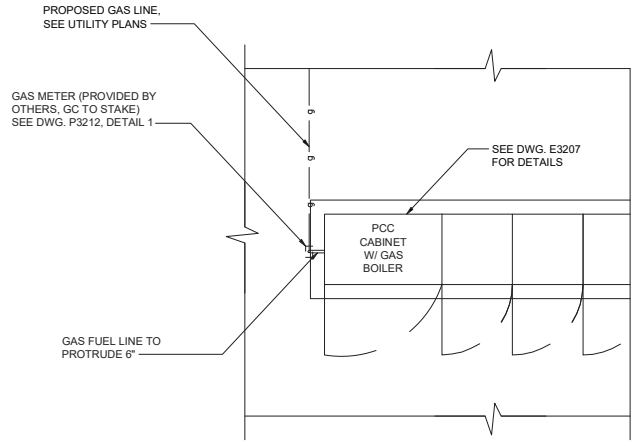
S-LINE EXTENSION PROJECT

STATION
MISCELLANEOUS PLATFORM DETAILS

State	AS NOTED
CADD Filename	SL-C-P-3-212.dwg
Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	P3212
Sheet No.	

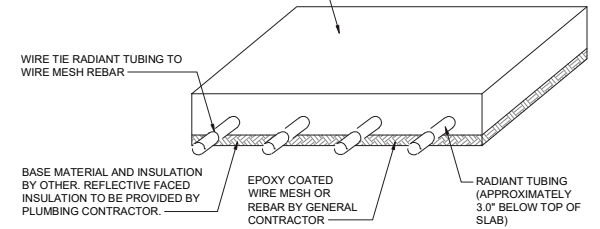
Submitted By:

Approved By:

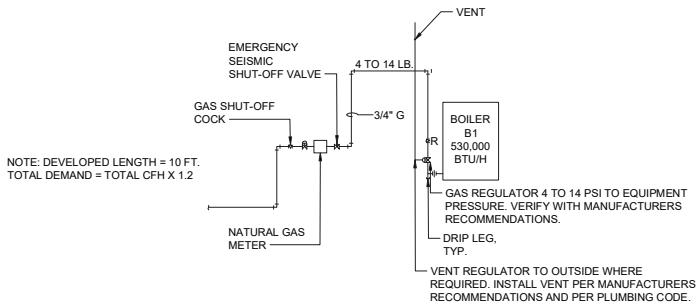


SNOWMELT PIPING DIAGRAM 1
NTS

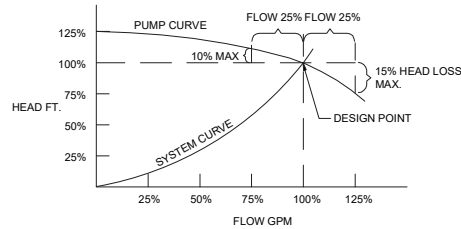
SEE P4201 AND P4202 FOR CONCRETE SLAB THICKNESS



PLATFORM SLAB ON GRADE RADIANT TUBING INSTALLATION DETAIL 4
NTS



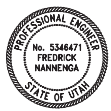
GAS FLOW DIAGRAM 2
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PUMP CURVE DETAIL 3
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F. NANNENGA

Drawn By:
T. COVEYOU

Checked By:
A. DIGIROLAMO

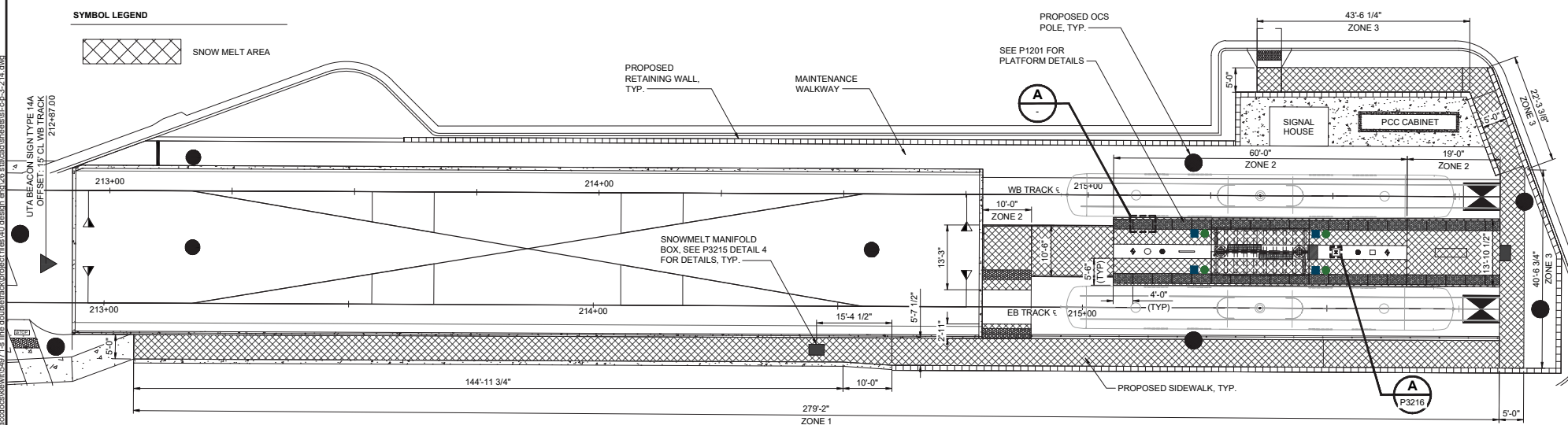
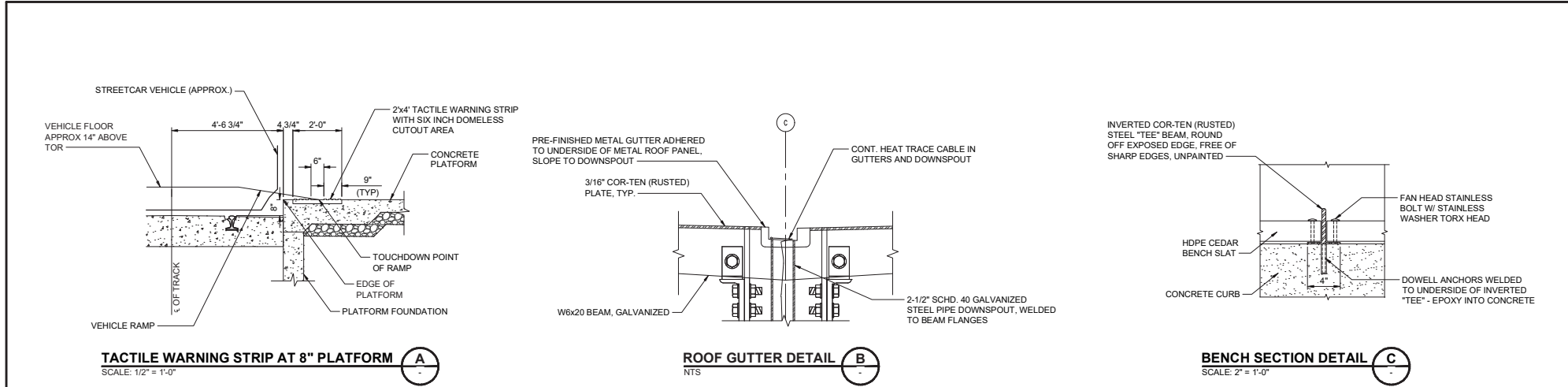
Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT

STATION MECHANICAL DETAILS

State	NTS
CADD Filename	SL-C-P-3-213.dwg
Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	P3213
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F. NANNENGA
Drawn By:
T. COVEYOU
Checked By:
A. DIGIROLAMO
Approved By:
F. NANNENGA

S-LINE EXTENSION PROJECT

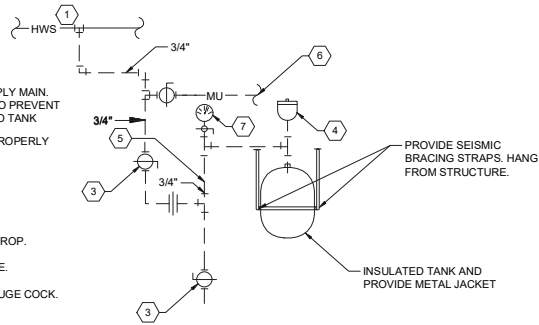
STATION
STANDARD PLATFORM AND SNOWMELT
DETAILS

State: AS NOTED
CADD Filename: SL-C-P-3-214.dwg
Submittal Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: P3214
Sheet No.:

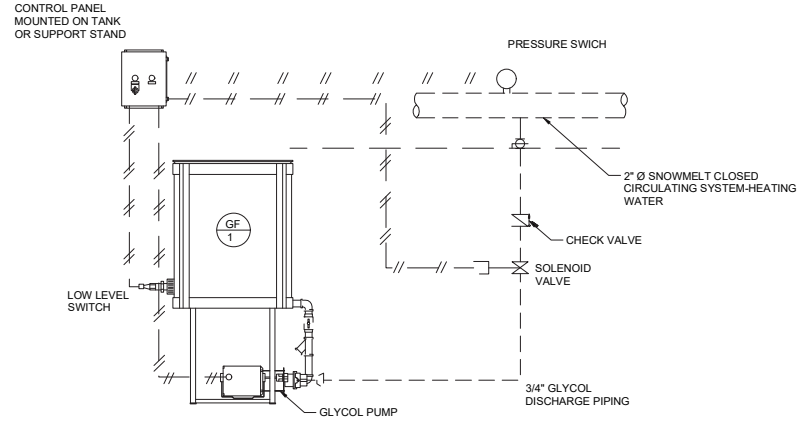
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DETAIL NOTES:

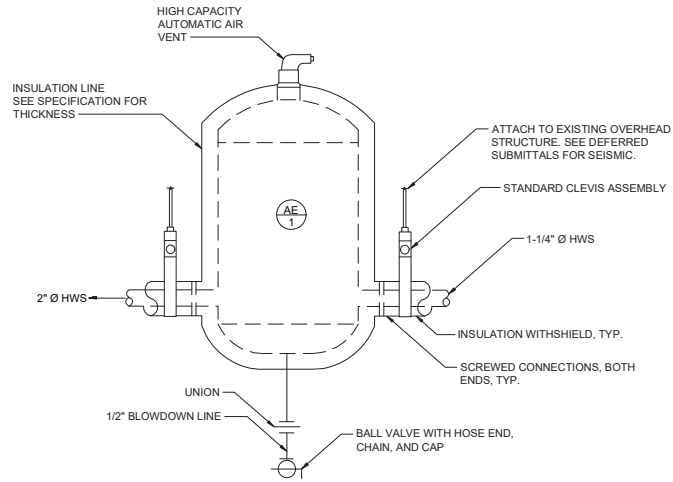
- 1 CONNECT TO SIDE OF HOT WATER SUPPLY MAIN. AVOID TOP OR BOTTOM CONNECTION TO PREVENT AIR OR DEBRIS FROM ENTERING PIPE TO TANK
- 2 SHUT OFF BALL VALVE. REQUIRED TO PROPERLY PRECHARGE TANK.
- 3 DRAIN VALVE
- 4 AUTOMATIC AIR VENT. BELL & GOSSETT MODEL #7 OR #87
- 5 ANTI THERMO-SYPHON LOOP. 12" MIN. DROP.
- 6 TIE INTO EXISTING MAKE-UP WATER LINE.
- 7 PRESSURE GAUGE -0- 60 PSIG WITH GAUGE COCK.



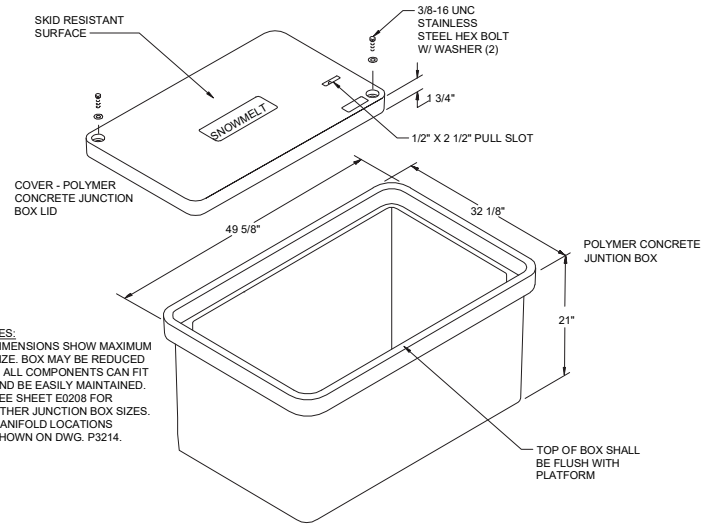
EXPANSION TANK DETAIL 1
NTS



HOT WATER SYSTEM GLYCOL CHEMICAL FEED SYSTEM 2
NTS



AIR ELIMINATOR DETAIL 3
NTS

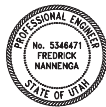


- NOTES:**
1. DIMENSIONS SHOW MAXIMUM SIZE. BOX MAY BE REDUCED IF ALL COMPONENTS CAN FIT AND BE EASILY MAINTAINED. SEE SHEET E0208 FOR OTHER JUNCTION BOX SIZES.
 2. MANIFOLD LOCATIONS SHOWN ON DWG. P3214.

SNOWMELT MANIFOLD BOX 4
NTS

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T. COVEYOU
Checked By:
A. DIGIROLAMO
Approved By:
F. NANNENGA

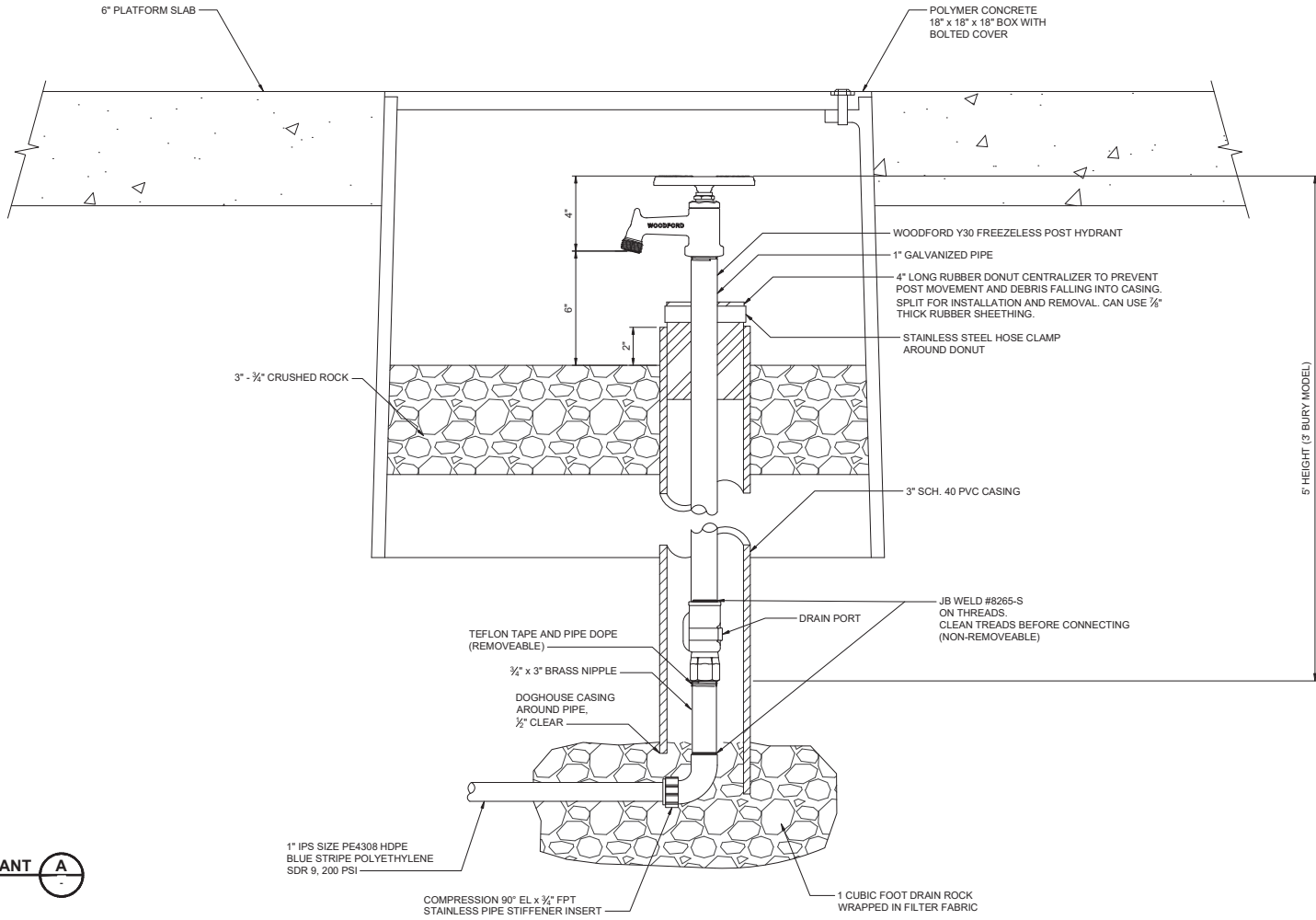
S-LINE EXTENSION PROJECT

STATION
SNOWMELT DETAILS

State	NTS
CADD Filename	SL-C-P-3-215.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	P3215
Sheet No.	

Submitted By: _____

Approved By: _____



FREEZELESS POST HYDRANT
NTS



1" IPS SIZE PE4308 HDPE
BLUE STRIPE POLYETHYLENE
SDR 9, 200 PSI

COMPRESSION 90° EL x 1/2" FPT
STAINLESS PIPE STIFFENER INSERT

1 CUBIC FOOT DRAIN ROCK
WRAPPED IN FILTER FABRIC

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Designed By: F. NANNENGA
Drawn By: T. COVEYOU
Checked By: A. DIGIROLAMO
Approved By: F. NANNENGA

S-LINE EXTENSION PROJECT

FREEZELESS POST HYDRANT
DETAIL

State: NTS
CADD Filename: SL-C-P-3-216.dwg
Submital Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: P3216
Sheet No.:

Submitted By: _____ Approved By: _____

FONT A: GOUDY BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 1234567890


FONT B: FRUTIGER ROMAN

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 1234567890

FONT C: GEOMETRIC 415 BLACK

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 1234567890



STANDARD FONT AND LOGO 
 SCALE: NTS

STREETCAR LOGO:
 - ONE WORD USING "FONT C." GEOMETRIC 415
 - ALL CAPITAL LETTERS
 - FONT COLOR IS UTA BLUE (REFLEX BLUE)
 - LETTERS SPACED AS SHOWN
 - CONFIRM ARTWORK WITH UTA BEFORE PROCEEDING

COLOR SCHEDULE

SIGN COLORS FOR ALL STREETCAR STOPS ARE INDICATED ON SIGN DETAILS. UTA LOGO COLORS TO MATCH AS SHOWN IN ALL CIRCUMSTANCES. CONFIRM COLOR SELECTION WITH UTA BEFORE PROCEEDING.
 - UTA BLUE: PMS REFLEX BLUE
 - UTA RED: PMS 186 RED

ACCEPTABLE SUBSTITUTES

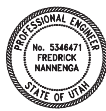
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 M:73 M:100
 Y:0 Y:81
 K:2 K:4

NOTES

1. FONTS DISPLAYED ON THIS PAGE ARE ONLY ALLOWABLE FONTS FOR USE ON UTA STREET CAR SYSTEM SIGNAGE.

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Submitted By: _____



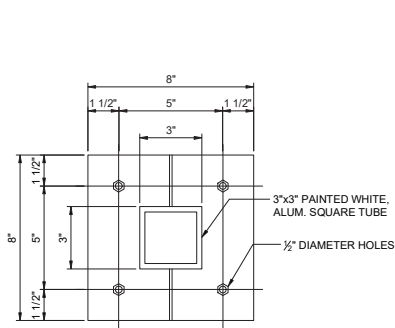
Approved By: _____

Designed By: F. NANNENGA
Drawn By: T. COVEYOU
Checked By: A. DIGIROLAMO
Approved By: F. NANNENGA

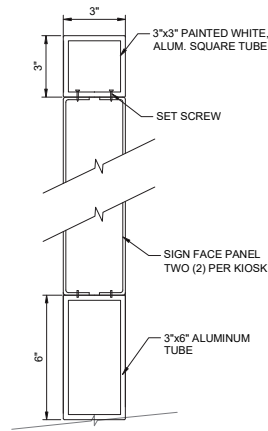
S-LINE EXTENSION PROJECT

**GRAPHIC SIGN STANDARDS
STANDARD FONTS**

State NTS
CADD Filename: SL-C-P-3-217.dwg
Submit Date 01-16-26
UTA Contract No. 24-03849
Drawing No. P3217
Sheet No.

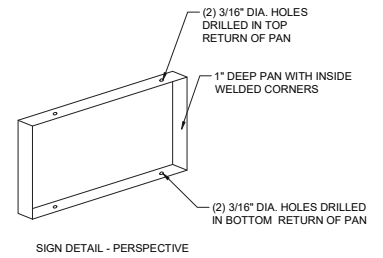


SIGN MOUNTING PLATE DETAIL (E)
SCALE: 4" = 1'-0"

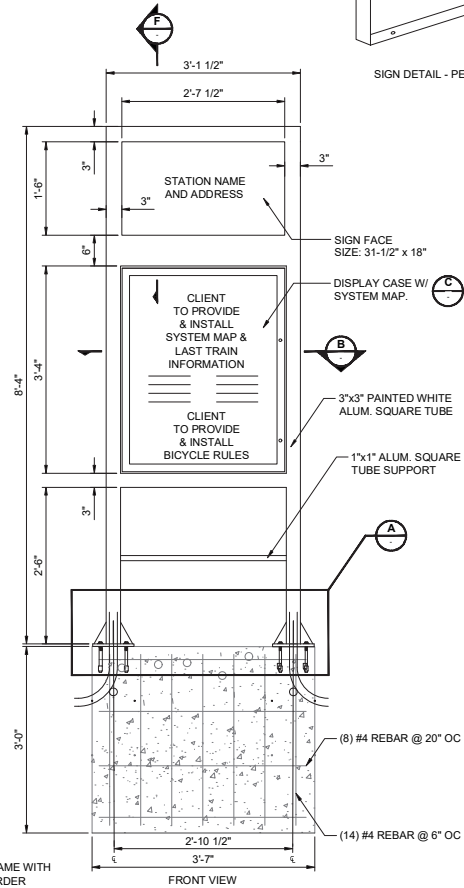


SIGN SECTION (F)
SCALE: 4" = 1'-0"

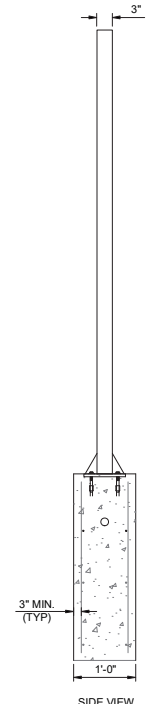
NOTES:
1. UTA TO CREATE AND PROVIDE POSTER ARTWORK. SEE UTA WAYFINDING AND SIGNAGE DOCUMENT.



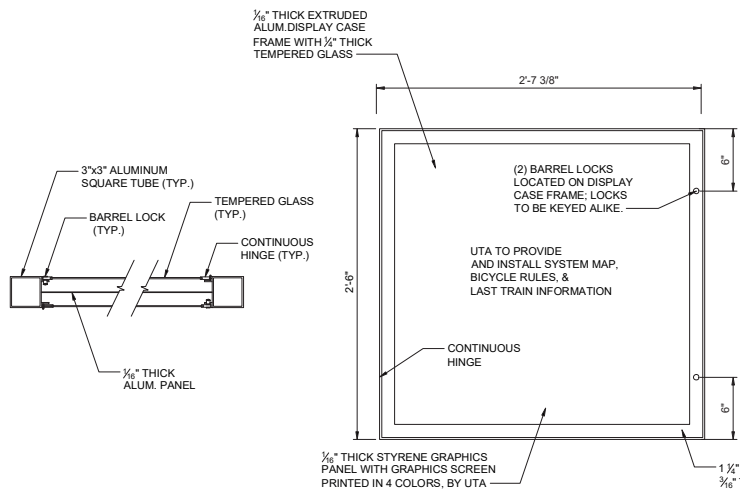
SIGN DETAIL - PERSPECTIVE



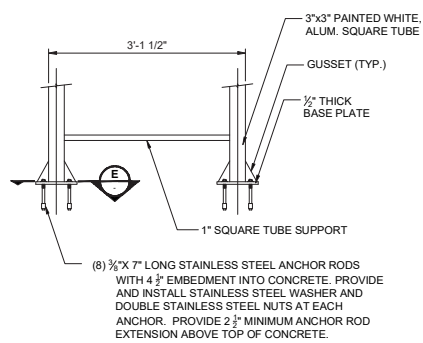
SINGLE CASE INFO KIOSK (TYP.) (D)
SCALE: 1" = 1'-0"



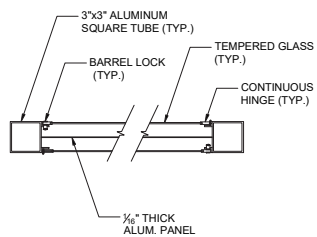
SIDE VIEW



DISPLAY CASE ELEVATION (C)
SCALE: 2" = 1'-0"



BASE PLATE ANCHOR DETAIL (A)
SCALE: 1" = 1'-0"



DISPLAY CASE DETAIL (B)
SCALE: 2" = 1'-0"

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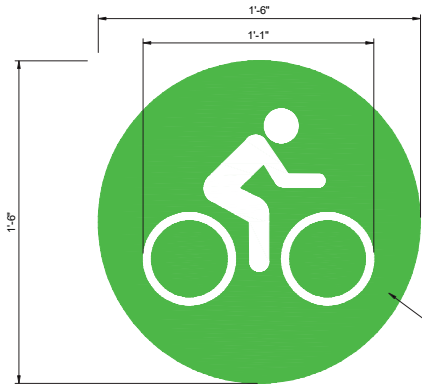
12/21/2025			
REV	DATE	Description	



Designed By:	F. NANNENGA
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

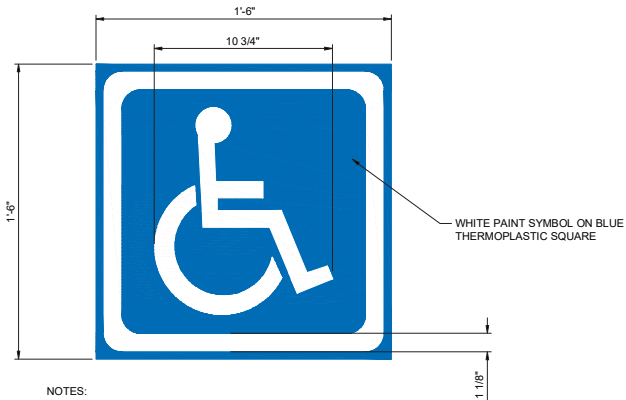
S-LINE EXTENSION PROJECT
GRAPHIC SIGN STANDARDS
TYPE 4 - RAIL PLATFORM
SIGN DETAILS

State:	AS NOTED
CADD Filename:	SL-C-P-3-218.dwg
Submital Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	P3218
Sheet No.:	



- NOTES:**
1. PLACE BIKE SYMBOL TO THE LEFT OF THE ADA SYMBOL (WHEN FACING TRAIN FROM PLATFORM) AS SHOWN ON PLATFORM SIGN PLANS.
 2. PLACE TWO INCHES FROM TACTILE STRIP AND ONE INCH FROM ANY CONTROL OR EXPANSION JOINTS.

SS 2: PLATFORM BICYCLE SYMBOL (B1)
SCALE: NTS

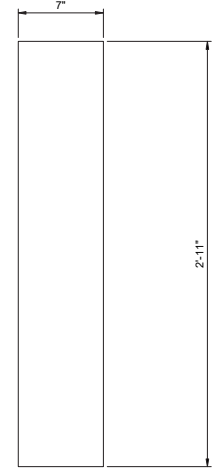


- NOTES:**
1. PLACE ADA SYMBOL AT CENTER OF LRT VEHICLE DOOR #2 & #3 AS SHOWN ON SUGAR HOUSE STATION PLATFORM PLAN P1201.
 2. PLACE TWO INCHES FROM TACTILE STRIP AND ONE INCH FROM ANY CONTROL OR EXPANSION JOINTS.

SS 1: PLATFORM ADA SYMBOL (A1)
SCALE: NTS

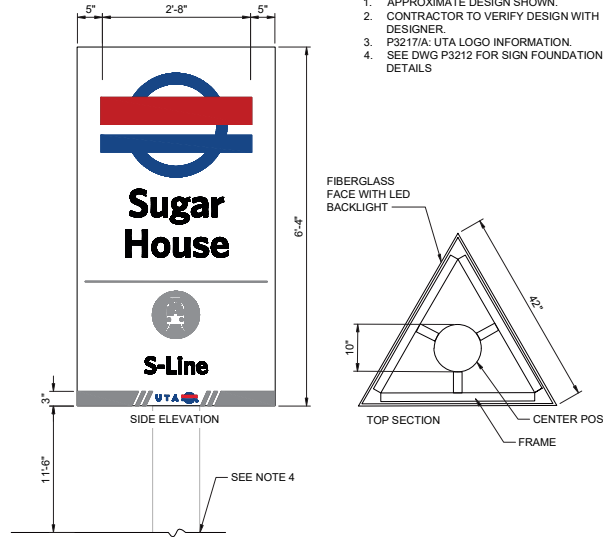
- GENERAL NOTES:**
1. APPROXIMATE DESIGN SHOWN. UTA OPERATIONS MAY PROVIDE STENCILS.
 2. VERIFY ALL PAVEMENT MARKING LOCATIONS WITH UTA OPERATIONS PRIOR TO INSTALLATION ON CONCRETE PLATFORM.
 3. REFER TO SUGAR HOUSE STATION PLATFORM PLAN DRAWING P1201 FOR INFORMATION ON SIGN LOCATIONS.
 4. SEE P3217 FOR FONTS. CHECK WITH UTA TO CONFIRM.
 5. REFER TO UTA WAYFINDING & SIGNAGE SIGN SCHEDULE AND DRAWING PACKAGE FOR MORE INFORMATION.

- NOTES:**
1. APPROXIMATE DESIGN SHOWN.
 2. REFER TO UTA STANDARD TEMPLATE.
 3. CONTRACTOR TO INSTALL USE RESTRICTION SIGNS.



SIGN TYPE 6: USE RESTRICTION SIGN (C)
NTS

- NOTES:**
1. APPROXIMATE DESIGN SHOWN.
 2. CONTRACTOR TO VERIFY DESIGN WITH DESIGNER.
 3. P3217/A: UTA LOGO INFORMATION.
 4. SEE DWG P3212 FOR SIGN FOUNDATION DETAILS.



SIGN TYPE 14A: UTA BEACON (TRIANGULAR PRISM) (A2)
SCALE: NTS

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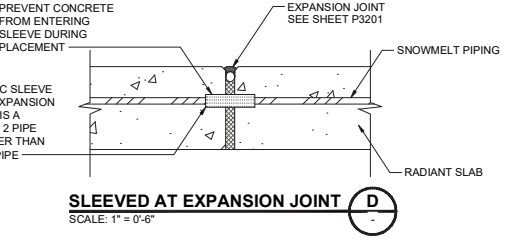
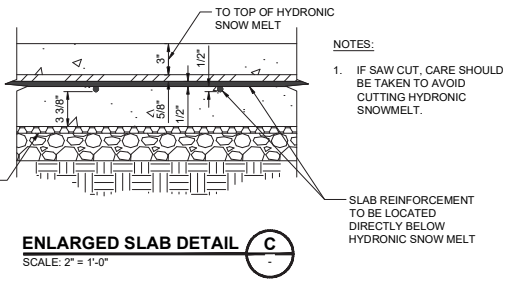
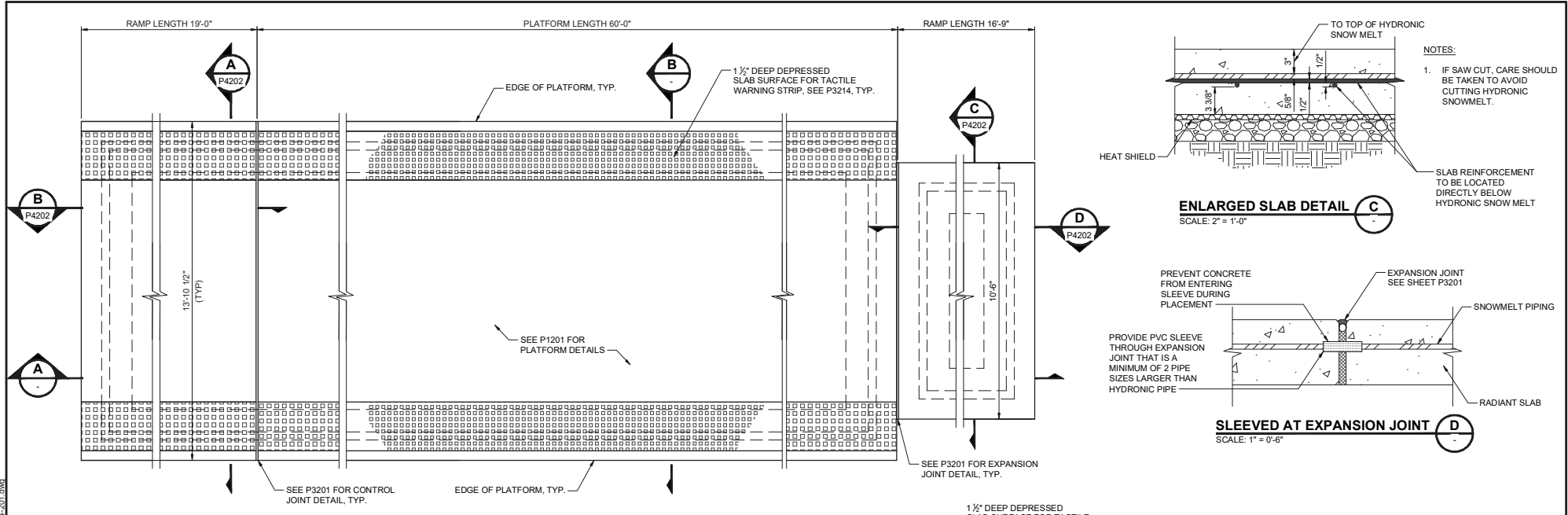
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REV	DATE	Description	



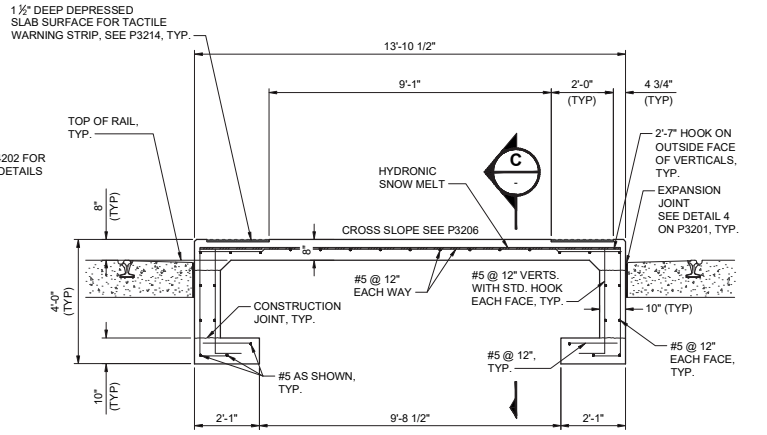
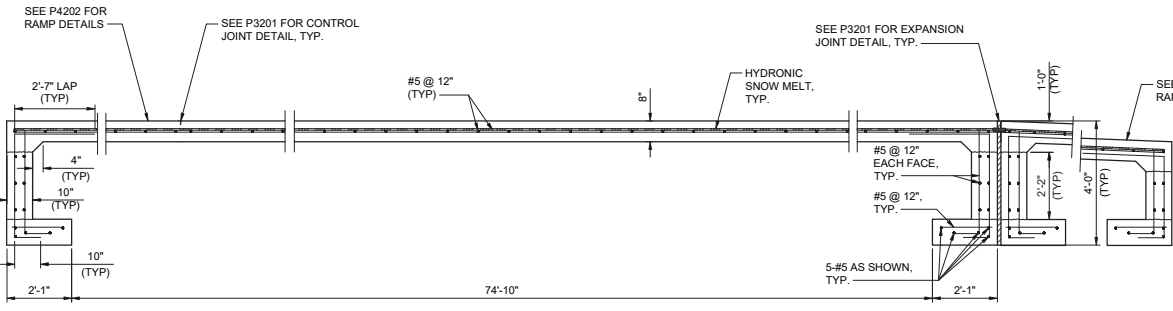
Designed By:	F. NANNENGA
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT	
GRAPHIC SIGN STANDARDS PAVEMENT MARKINGS AND PRISM	

State:	NTS
CADD Filename:	SL-C-P-3-220.dwg
Submital Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	P3220
Sheet No.:	



SUGAR HOUSE STATION FOUNDATION PLAN
NTS



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1/8/2018

REV	DATE	Description



Designed By:
F. NANNENGA
Drawn By:
T. COVEYOU
Checked By:
A. DIGIROLAMO
Approved By:
F. NANNENGA

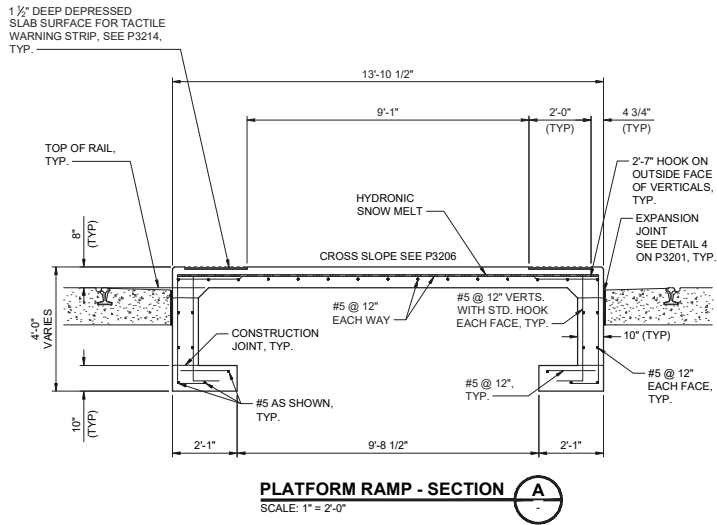
S-LINE EXTENSION PROJECT

STATION FOUNDATION PLAN AND SECTIONS

State	AS NOTED
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Submitted Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	P4201
Sheet No.	

Submitted By: _____

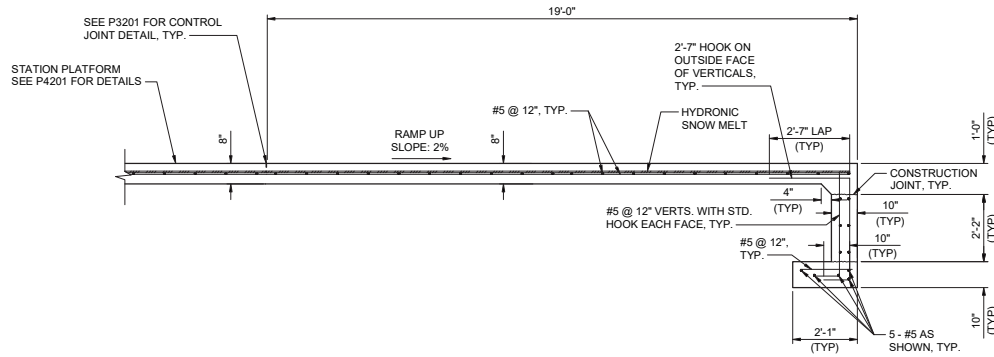
Approved By: _____



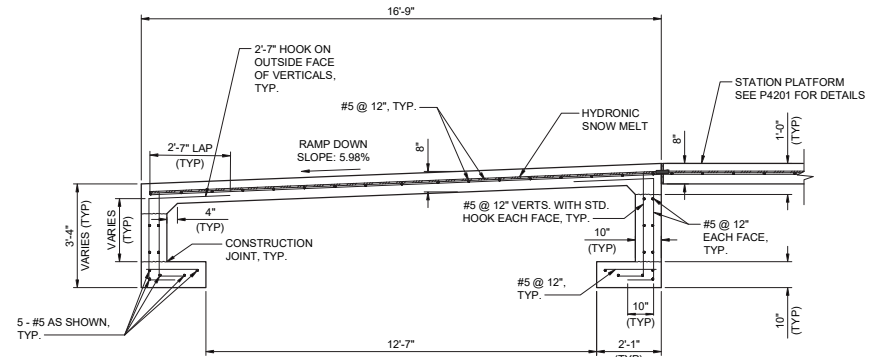
PLATFORM RAMP - SECTION A
SCALE: 1" = 2'-0"



PLATFORM RAMP - SECTION C
SCALE: 1" = 2'-0"



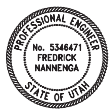
PLATFORM RAMP - SECTION B
SCALE: 1" = 2'-0"



PLATFORM RAMP - SECTION D
SCALE: 1" = 2'-0"

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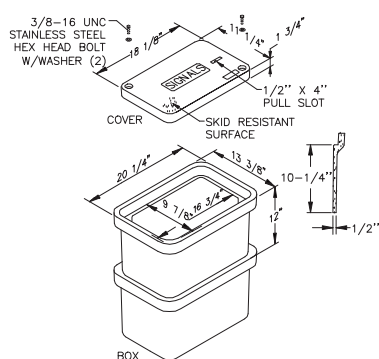
Designed By	F. NANNENGA
Drawn By	T. COVEYOU
Checked By	A. DIGIROLAMO
Approved By	F. NANNENGA

S-LINE EXTENSION PROJECT

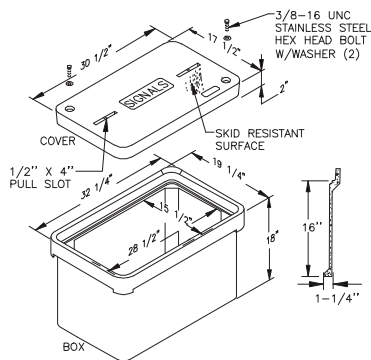
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RAMP FOUNDATION SECTIONS

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UTA Contract No.	24-03849
Drawing No.	P4202
Sheet No.	

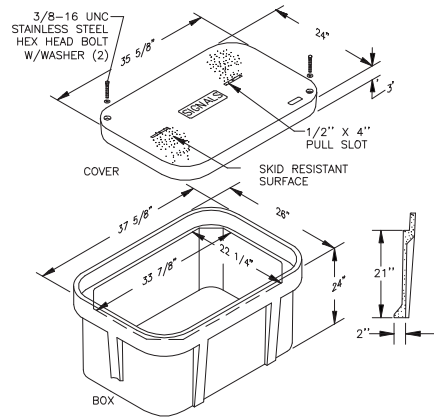
Submitted By: _____ Approved By: _____



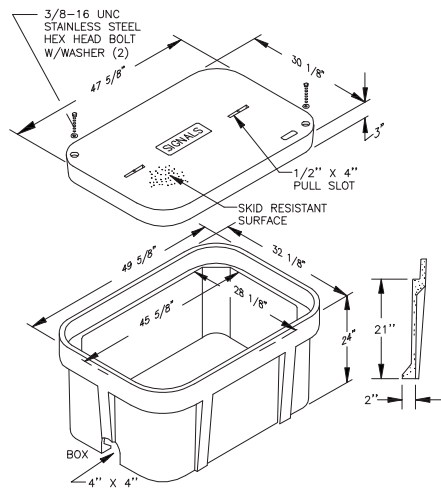
TYPE I DOUBLE JUNCTION BOX



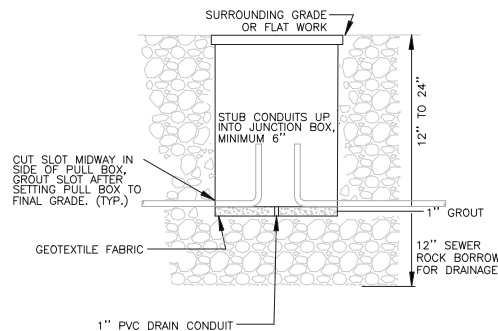
TYPE II JUNCTION BOX



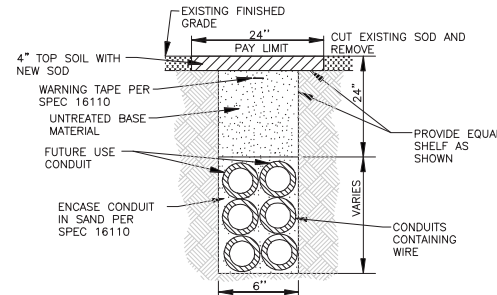
TYPE III JUNCTION BOX



TYPE D JUNCTION BOX



TYPICAL JUNCTION BOX INSTALLATION



TRENCH DETAIL FOR CONDUIT IN NATIVE MATERIAL

NOTES:

- 1. PROVIDE SEALING COMPOUND ON ENDS OF EACH CONDUIT RUN
2. OTHER JUNCTION BOXES ACCEPTABLE SUBJECT TO APPROVAL BY OWNER.
3. USE GRANULAR BACKFILL WELL TAMPED AROUND JUNCTION BOXES.
4. CAST CONDUIT HOLES IN JUNCTION BOX AT THE TIME OF PRE-CASTING OR DRILL/PUNCH AT THE TIME OF PLACEMENT WITH NO STRUCTURAL DAMAGE TO THE BOX. ALL DRILLED HOLES SHALL BE THE SAME DIAMETER AS OUTSIDE DIAMETER OF CONDUIT.
5. THE TOP OF THE JUNCTION BOX SHALL BE FLUSH WITH SURROUNDING GRADE OR CONCRETE FLATWORK EXCEPT AS DIRECTED WHEN AREA IS SUBJECT TO WHEEL LOAD. IF WHEEL LOAD IS ANTICIPATED, THE JUNCTION BOX SHALL THEN BE COVERED BY A 1/4" STEEL PLATE OVERLAPPING THE JUNCTION BOX BY A MINIMUM OF 1-1/2" ON ALL SIDES AND A MINIMUM OF 4" OF ASPHALT COVER.
6. ALL CONDUIT TO CONTAIN 700 POUND FLAT BRAIDED NYLON PULL LINE IN ADDITION TO CIRCUIT WIRES.
7. SEAL ALL CONDUIT HOLES USING A RUBBER SLEEVE GASKET AND EXPANDING FOAM.
8. SEWER ROCK AND GEO-TEXTILE FABRIC FOR ALL JUNCTION BOXES SHALL BE INCLUDED IN THE SIGNAL INSTALLATION PRICE.
9. REFER TO APWA PLAN NO 255 FOR FURTHER TRENCHING DETAILS.
10. MAINTAIN MINIMUM ON 24" COVER TO CONDUITS BEHIND TBC AND MINIMUM OF 36" COVER TO CONDUITS IN ROADWAY.
11. JUNCTION BOX INSTALLED IN CONCRETE SLABS TO HAVE 1/2" PREFORMED EXPANSION JOINT FILLER TRIMMED FLUSH WITH SLAB AND BOX. JOINT SEAL ALL SIDES.
12. ALL CONDUITS TO ENTER BOTTOM HALF OF JUNCTION BOX.

SPECIFICATIONS FOR TYPE I, II, III & D JUNCTION BOX AND COVER.

- A. MADE FROM POLYMER CONCRETE CONSISTING OF SAND AND AGGREGATE BOUND TOGETHER WITH A POLYMER RESIN.
B. NON-SKID SURFACE 0.50 COEFFICIENT.
C. MINIMUM WALL THICKNESS 1/2".
D. SUPPORT WHEEL LOAD OF 12,000 LBS. AND A MAXIMUM DEFLECTION OF 1/2" WITH 8,000 LBS. LOAD USING 10" X 10" LOAD.
E. LOGO AREA:
1. SIGNAL USE LOGO 'SIGNAL'.
2. LIGHTING USE LOGO 'STREET LIGHTING'.
3. INTERCONNECT USE LOGO 'SIGNAL'.
4. POWER BOXES USE LOGO 'POWER'.
F. SHALL COMPLY WITH THE FOLLOWING AVERAGE PHYSICAL AND CHEMICAL PROPERTIES:

Table with 2 columns: PROPERTIES and ASTM/POLYMER. Rows include TENSILE STRENGTH, FLEXURAL STRENGTH, IMPACT RESISTANCE, COMPRESSIVE STRENGTH, EFFECT OF ACIDS, and EFFECT OF ALKALIES.

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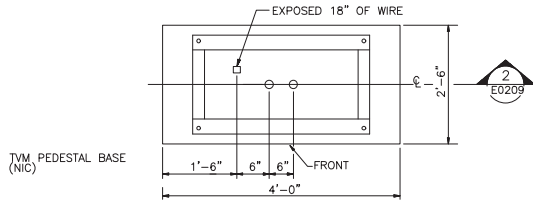
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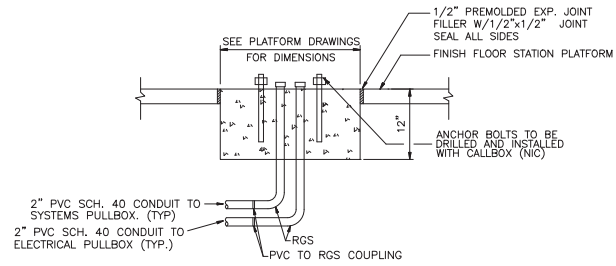
Design and approval table with columns: Designed By, Drawn By, Checked By, Approved By.

S-LINE EXTENSION PROJECT
SUGAR HOUSE STATION PLATFORM
JUNCTION BOX AND TRENCH DETAILS

Project information table with columns: State, CADD Filename, Submission Date, UTA Contract No., Drawing No., Sheet No.

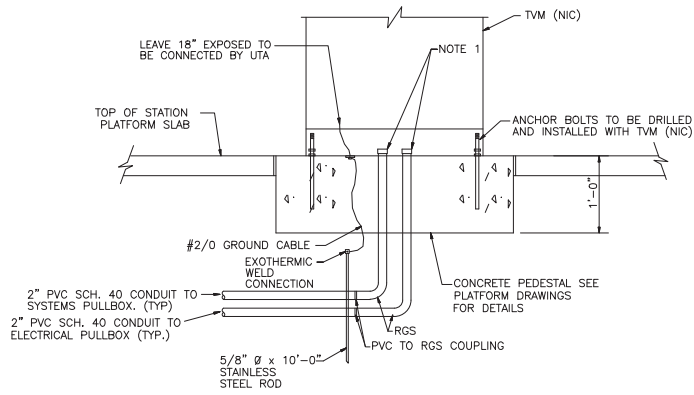


TICKET VENDING MACHINE FOUNDATION AND BASE
SCALE: NTS

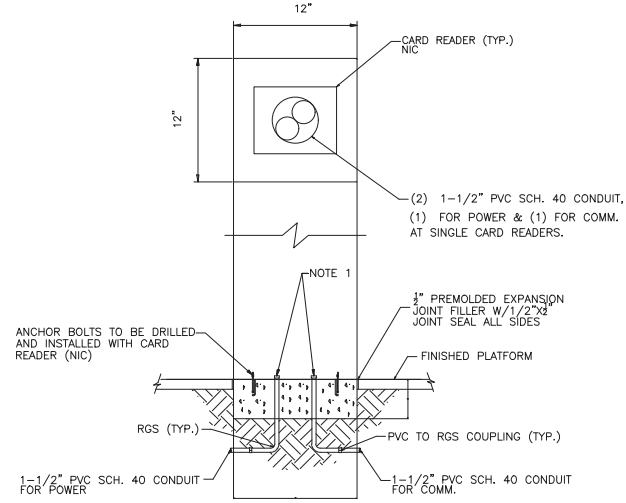


CALL BOX CONCRETE BASE
SCALE: NTS

NOTE:
1. STUB UP 2" ABOVE PLATFORM



TICKET VENDING MACHINE BASE SECTION
SCALE: NTS



SINGLE CARD READER BASE
SCALE: NTS

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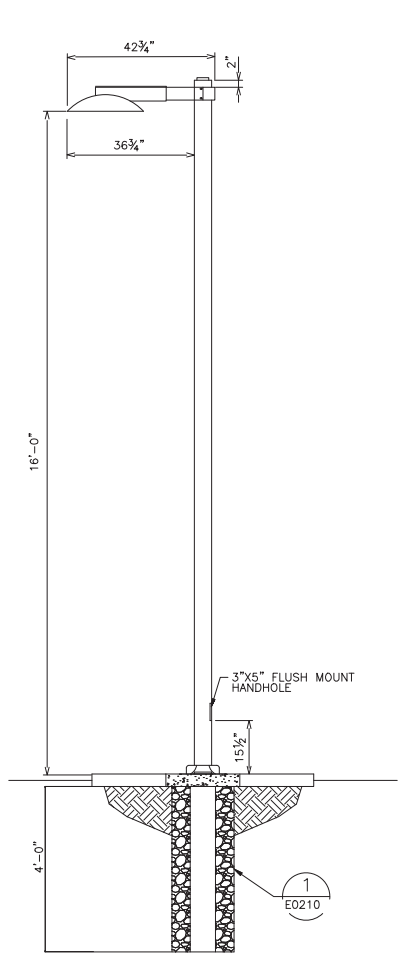
Designed By A.JAIN
Drawn By A.JAIN
Checked By D.DUZAN
Approved By Y.LIU

S-LINE EXTENSION PROJECT

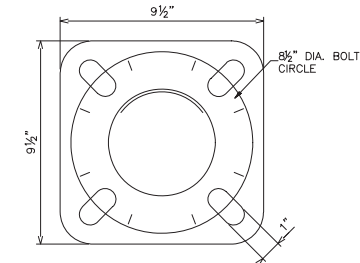
PLATFORM ELECTRICAL
SUGAR HOUSE STATION PLATFORM
TVM BASE, CALL BOX, AND CARD READER DETAILS

State NTS
CADD Filename SL-C-E-0209.dwg
Submittal Date 01-16-26
UTA Contract No. 24-03849
Drawing No. E0209
Sheet No.

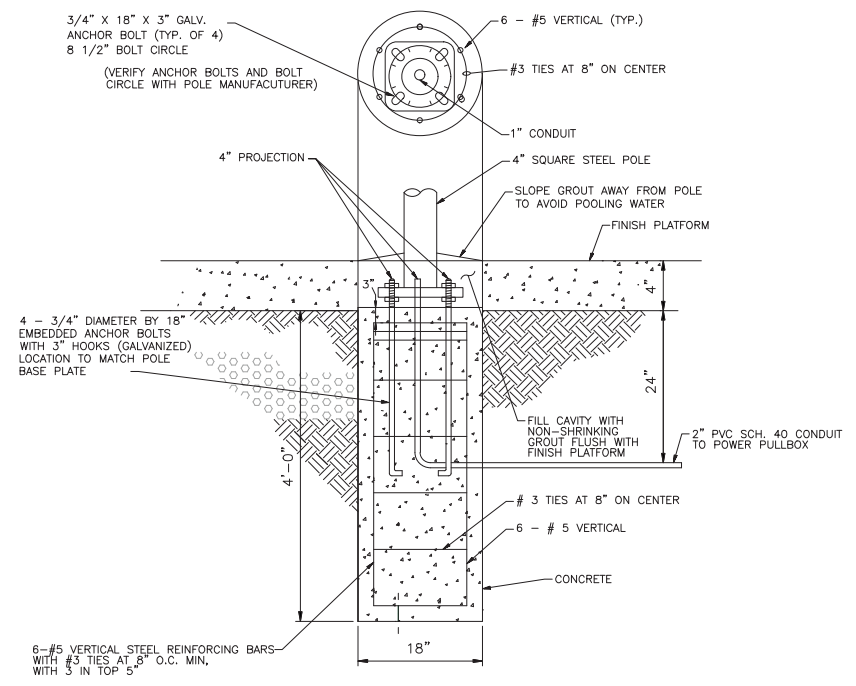
Submitted By: _____ Approved By: _____



PLATFORM LIGHT SECTION
SCALE: NTS



BASE PLATE DETAIL
SCALE: NTS



1 LIGHT POLE FOUNDATION
SCALE: NTS

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Designed By	A.JAIN
Drawn By	A.JAIN
Checked By	D.DUZAN
Approved By	Y.LIU

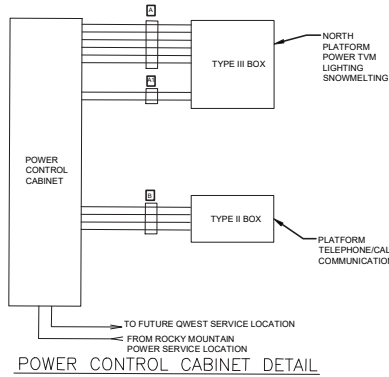
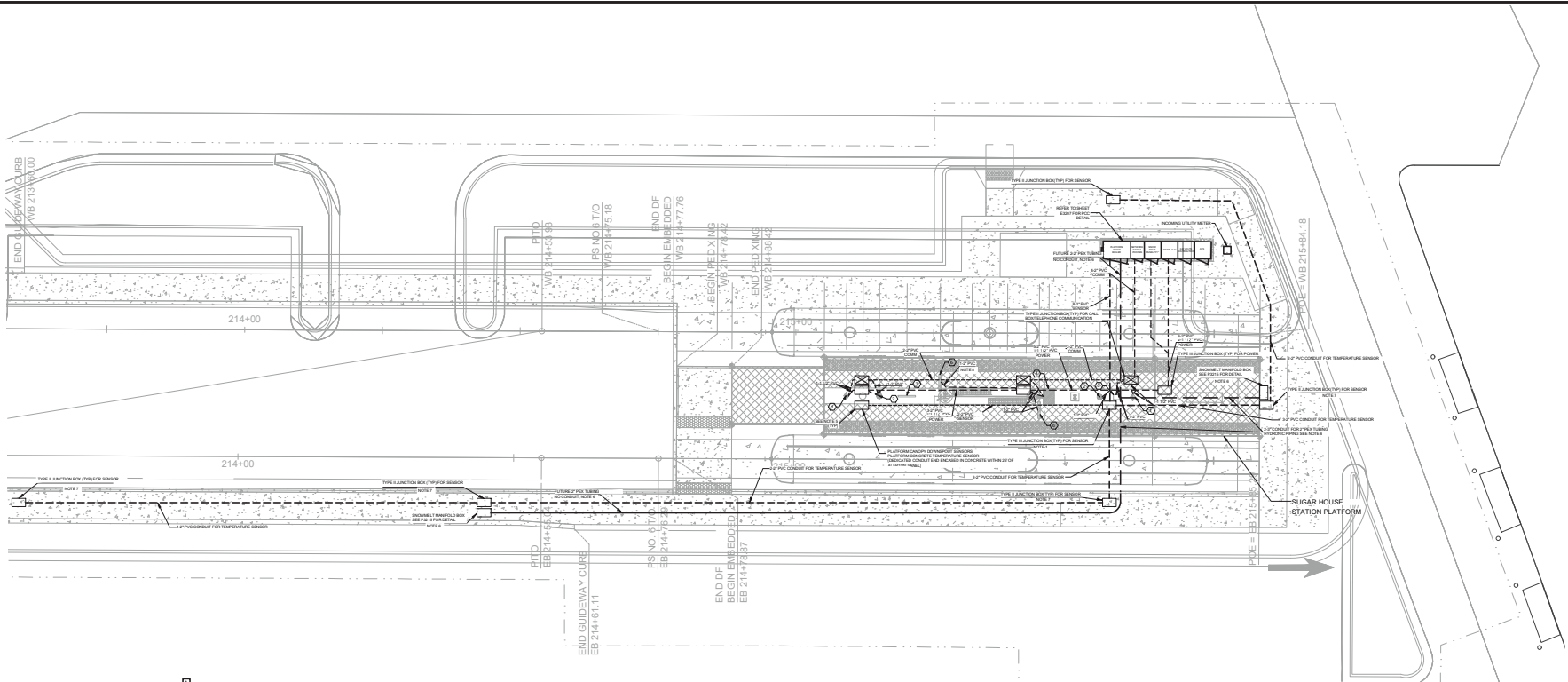
S-LINE EXTENSION PROJECT

**PLATFORM ELECTRICAL
PLATFORM LIGHT INSTALLATION AND
POLE FOUNDATION DETAILS**

State	NTS
CADD Filename	SL-C-E-0-210.dwg
Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	E0210
Sheet No.	

Submitted By: _____ Approved By: _____

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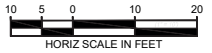


REFERENCE NOTES

- 1 CARD READER
- 2 LIGHT POLE
- 3 SIGN KIOSK
- 4 TICKET (FARE) VENDING MACHINE (TVM)
- 5 CALL BOX
- 6 PASSENGER INFORMATION SIGN

NOTES:

1. LOCATE UTA SYSTEM CONDUITS/JUNCTION BOXES ON TRACK SIDE OF PLATFORM AND POWER CONDUIT/JUNCTION BOXES ON OUTSIDE OF PLATFORM.
2. PULL BOXES AND CONDUITS ARE ILLUSTRATED SCHEMATICALLY. PLACE PULL BOXES OUT OF PLATFORM WALKING PATH.
3. INSTALL EMPTY 2\"/>



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REV	DATE	Description	



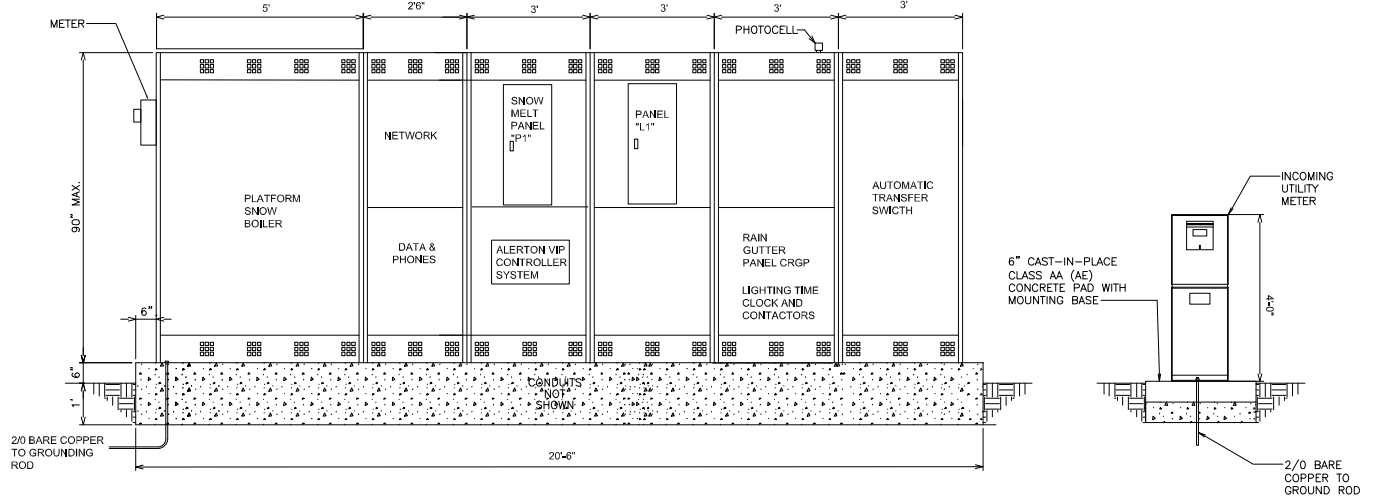
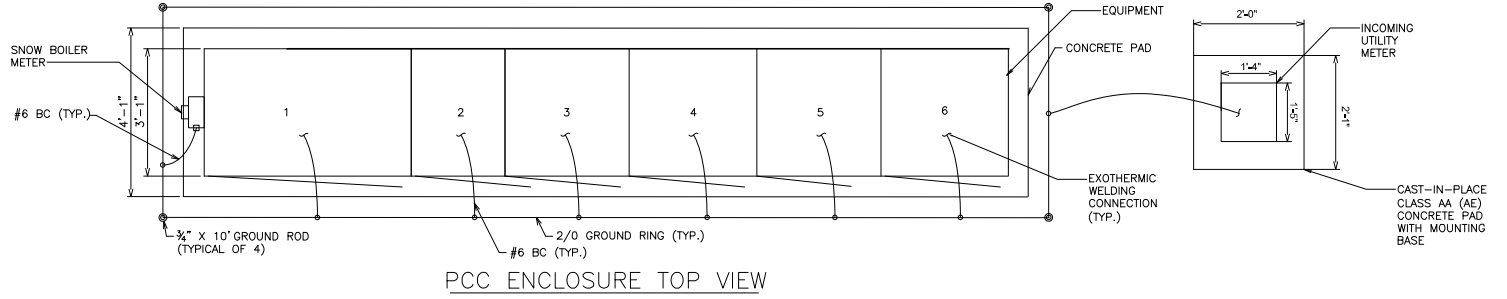
Designed By:	A.JAIN
Drawn By:	A.JAIN
Checked By:	D.DUZAN
Approved By:	Y.LIU

S-LINE EXTENSION PROJECT
SUGAR HOUSE STATION PLATFORM ELECTRICAL PLAN

Scale:	1"=10'
CADD Filename:	SL-C-E-1205.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	E1205
Sheet No.:	

Submitted By: _____ Approved By: _____

NOTE:
 1. STATION PLATFORM IS PROVIDED WITH HYDRONIC SNOW MELTER SYSTEM. CANOPY ROOF HAS HEAT TRACE SYSTEM.



- GROUNDING SYMBOLS**
- ⊙ GROUND ROD (3/4" X 10' COPPER COATED STEEL)
 - BOLTED GROUND CONNECTION (ABOVE GROUND)
 - GROUND CONDUCTOR (2/0 BARE COPPER)

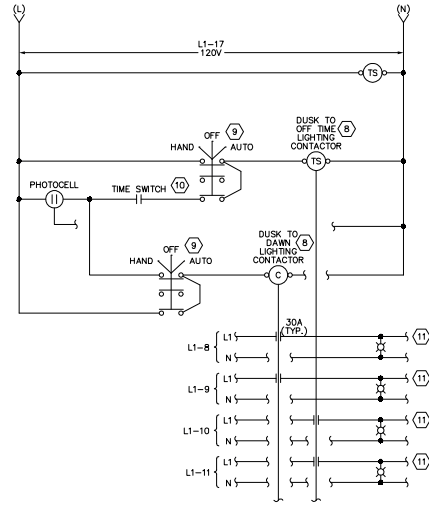
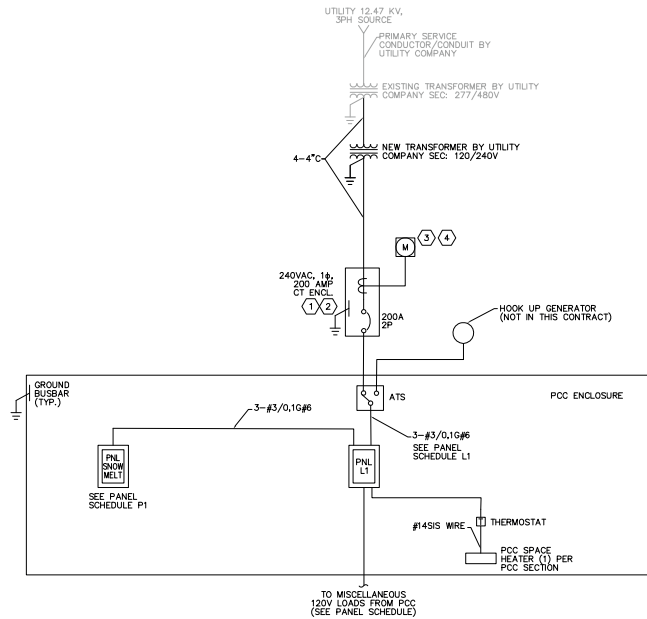
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REL	DATE	Description



Designed By: A.JAIN
Drawn By: A.JAIN
Checked By: D.DUZAN
Approved By: Y.LIU

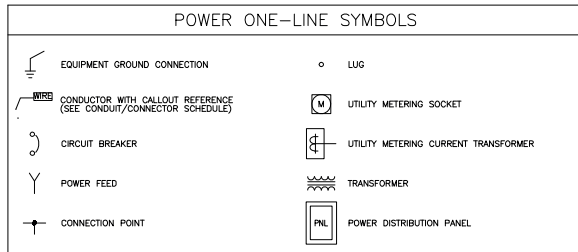
S-LINE EXTENSION PROJECT SUGAR HOUSE STATION PLATFORM PCC DETAILS	Scale: NTS
	CADD Filename: SL-C-E-3-207.dwg
	Submittal Date: 01-16-26
	UTA Contract No.: 24-03849
Drawing No.: E3207	Sheet No.:



- NOTES:**
- CONDUIT BY CONTRACTOR. CONDUCTORS BY ROCKY MOUNTAIN POWER. VERIFY SIZE AND QUANTITY WITH ROCKY MOUNTAIN POWER BEFORE INSTALLATION.
 - CONTRACTOR TO COORDINATE WITH MANUFACTURER THE WIRING TO BE PROVIDED AND INSTALLED BY PCC MANUFACTURER.
 - 120/240V, 200A, 1-PHASE, 3-WIRE METER DISTRIBUTION PANEL WITH BREAKERS AS SHOWN IN PANEL SCHEDULE. INSTALL AS PER UTILITY REQUIREMENTS, PANEL AND METER SOCKET PROVIDED AND INSTALLED BY CONTRACTOR, METER BY UTILITY COMPANY.
 - LABEL AS "MAIN SERVICE DISCONNECT".
 - NOT USED
 - NOT USED
 - NOT USED
 - PROVIDE CONTACTORS AS REQUIRED FOR CIRCUITS.
 - PROVIDE MAINTAINED CONTACT, THREE POSITION SELECTOR SWITCH WITH HAND-OFF-AUTO LEGEND PLATE. INSTALL SWITCH INSIDE PCC. PROVIDE APPROPRIATE MOUNTING BOX FOR SWITCH.
 - TIME SWITCH SHALL BE TORK E101P OR APPROVED EQUAL, 24 HOUR TIMER.
 - TO ADDITIONAL LIGHTS AS REQUIRED.

TYPICAL LIGHTING CONTROL DIAGRAM (IN PCC ENCLOSURE)

POWER DISTRIBUTION ONE-LINE DIAGRAM



REVISION	DATE	DESCRIPTION



Designed By:	A.JAIN
Drawn By:	A.JAIN
Checked By:	D.DUZAN
Approved By:	Y.LIU

S-LINE EXTENSION PROJECT

SUGAR HOUSE STATION PLATFORM ONE-LINE AND LIGHTING CONTROL DIAGRAMS

Scale:	NTS
CADD File Name:	SL-C-E-7-203.dwg
Submittal Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	E7203
Sheet No.:	

NOTES:

- LOADS SHOWN ON SNOW MELT PANEL ARE INDICATIVE. COORDINATE WITH SNOW MELT SYSTEM SUPPLIER FOR FINAL LOADS.
- STATION PLATFORM IS PROVIDED WITH HYDRONIC SNOW MELTER SYSTEM. CANOPY ROOF HAS HEAT TRACE SYSTEM.
- CIRCUIT BREAKER SUPPLYING POWER TO HEAT TRACING SHALL BE EQUIPPED WITH 30A MINIMUM GROUND-FAULT EQUIPMENT PROTECTION.

(Faint electrical panel schedule table)

(Faint electrical panel schedule table)

(Faint table with 3 rows and 2 columns)

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Submitted By: _____ Approved By: _____

Designed By: A.JAIN
Drawn By: A.JAIN
Checked By: D.DUZAN
Approved By: Y.LIU

S-LINE EXTENSION PROJECT

PLATFORM ELECTRICAL
SUGAR HOUSE STATION PLATFORM
PANEL SCHEDULE

State:	NTS
CADD Filename:	SL-C-E-204.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	E8204
Sheet No.:	

GENERAL NOTES, STANDARD SYMBOLS AND ABBREVIATIONS

GN GENERAL REQUIREMENTS:

- GN-1. THE DESIGN DRAWINGS ARE NOT TO BE CONSIDERED ALL INCLUSIVE, AND IT IS THE FIELD PERSONNEL'S RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH FOUNDATION INSTALLATION OR ANY OTHER CONSTRUCTION. ANY DISCREPANCIES FOUND BETWEEN THE DESIGN DRAWINGS AND THE ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD FOR REEVALUATION BEFORE PROCEEDING WITH WORK.
- GN-2. IN CASE OF CONFLICT BETWEEN DESIGN DRAWINGS AND SPECIFICATIONS, THE ENGINEER OF RECORD SHALL BE NOTIFIED TO OBTAIN CLARIFICATION PRIOR TO PROCEEDING WITH WORK.
- GN-3. ONLY USE DIMENSIONS INDICATED ON THE DESIGN DRAWINGS. DO NOT SCALE DESIGN DRAWINGS.
- GN-4. STRUCTURES HAVE BEEN DESIGNED TO BE STABLE IN THEIR FINAL STATE. CONTRACTOR TO ENGAGE A QUALIFIED ENGINEER FOR ALL TEMPORARY CONDITIONS. ERECTION AIDS, LIFTING DEVICES, ETC. ARE NOT SHOWN AND ARE THE RESPONSIBILITY OF THE ERECTOR'S ENGINEER OR AS APPROVED BY THE ENGINEER OF RECORD.

NOTES:

RETAINING WALL GENERAL NOTES:

- DESIGN SPECIFICATIONS:
 - UT BUILDING CODE, 2021
 - ACI 318-19
 - ASCE 7-16
 - AASHTO LRFD DESIGN SPECIFICATIONS FOR HIGHWAY BRIDGES, 2021
- COMPRESSIVE STRENGTH OF CONCRETE FOR RETAINING WALL AT 28 DAYS $F'_c=4000$ PSI.
- ALL SHOP DRAWINGS SUBMITTED FOR THE PROJECT SHALL BE IN U.S. CUSTOMARY UNITS.
- INSTALLATION OF RETAINING WALLS TO BE COORDINATED WITH EXISTING AND PROPOSED UTILITIES, DRAINAGE, ITS UTILITIES, AND WZTC.

FOUNDATION NOTES:

- THE FOLLOWING INFORMATION WAS USED IN THE DESIGN OF THE RETAINING WALLS:
 - A. FREE DRAINING BACKFILL:
 - UNIT WEIGHT = 120 LB/FT³
 - FRICTION ANGLE = 30-34
 - SEISMIC PEAK GROUND ACCELERATION (PGA) = 0.64G
 - B.
 - UNIT WEIGHT = 120 LB/FT³
 - FRICTION ANGLE = 32
 - BEARING RESISTANCE = 2500 LB/FT²
 - FRICTION FACTOR = 0.45
- DESIGN VALUES SHALL BE FIELD VERIFIED BY QUALIFIED GEOTECHNICAL ENGINEER.

SUBSTRUCTURE NOTES:

- ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A615 GRADE 60.
- BOTTOM OF EXCAVATION TO BE COMPACTED. ANY LOCALIZED UNSTABLE AREAS TO BE STABILIZED AS DIRECTED BY SITE ENGINEER.
- ALL CONSTRUCTION JOINTS SHALL BE PROVIDED WITH SHEAR KEYS AND WATERSTOPS.

CM. CONCRETE MATERIALS

- CM-1. CONCRETE MIX DESIGN, PLACEMENT, AND CURING SHALL BE IN ACCORDANCE WITH ACI 301.
- CM-2. USE A MINIMUM 28-DAY CONCRETE COMPRESSIVE STRENGTH OF 4,000 PSI UNLESS NOTED OTHERWISE.
- CM-3. FOR CONCRETE MIXTURES BEING USED FOR MASS CONCRETE, CONTRACTOR SHALL ADJUST CEMENTITIOUS MATERIAL CONTENT AND TAKE OTHER MEASURES TO MAINTAIN MAXIMUM TEMPERATURE IN CONCRETE, AS PER ACI 307.1.
- CM-4. CONCRETE SHALL BE CURED ACCORDING TO ACI 308.1. CONCRETE SHALL BE PROTECTED FROM LOSS OF MOISTURE FOR NOT LESS THAN SEVEN DAYS AFTER PLACEMENT AND WITH NECESSARY PROTECTION FOR COLD OR HOT WEATHER PLACEMENT.
- CM-5. THE USE OF CALCIUM CHLORIDE AND OTHER CHLORIDE-CONTAINING AGENTS IS PROHIBITED. THE USE OF RECYCLED CONCRETE IS PROHIBITED. PLACEMENT WITHIN/CONTACT BETWEEN ALUMINUM ITEMS (INCLUDING ALUMINUM CONDUIT) AND CONCRETE IS PROHIBITED.
- CM-6. ALL PERMANENTLY EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" CHAMFER UNLESS NOTED OTHERWISE.
- CM-7. CONSULT MECHANICAL AND ELECTRICAL DRAWINGS (FILED UNDER A SEPARATE APPLICATION) FOR OPENINGS AND EMBEDDED ITEMS SUCH AS FLOOR DRAIN SYSTEMS, CONDUIT, ETC.
- CM-8. OBSERVABLE CRACKS SHALL BE REPORTED TO THE ENGINEER OF RECORD TO DETERMINE CAUSE AND APPROPRIATE REPAIR PROCEDURE.
- CM-9. PERFORM CONCRETE TESTING IN ACCORDANCE WITH SPECIFICATIONS.

RE CONCRETE REINFORCEMENT

- RE-1. REINFORCING BAR STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615, GRADE 60 DEFORMED BARS UNLESS NOTED OTHERWISE. WELDED WIRE REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM A1064. MILL TEST CERTIFICATES SHALL BE PROVIDED IN ACCORDANCE WITH SPECIFICATIONS.
- RE-2. FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CRSI MSP-1 AND ACI 301.
- RE-3. CHAIRS, SPACERS, STANDEES, AND CARRIER BARS SHALL BE SIZED, SPACED, AND PLACED TO PROVIDE THE REQUIRED SPACING, ALIGNMENT, AND CLEARANCES OF REINFORCING. CARRIER BARS SHALL NOT BE USED AS PRIMARY REINFORCING BARS.
- RE-4. REINFORCING BAR LAP SPLICES NOT OTHERWISE INDICATED SHALL BE ACI CLASS B. WELDED WIRE REINFORCEMENT SHALL BE LAPPED ONE PANEL PLUS TWO INCHES MINIMUM.
- RE-5. WHERE A 90-DEGREE, 135-DEGREE, OR 180-DEGREE HOOK IS GRAPHICALLY INDICATED, PROVIDE CORRESPONDING ACI 318-14 STANDARD HOOKS UNLESS NOTED OTHERWISE.
- RE-6. DOWELS SHALL MATCH SIZE AND SPACING OF MAIN REINFORCEMENT UNLESS NOTED OTHERWISE.
- RE-7. REINFORCING STEEL SHALL BE SECURELY TIED IN PLACE.
- RE-8. ALL BENDING OF REINFORCEMENT SHALL BE DONE COLD.
- RE-9. PROVIDE MECHANICAL SPLICES FOR BARS LARGER THAN #11 OR WHERE INDICATED. ALL MECHANICAL SPLICES SHALL BE APPROVED BY THE ENGINEER OF RECORD.
- RE-10. PROVIDE MIN CONCRETE COVER OVER REINFORCING STEEL AS FOLLOWS UNLESS NOTED OTHERWISE:

CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	SPECIFIED COVER, IN.
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	#6 THROUGH #8 BARS	2
		#5 BAR, W31 OR D31 WIRE AND SMALLER	1-1/2
		#14 AND #18 BARS	1-1/2
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	SLABS, JOISTS, AND WALLS	#11 BAR AND SMALLER	1 1/2 UNO
	BEAMS, COLUMNS, PEDESTALS, AND TENSION TIES	PRIMARY REINFORCEMENT, STIRRUPS, TIES, AND HOOPS	1-1/2

RE-11. PROVIDE SPLICES, DEVELOPMENT, AND STANDARD HOOKS AS FOLLOWS UNLESS NOTED OTHERWISE:

REINFORCING STEEL SPLICE CHART FOR $F'_c = [4000 \text{ PSI}]$ - EPOXY COATED

BAR SIZE	SPLICE LENGTH (CLASS B)		DEVELOPMENT LENGTH		DEVELOPMENT LENGTH FOR STANDARD HOOKS	LENGTH OF STANDARD HOOKS
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS		
#3	29"	22"	22"	17"	7"	7"
#4	39"	30"	30"	23"	9"	9"
#5	48"	36"	37"	28"	11"	11"
#6	57"	44"	44"	34"	13"	14"
#7	85"	65"	65"	50"	15"	16"
#8	96"	74"	74"	57"	17"	18"
#9	108"	83"	83"	64"	19"	23"
#10	122"	94"	94"	72"	22"	25"
#11	135"	104"	104"	80"	24"	28"

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Submitted By: _____

Approved By: _____

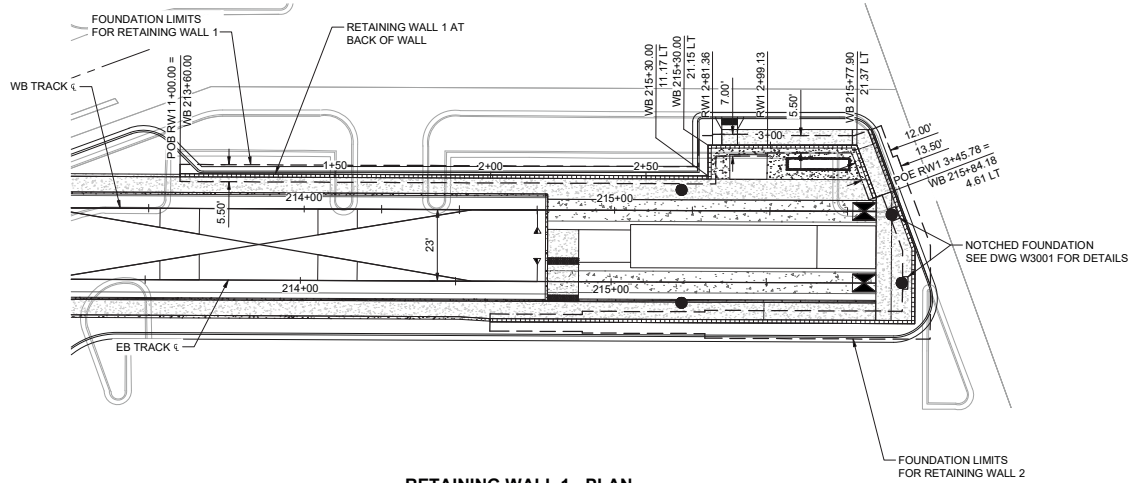
Designed By: A. ALY
Drawn By: S. JOSHI
Checked By: W. ABBASSI
Approved By: W. ABBASSI

S-LINE EXTENSION PROJECT

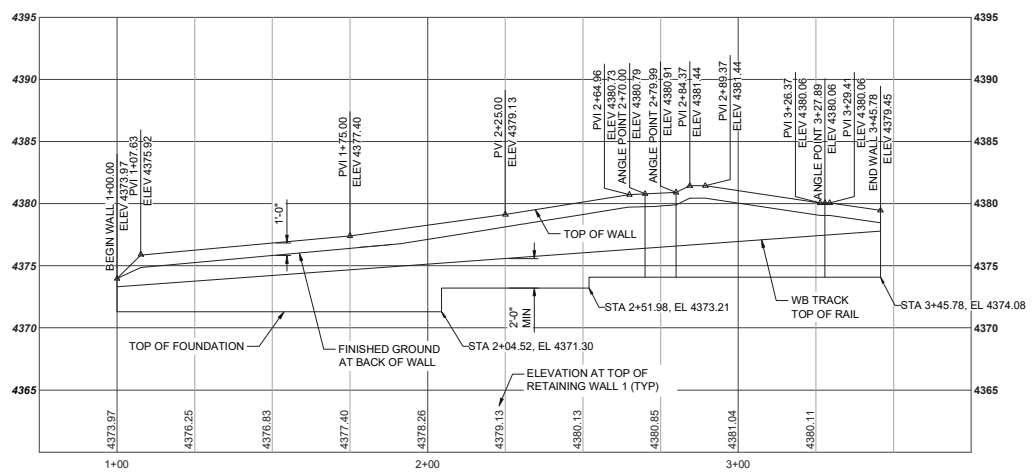
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GENERAL NOTES, STANDARD SYMBOLS AND ABBREVIATIONS

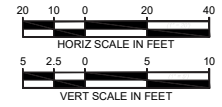
State: NTS
CADD Filename: SL-C-W-0-001.dwg
Submit Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: W0001
Sheet No.:



RETAINING WALL 1 - PLAN
SCALE: 1" = 20'



DEVELOPED ELEVATION
(HANDRAIL NOT SHOWN)



NOTES:

1. HANDRAILS ARE NOT SHOWN.
2. HANDRAILS ARE REQUIRED ON BOTH SIDES OF RAMP'S WITH RISE OF 6" OR MORE.
3. HANDRAIL HEIGHT SHALL ADHERE TO ADA STANDARDS 405.8 AND 505.
4. SEE SHEET C3005 FOR DETAILS.

1/9/2028			
REV	DATE	Description	



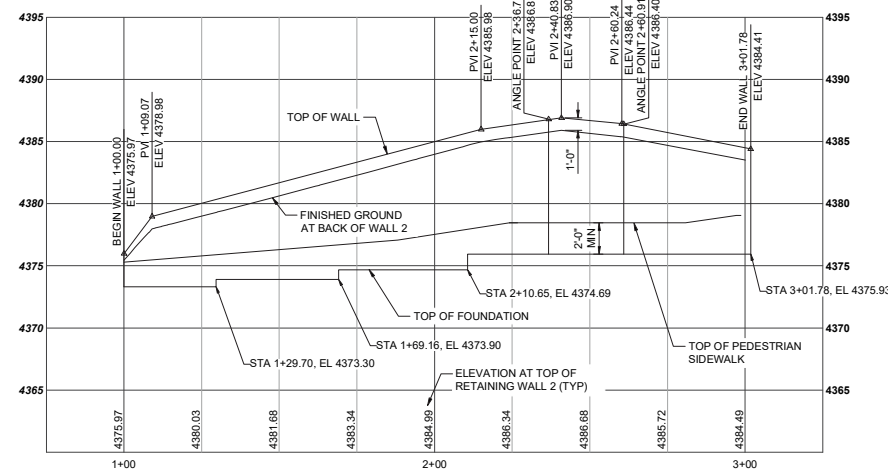
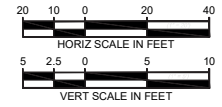
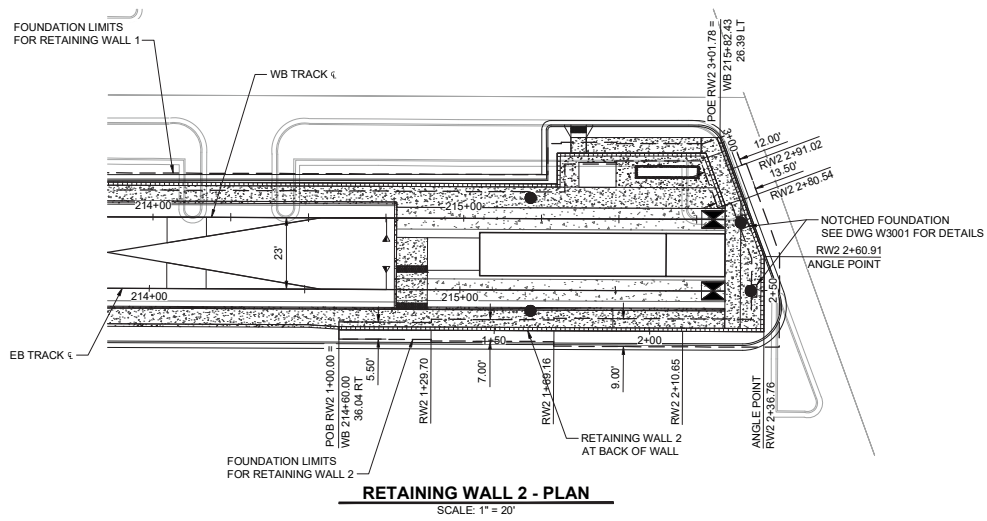
Designed By:	S. JOSHI
Drawn By:	S. JOSHI
Checked By:	W. ABBASSI
Approved By:	W. ABBASSI

S-LINE EXTENSION PROJECT

RETAINING WALL 1
SITUATION AND LAYOUT

State:	AS SHOWN
CADD Filename:	SL-C-W-1-201.dwg
Submittal Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	W1201
Sheet No.:	

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- NOTES:**
- HANDRAILS ARE NOT SHOWN.
 - HANDRAILS ARE REQUIRED ON BOTH SIDES OF RAMP'S WITH RISE OF 6" OR MORE.
 - HANDRAIL HEIGHT SHALL ADHERE TO ADA STANDARDS 405.8 AND 505.
 - SEE SHEET C3005 FOR DETAILS.

1/2/2023			
REV	DATE	Description	

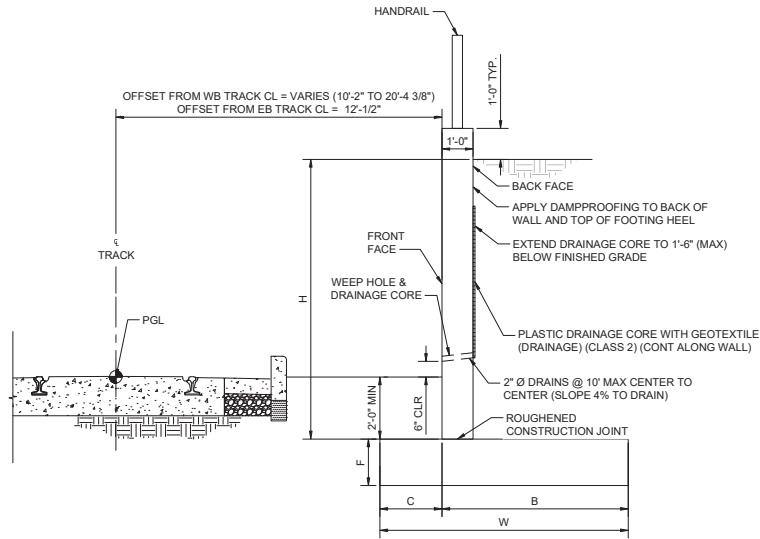


Designed By:	S. JOSHI
Drawn By:	S. JOSHI
Checked By:	W. ABBASSI
Approved By:	W. ABBASSI

S-LINE EXTENSION PROJECT

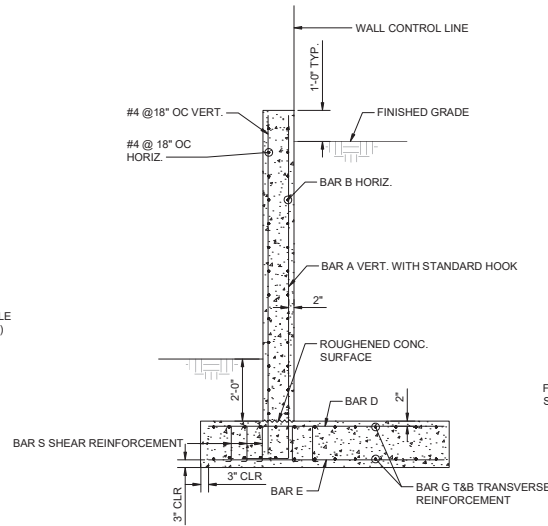
RETAINING WALL 2
SITUATION AND LAYOUT

Scale:	H: 1" = 20' V: 1" = 5'
CADD Filename:	SL-C-W-1-202.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	W1202
Sheet No.:	

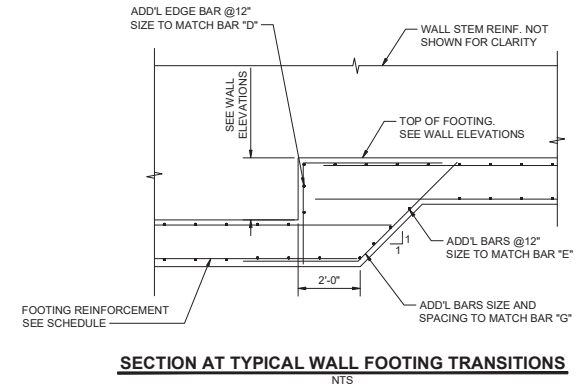


RETAINING WALL - DIMENSIONS
NTS

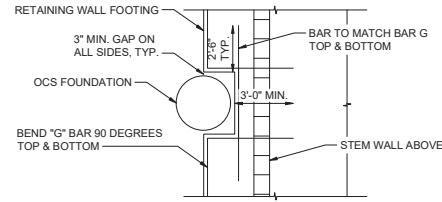
DESIGN H	W	B	C	F	H-VARIES		BARS A	BARS B	BARS D	BARS E	BAR G	BAR S BASE SHEAR REINF
					FROM	TO						
6'-0"	5'-6"	4'-0"	1'-6"	1'-4"	2'-1"	6'-0"	#5@12"	#4@9"	#5@10"	#5@10"	#4@12"	-
8'-0"	7'-0"	4'-6"	2'-6"	1'-6"	6'-0"	8'-0"	#6@12"	#4@12"	#6@12"	#6@12"	#4@12"	-
10'-0"	9'-0"	6'-0"	3'-0"	1'-6"	8'-0"	10'-0"	#6@9"	#4@12"	#6@12"	#6@12"	#4@12"	-
12'-0"	12'-0"	8'-6"	3'-6"	1'-6"	10'-0"	12'-0"	#7@6"	#5@12"	#7@12"	#7@12"	#5@12"	#4@7"



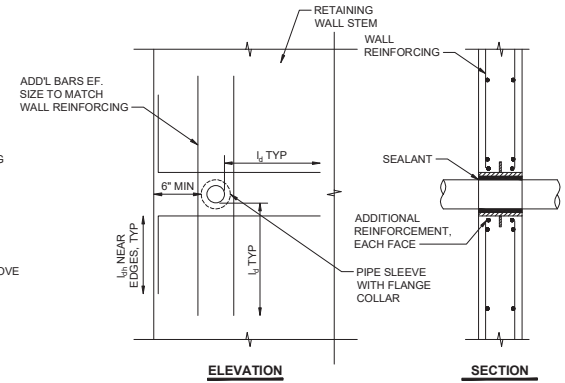
RETAINING WALL - REINFORCEMENT
NTS



SECTION AT TYPICAL WALL FOOTING TRANSITIONS
NTS



DETAIL AT FOUNDATION NOTCH
NTS



TYPICAL PENETRATION REINFORCING DETAIL THROUGH WALL
NTS

NOTES:
1. ALL REINFORCEMENT BARS SHALL BE EPOXY-COATED.

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Designed By:
A. ALY
Drawn By:
S. JOSHI
Checked By:
W. ABBASSI
Approved By:
W. ABBASSI

S-LINE EXTENSION PROJECT

WALL DETAILS

Scale: H: 1" = 20' V: 1" = 5'
CADD Filename: SL-C-W-3-001.dwg
Submit Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: W3001
Sheet No.:

GENERAL UTILITY NOTES:

1. UTILITIES TO BE INSTALLED PER APWA STANDARDS AND SPECIFICATIONS
2. EXISTING UTILITIES SHOWN IN PLANS AND PROFILES ARE BASED ON AS-BUILT INFORMATION, INFORMATION FROM 3RD PARTY FRANCHISEES, FIELD SURVEY DATA, AND TEST HOLE DATA. CONTRACTOR TO BE VERIFY LOCATIONS AND ELEVATIONS PRIOR TO WORK.
3. 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. ANY FUTURE WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.
4. REFER TO MAINTENANCE AGREEMENT BETWEEN UTA AND CITY IN CASE FUTURE MAINTENANCE OF UTILITIES TO REMAIN IS REQUIRED.
5. EXISTING BUILDINGS, DRIVEWAYS, UTILITY SERVICES, AND LANDSCAPING ON THE CRA PROPERTY ARE TO BE DEMOLISHED AND EXISTING WATER, SEWER, STORMWATER, AND GAS SERVICES ARE TO BE REMOVED BACK TO MAIN. UTILITIES ARE TO REMAIN IN PLACE UNTIL BUILDING DEMOLITION BEGINS.
6. PROTECT THE EXISTING JORDAN AND SALT LAKE CANAL IN PLACE. NO WORK IS ALLOWED WITHIN 33 LF OF CANAL CENTERLINE FROM MARCH 1ST TO OCTOBER 1ST.
7. 1" WATER METER AND VAULT(S) TO BE INSTALLED PER APWA STANDARD PLAN 521
8. 2" WATER METER AND VAULT(S) TO BE INSTALLED PER APWA STANDARD PLAN 522
9. BACKFLOW PREVENTER(S) TO BE INSTALLED PER APWA STANDARD PLAN 631.1
10. FIRE HYDRANT(S) TO BE INSTALLED PER APWA STANDARD PLAN 511
11. DUCTILE IRON PIPE WITH MECHANICAL JOINTS PER ANSI C110, C150, AND C51. PROVIDE PIPE IN 18' LENGTHS. MAXIMUM DEFLECTION OF 4 DEG 16' 48" (16" PER 18' LENGTH) PER AWWA M41, FIGURE 4-21
12. TRENCH FOR DIP AND HDPE PIPE TO BE PER AWWA M51, FIGURE 4-2. UNTREATED BASE COURSE FOR HAUNCHING AND BEDDING TO BE PER APWA PLAN 382
13. A MINIMUM OF 5' COVER TO TOP OF PIPE IS REQUIRED
14. ALL HDPE PIPE TO BE SDR11
15. ALL CASINGS TO INCLUDE POLYETHYLENE MODEL CI CASING SPACERS AT 5' ON CENTER SPACING FROM ADVANCE PRODUCTS AND SYSTEMS OR APPROVED EQUAL. SPACER SHOE HEIGHT SHOWN ON PLANS.
16. CARRIER PIPE IS TO BE CENTERED WITHIN CASING
17. NO ANNULAR FILL WITHIN CASINGS
18. CASINGS SHALL INCLUDE AMCE MOLDED CONE END SEALS FROM ADVANCE PRODUCTS AND SYSTEMS OR APPROVED EQUAL

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Submitted By: _____

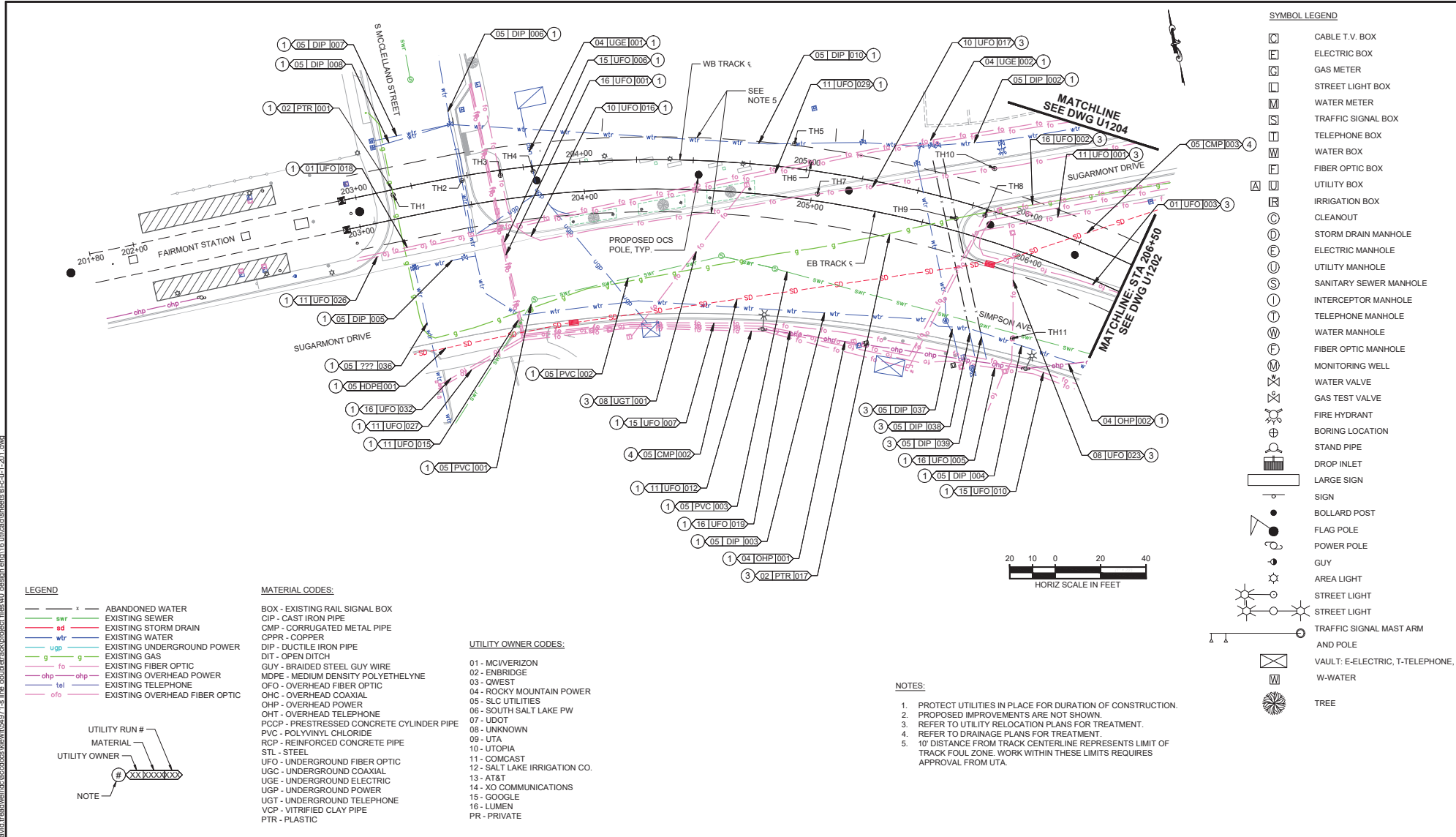
Approved By: _____

Designed By: D. TREADWELL
Drawn By: D. TREADWELL
Checked By: R. NANNENGA
Approved By: D. TREADWELL

S-LINE EXTENSION PROJECT

UTILITIES
GENERAL NOTES

State	NTS
CADD Filename	SL-C-U-0-100.dwg
Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	U0100
Sheet No.	



SYMBOL LEGEND

- CABLE T.V. BOX
- ELECTRIC BOX
- GAS METER
- STREET LIGHT BOX
- WATER METER
- TRAFFIC SIGNAL BOX
- TELEPHONE BOX
- WATER BOX
- FIBER OPTIC BOX
- UTILITY BOX
- IRRIGATION BOX
- CLEANOUT
- STORM DRAIN MANHOLE
- ELECTRIC MANHOLE
- UTILITY MANHOLE
- SANITARY SEWER MANHOLE
- INTERCEPTOR MANHOLE
- TELEPHONE MANHOLE
- WATER MANHOLE
- FIBER OPTIC MANHOLE
- MONITORING WELL
- WATER VALVE
- GAS TEST VALVE
- FIRE HYDRANT
- BORING LOCATION
- STAND PIPE
- DROP INLET
- LARGE SIGN
- SIGN
- BOLLARD POST
- FLAG POLE
- POWER POLE
- GUY
- AREA LIGHT
- STREET LIGHT
- STREET LIGHT
- TRAFFIC SIGNAL MAST ARM
- AND POLE
- VAULT: E-ELECTRIC, T-TELEPHONE
- W-WATER
- TREE

LEGEND

- x — ABANDONED WATER
- swr — EXISTING SEWER
- sd — EXISTING STORM DRAIN
- wtr — EXISTING WATER
- ugp — EXISTING UNDERGROUND POWER
- g — EXISTING GAS
- fo — EXISTING FIBER OPTIC
- ohp — EXISTING OVERHEAD POWER
- tel — EXISTING TELEPHONE
- ofo — EXISTING OVERHEAD FIBER OPTIC

MATERIAL CODES:

- BOX - EXISTING RAIL SIGNAL BOX
- CIP - CAST IRON PIPE
- CMP - CORRUGATED METAL PIPE
- CPPR - COPPER
- DIP - DUCTILE IRON PIPE
- DIT - OPEN DITCH
- GUY - BRAIDED STEEL GUY WIRE
- MDPE - MEDIUM DENSITY POLYETHYLENE
- OFO - OVERHEAD FIBER OPTIC
- OHC - OVERHEAD COAXIAL
- OHP - OVERHEAD POWER
- OHT - OVERHEAD TELEPHONE
- PCCP - PRESTRESSED CONCRETE CYLINDER PIPE
- PVC - POLYVINYL CHLORIDE
- RCP - REINFORCED CONCRETE PIPE
- STL - STEEL
- UFO - UNDERGROUND FIBER OPTIC
- UGC - UNDERGROUND COAXIAL
- UGE - UNDERGROUND ELECTRIC
- UGP - UNDERGROUND POWER
- UGT - UNDERGROUND TELEPHONE
- VCP - VITRIFIED CLAY PIPE
- PTR - PLASTIC

UTILITY OWNER CODES:

- 01 - MCIVERIZON
- 02 - ENBRIDGE
- 03 - QWEST
- 04 - ROCKY MOUNTAIN POWER
- 05 - SLC UTILITIES
- 06 - SOUTH SALT LAKE PW
- 07 - UDOT
- 08 - UNKNOWN
- 09 - UTA
- 10 - UTOPIA
- 11 - COMCAST
- 12 - SALT LAKE IRRIGATION CO.
- 13 - AT&T
- 14 - XO COMMUNICATIONS
- 15 - GOOGLE
- 16 - LUMEN
- PR - PRIVATE

- NOTES:**
1. PROTECT UTILITIES IN PLACE FOR DURATION OF CONSTRUCTION.
 2. PROPOSED IMPROVEMENTS ARE NOT SHOWN.
 3. REFER TO UTILITY RELOCATION PLANS FOR TREATMENT.
 4. REFER TO DRAINAGE PLANS FOR TREATMENT.
 5. 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.



REV	DATE	Description



Designed By:
D. TREADWELL

Drawn By:
T. COVEYOU

Checked By:
F. NANNENGA

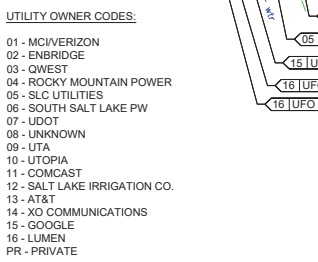
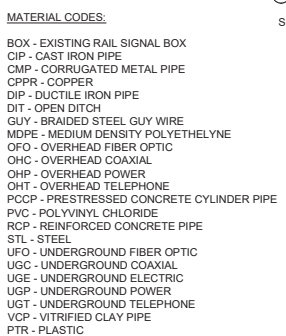
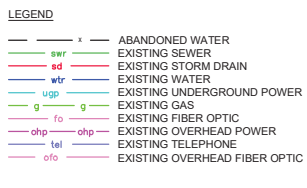
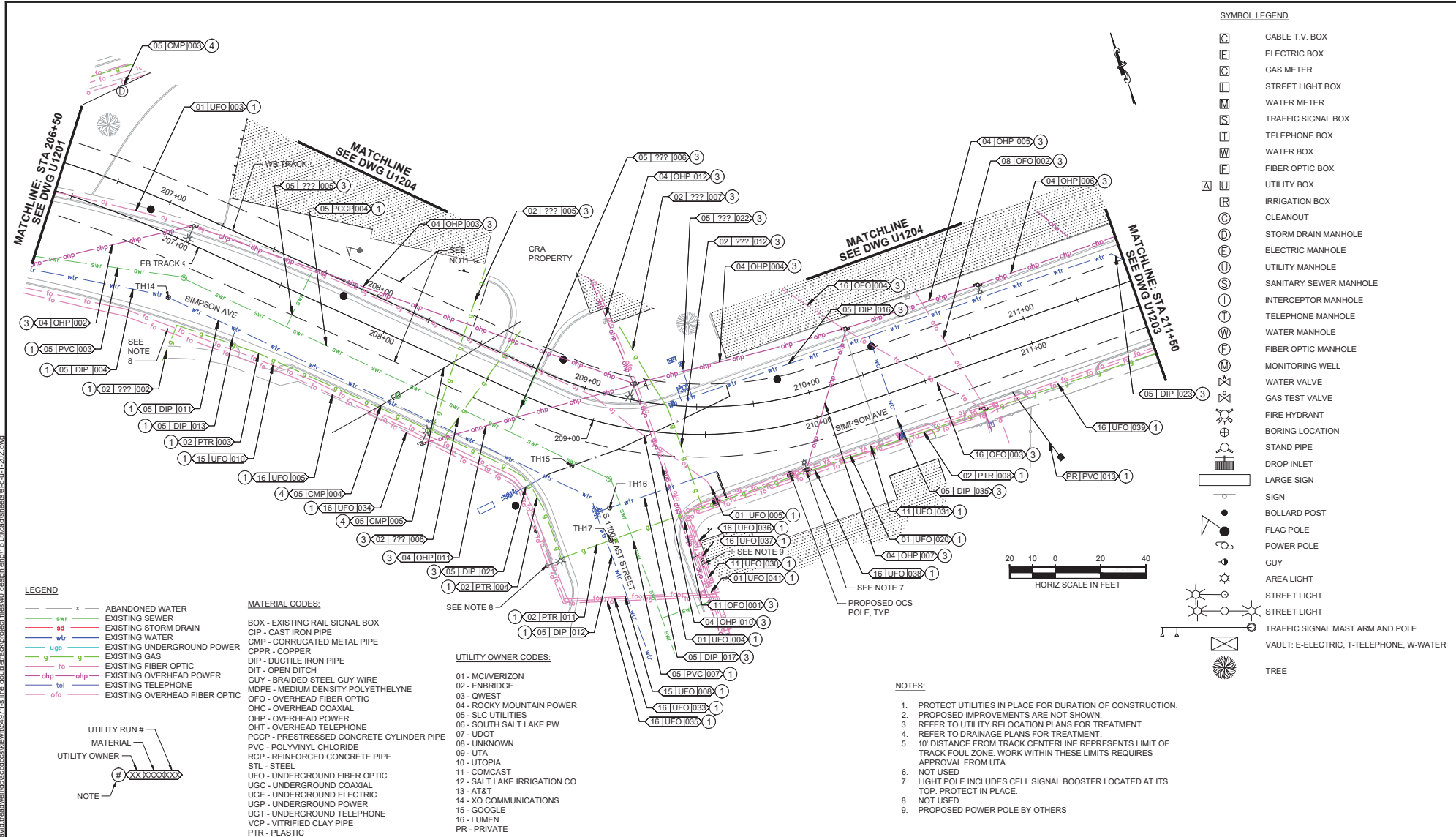
Approved By:
A. DIGIROLAMO

S-LINE EXTENSION PROJECT

EXISTING UTILITY PLAN
WB STA 201+80.27 TO WB STA 206+50

Scale	1" = 20'
CADD Filename	SL-U-1-201.dwg
Submitted Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	U1201
Sheet No.	

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- NOTES:**
1. PROTECT UTILITIES IN PLACE FOR DURATION OF CONSTRUCTION.
 2. PROPOSED IMPROVEMENTS ARE NOT SHOWN.
 3. REFER TO UTILITY RELOCATION PLANS FOR TREATMENT.
 4. REFER TO DRAINAGE PLANS FOR TREATMENT.
 5. 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.
 6. NOT USED
 7. LIGHT POLE INCLUDES CELL SIGNAL BOOSTER LOCATED AT ITS TOP. PROTECT IN PLACE.
 8. NOT USED
 9. PROPOSED POWER POLE BY OTHERS



Designed By
D. TREADWELL

Drawn By
T. COVEYOU

Checked By
F. NANNENGA

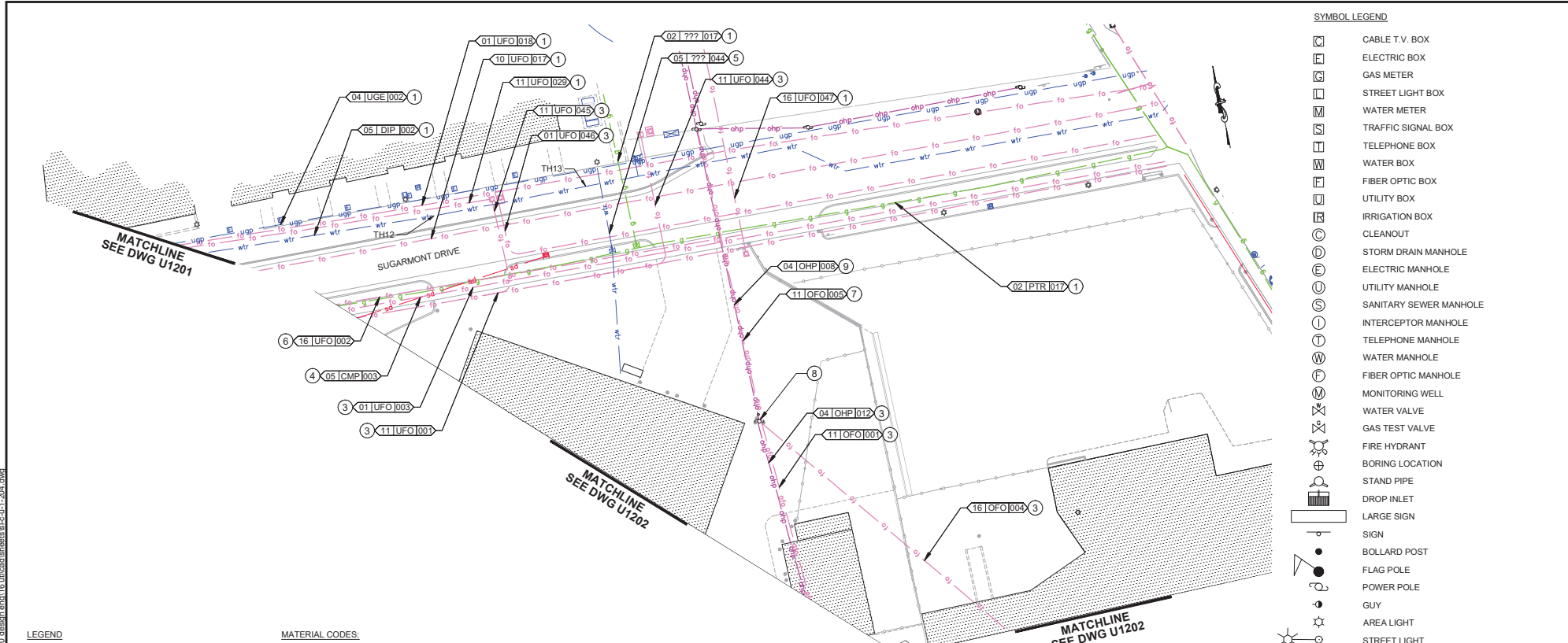
Approved By
A. DIGIROLAMO

S-LINE EXTENSION PROJECT

EXISTING UTILITY PLAN
WB STA 206+50 TO WB STA 211+50

Scale	1" = 20'
CADD Filename	SL-C-U-1-202.dwg
Submitted Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	U1202
Sheet No.	

1/22/2026



SYMBOL LEGEND

- ☐ CABLE T.V. BOX
- ☐ ELECTRIC BOX
- G GAS METER
- ☐ STREET LIGHT BOX
- ☐ WATER METER
- S TRAFFIC SIGNAL BOX
- ☐ TELEPHONE BOX
- ☐ WATER BOX
- ☐ FIBER OPTIC BOX
- ☐ UTILITY BOX
- ☐ IRRIGATION BOX
- CLEANOUT
- STORM DRAIN MANHOLE
- ELECTRIC MANHOLE
- UTILITY MANHOLE
- SANITARY SEWER MANHOLE
- INTERCEPTOR MANHOLE
- TELEPHONE MANHOLE
- WATER MANHOLE
- FIBER OPTIC MANHOLE
- MONITORING WELL
- WATER VALVE
- GAS TEST VALVE
- FIRE HYDRANT
- BORING LOCATION
- STAND PIPE
- DROP INLET
- ☒ LARGE SIGN
- SIGN
- BOLLARD POST
- FLAG POLE
- POWER POLE
- GUY
- AREA LIGHT
- ☀ STREET LIGHT
- ☀ STREET LIGHT
- ⊥ TRAFFIC SIGNAL MAST ARM AND POLE
- ☒ VAULT: E-ELECTRIC, T-TELEPHONE, W-WATER
- TREE

LEGEND

- x- ABANDONED WATER
- sw- EXISTING SEWER
- sd- EXISTING STORM DRAIN
- wtr- EXISTING WATER
- ugp- EXISTING UNDERGROUND POWER
- g- EXISTING GAS
- fo- EXISTING FIBER OPTIC
- chp- EXISTING OVERHEAD POWER
- tel- EXISTING TELEPHONE
- of- EXISTING OVERHEAD FIBER OPTIC

MATERIAL CODES:

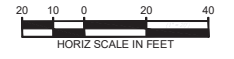
- BOX - EXISTING RAIL SIGNAL BOX
- CIP - CAST IRON PIPE
- CMP - CORRUGATED METAL PIPE
- CPBR - COPPER
- DIP - DUCTILE IRON PIPE
- DIT - OPEN DITCH
- GUY - BRAIDED STEEL GUY WIRE
- MDPE - MEDIUM DENSITY POLYETHYLENE
- OFO - OVERHEAD FIBER OPTIC
- OHC - OVERHEAD COAXIAL
- OHP - OVERHEAD POWER
- OHT - OVERHEAD TELEPHONE
- PCCP - PRESTRESSED CONCRETE CYLINDER PIPE
- PVC - POLYVINYL CHLORIDE
- RCP - REINFORCED CONCRETE PIPE
- STL - STEEL
- UFO - UNDERGROUND FIBER OPTIC
- UGC - UNDERGROUND COAXIAL
- UGE - UNDERGROUND ELECTRIC
- UGP - UNDERGROUND POWER
- UGT - UNDERGROUND TELEPHONE
- VCP - VITRIFIED CLAY PIPE
- PTR - PLASTIC

UTILITY OWNER CODES:

- 01 - MCIVERIZON
- 02 - ENBRIDGE
- 03 - QWEST
- 04 - ROCKY MOUNTAIN POWER
- 05 - SLC UTILITIES
- 06 - SOUTH SALT LAKE PW
- 07 - UDOT
- 08 - UNKNOWN
- 09 - UTA
- 10 - UT/PIA
- 11 - COMCAST
- 12 - SALT LAKE IRRIGATION CO.
- 13 - AT&T
- 14 - XO COMMUNICATIONS
- 15 - GOOGLE
- 16 - LUMEN
- PR - PRIVATE

NOTES:

1. PROTECT UTILITIES IN PLACE FOR DURATION OF CONSTRUCTION.
2. PROPOSED IMPROVEMENTS ARE NOT SHOWN.
3. SEE Y1241 FOR SHARED RMP AND FIBER OPTIC TRENCH (NOT SHOWN)
4. REFER TO DRAINAGE PLANS FOR TREATMENT.
5. EXISTING BUILDINGS, DRIVEWAYS, UTILITY SERVICES, LANDSCAPING ON THE CRA PROPERTY ARE TO BE DEMOLISHED AND EXISTING WATER, SEWER, STORMWATER, AND GAS SERVICES WILL BE REMOVED BACK TO MAIN. UTILITIES TO REMAIN IN PLACE UNTIL BUILDING DEMOLITION BEGINS.
6. REFER TO UTILITY RELOCATION PLANS FOR TREATMENT.
7. FIBER OPTIC TO BE REMOVED BY COMCAST.
8. REMOVE EXISTING POLE.
9. OVERHEAD POWER TO BE REMOVED BY RMP.



REV	DATE	Description															



Designed By D. TREADWELL
Drawn By T. COVEYOU
Checked By F. NANNENGA
Approved By A. DIGIRIOLAMO

S-LINE EXTENSION PROJECT

**EXISTING UTILITY PLAN
SUGARMONT AVENUE AND
CRA PROPERTIES**

Scale	1" = 20'
CADD Filename	SL-C-U-1-204.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	U1204
Sheet No.	

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UTILITY ID#	UTILITY TYPE	OWNER ID#	UTILITY OWNER	UTILITY RUN MATERIAL	UTILITY RUN#	IMPACT PROBABILITY	SIZE	SHEET	EX. CASING?	EX. CASING SIZE	EX. CASING MATERIAL	DESCRIPTION	ASCE Quality Level
16-UFO-001	FIBER OPTIC	16	LUMEN	COPPER	001	HIGH		U1201				PROTECT IN PLACE	QLD
16-UFO-002	FIBER OPTIC	16	LUMEN	PLASTIC	002	HIGH	1.75"	U1201				TEST HOLE #8. RELOCATE.	QLD
15-UFO-006	FIBER OPTIC	15	GOOGLE	UNDERGROUND FIBER OPTIC	006	LOW		U1201				PROTECT IN PLACE	QLC
15-UFO-007	FIBER OPTIC	15	GOOGLE	UNDERGROUND FIBER OPTIC	007	LOW		U1201				PROTECT IN PLACE	QLC
11-UFO-012	FIBER OPTIC	11	COMCAST	UNDERGROUND FIBER OPTIC	012			U1201				PROTECT IN PLACE	QLD
11-UFO-015	FIBER OPTIC	11	COMCAST	UNDERGROUND FIBER OPTIC	015	LOW		U1201				PROTECT IN PLACE	QLD
10-UFO-016	FIBER OPTIC	10	UTOPIA	STEEL	016	LOW	6"	U1201				TEST HOLE #3; TEST HOLE #7. PROTECT IN PLACE	QLC
10-UFO-017	FIBER OPTIC	10	UTOPIA	PLASTIC	017	LOW	2"	U1201				TEST HOLE #10. PROTECT IN PLACE	QLC
01-UFO-018	FIBER OPTIC	01	MCIVERIZON	UNDERGROUND FIBER OPTIC	018	LOW		U1201				TEST HOLE #6. PROTECT IN PLACE	QLC
16-UFO-019	FIBER OPTIC	16	LUMEN	UNDERGROUND FIBER OPTIC	019	LOW		U1201				PROTECT IN PLACE	QLC
08-UFO-023	FIBER OPTIC	08	UNKNOWN	PLASTIC	023	HIGH		U1201				TEST HOLE #11. RELOCATE.	QLC
11-UFO-026	FIBER OPTIC	11	COMCAST	UNDERGROUND FIBER OPTIC	026	LOW		U1201				PROTECT IN PLACE	QLD
11-UFO-027	FIBER OPTIC	11	COMCAST	UNDERGROUND FIBER OPTIC	027	LOW		U1201				PROTECT IN PLACE	QLD
11-UFO-028	FIBER OPTIC	11	COMCAST	UNDERGROUND FIBER OPTIC	028	LOW		U1201				PROTECT IN PLACE	QLD
11-UFO-029	FIBER OPTIC	11	COMCAST	UNDERGROUND FIBER OPTIC	029	LOW		U1201				PROTECT IN PLACE	QLD
16-UFO-032	FIBER OPTIC	16	LUMEN	UNDERGROUND FIBER OPTIC	032	LOW		U1201				PROTECT IN PLACE	QLD
02-PTR-001	GAS	02	ENBRIDGE	PLASTIC	001	HIGH	4"	U1201				TEST HOLE #1. PROTECT IN PLACE	QLC
02-PTR-017	GAS	02	ENBRIDGE	PLASTIC	017	HIGH	5"	U1201				TEST HOLE #6. CASING PROPOSED	QLB
04-OHP-001	OVERHEAD POWER	04	ROCKY MOUNTAIN POWER	OVERHEAD POWER	001	LOW		U1201				EAST POLE TO BE RELOCATED BY OTHERS	QLB
05-PVC-001	SEWER	05	SLC UTILITIES	POLYVINYL CHLORIDE	001	LOW	8"	U1201				PROTECT IN PLACE	QLC
05-PVC-002	SEWER	05	SLC UTILITIES	POLYVINYL CHLORIDE	002	LOW	8"	U1201				PROTECT IN PLACE	QLC
05-HDPE-001	STORM DRAIN	05	SLC UTILITIES	HIGH DENSITY POLYETHYLENE	001	LOW	10"	U1201				PROTECT IN PLACE	QLD
05-CMP-002	STORM DRAIN	05	SLC UTILITIES	CORRUGATED METAL	002	HIGH	12"	U1201				CONNECT TO NEW MANHOLE	QLC
08-UGT-001	TELEPHONE	08	UNKNOWN	UNDERGROUND TELEPHONE	001	LOW		U1201				BOX TO BE RELOCATED BY OTHERS	QLC
04-UGE-001	UNDERGROUND ELECTRIC	04	ROCKY MOUNTAIN POWER	UNDERGROUND ELECTRIC	001	LOW	20"X7"	U1201				TEST HOLE #4. PROTECT IN PLACE	QLC
04-UGE-002	UNDERGROUND ELECTRIC	04	ROCKY MOUNTAIN POWER	UNDERGROUND ELECTRIC	002	LOW	10"X6"	U1201				TEST HOLE #6. 4" X 6" CONDUIT. PROTECT IN PLACE	QLC
05-DIP-002	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	002	LOW	12"	U1201				PROTECT IN PLACE	QLD
05-DIP-003	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	003	HIGH	12"	U1201				PROTECT IN PLACE	QLD
05-DIP-005	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	005	LOW		U1201				PROTECT IN PLACE	QLB
05-DIP-006	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	006	HIGH	12"	U1201	YES	20"	METAL	TEST HOLE #2. PROTECT IN PLACE.	QLB
05-DIP-007	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	007	LOW		U1201				PROTECT IN PLACE	QLC
05-DIP-008	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	008	LOW		U1201				PROTECT IN PLACE	QLC
05-DIP-010	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	010	HIGH	12"	U1201				TEST HOLE #5. RELOCATE. ASSUMED MATERIAL	QLB
05-??-036	WATER	05	SLC UTILITIES	UNKNOWN	036	LOW	UNKNOWN	U1201				PROTECT IN PLACE	QLD
05-DIP-037	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	037	HIGH	3"	U1201				CONNECT TO EXISTING MAIN	QLD
05-DIP-038	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	038	HIGH	4"	U1201				PORTION SOUTH OF MAIN TO BE PROTECTED	QLD
05-DIP-039	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	039	HIGH	6"	U1201				PORTION SOUTH OF MAIN TO BE PROTECTED	QLD
01-UFO-003	FIBER OPTIC	01	MCIVERIZON	UNDERGROUND FIBER OPTIC	003	HIGH		U1201, U1202				RELOCATE	QLC
16-UFO-005	FIBER OPTIC	16	LUMEN	UNDERGROUND FIBER OPTIC	005	HIGH		U1201, U1202				PROTECT IN PLACE	QLD
15-UFO-010	FIBER OPTIC	15	GOOGLE	UNDERGROUND FIBER OPTIC	010	LOW		U1201, U1202				PROTECT IN PLACE	QLD
04-OHP-002	OVERHEAD POWER	04	ROCKY MOUNTAIN POWER	OVERHEAD POWER	002	HIGH		U1201, U1202				NORTH POLE AND WIRE TO BE RELOCATED BY OTHERS	QLB
05-PVC-003	SEWER	05	SLC UTILITIES	POLYVINYL CHLORIDE	003	LOW	8"	U1201, U1202				PROTECT IN PLACE	QLC
05-CMP-003	STORM DRAIN	05	SLC UTILITIES	CORRUGATED METAL	003	HIGH	12"	U1201, U1202				CONNECT TO NEW MANHOLE	QLC
05-DIP-004	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	004	LOW	12"	U1201, U1202				PROTECT IN PLACE	QLD
01-UFO-004	FIBER OPTIC	01	MCIVERIZON	UNDERGROUND FIBER OPTIC	004	HIGH		U1202				RELOCATE	QLC
15-UFO-008	FIBER OPTIC	15	GOOGLE	UNDERGROUND FIBER OPTIC	008	LOW		U1202				PROTECT IN PLACE	QLC

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REV	DATE	Description	



Designed By:
D. TREADWELL

Drawn By:
T. COVEYOU

Checked By:
F. NANNENGA

Approved By:
D. TREADWELL

S-LINE EXTENSION PROJECT

EXISTING UTILITY MATRIX
SHEET 1 OF 4

State	NTS
CADD Filename:	SL-C-U-1-205.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	U1205
Sheet No.	

Submitted By: _____ Approved By: _____

Table with columns: UTILITY ID#, UTILITY TYPE, OWNER ID#, UTILITY OWNER, UTILITY RUN MATERIAL, UTILITY RUN#, IMPACT PROBABILITY, SIZE, SHEET, EX. CASING?, EX. CASING SIZE, EX. CASING MATERIAL, DESCRIPTION, ASCE Quality Level. Includes rows for FIBER OPTIC, GAS, OVERHEAD FIBER OPTIC, OVERHEAD POWER, SEWER, STORM DRAIN, and WATER.

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Revision table with columns: REV, DATE, Description. Includes revision symbols and empty rows for tracking.



Designed By: D. TREADWELL
Drawn By: T. COVEYOU
Checked By: F. NANNENGA
Approved By: D. TREADWELL

S-LINE EXTENSION PROJECT

EXISTING UTILITY MATRIX SHEET 2 OF 4

State: NTS
CADD Filename: SL-C-U-1-206.dwg
Submitted Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: U1206
Sheet No.: U1206

UTILITY ID#	UTILITY TYPE	OWNER ID#	UTILITY OWNER	UTILITY RUN MATERIAL	UTILITY RUN#	IMPACT PROBABILITY	SIZE	SHEET	EX. CASING?	EX. CASING SIZE	EX. CASING MATERIAL	DESCRIPTION	ASCE Quality Level
05-RCP-006	STORM DRAIN	05	SLC UTILITIES	REINFORCED CONCRETE PIPE	006	LOW	48"	U1203				JORDAN AND SALT LAKE CITY CANAL: PROTECT IN PLACE	QLC
05-???-007	STORM DRAIN	05	SLC UTILITIES	UNKNOWN	007	LOW	UNKNOWN	U1203				PROTECT IN PLACE	QLC
05-RCP-008	STORM DRAIN	05	SLC UTILITIES	REINFORCED CONCRETE PIPE	008	LOW	15"	U1203				PROTECT IN PLACE	QLD
05-RCP-009	STORM DRAIN	05	SLC UTILITIES	REINFORCED CONCRETE PIPE	009	LOW	15"	U1203				PROTECT IN PLACE	QLD
05-RCP-010	STORM DRAIN	05	SLC UTILITIES	REINFORCED CONCRETE PIPE	010	LOW	15"	U1203				PROTECT IN PLACE	QLD
05-RCP-011	STORM DRAIN	05	SLC UTILITIES	REINFORCED CONCRETE PIPE	011	HIGH	15"	U1203				ABANDON	QLD
PR-???-012	STORM DRAIN	05	SLC UTILITIES	UNKNOWN	012	HIGH	UNKNOWN	U1203				ABANDON	QLD
PR-RCP-013	STORM DRAIN	PR	PRIVATE	REINFORCED CONCRETE PIPE	013	LOW	UNKNOWN	U1203				PROTECT IN PLACE	QLC
PR-RCP-014	STORM DRAIN	PR	PRIVATE	REINFORCED CONCRETE PIPE	014	LOW	UNKNOWN	U1203				PROTECT IN PLACE	QLC
PR-RCP-015	STORM DRAIN	PR	PRIVATE	REINFORCED CONCRETE PIPE	015	LOW	UNKNOWN	U1203				PROTECT IN PLACE	QLC
PR-???-016	STORM DRAIN	PR	PRIVATE	UNKNOWN	016	HIGH	12"	U1203				REMOVE	QLC
PR-UGE-003	UNDERGROUND ELECTRIC	PR	PRIVATE	UNKNOWN	003	UNKNOWN		U1203				SERVICE TO EXISTING PARKING LOT LIGHTING	QLD
PR-UGE-004	UNDERGROUND ELECTRIC	PR	PRIVATE	UNKNOWN	004	UNKNOWN		U1203				SERVICE TO EXISTING PARKING LOT LIGHTING	QLD
04-UGP-003	UNDERGROUND ELECTRIC	04	ROCKY MOUNTAIN POWER	UNDERGROUND ELECTRIC	003	LOW		U1203				PROTECT IN PLACE	QLC
05-DIP-024	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	024	HIGH	12"	U1203				ABANDON	QLC
05-DIP-025	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	025	HIGH	12"	U1203				ABANDON	QLC
05-DIP-026	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	026	HIGH	12"	U1203				PROTECT IN PLACE	QLB
PR-CIP-027	WATER	PR	PRIVATE	CAST IRON PIPE	027	LOW	6"	U1203				PROTECT IN PLACE	QLC
PR-CIP-028	WATER	PR	PRIVATE	CAST IRON PIPE	028	HIGH	6"	U1203				PROTECT IN PLACE - PRIVATE	QLD
PR-DIP-029	WATER	PR	PRIVATE	DUCTILE IRON PIPE	029	LOW	6"	U1203				PROTECT IN PLACE - PRIVATE	QLD
PR-DIP-030	WATER	05	PRIVATE	DUCTILE IRON PIPE	030	HIGH	???	U1203				RELOCATE HYDRANT AND VALVE	QLD
PR-DIP-031	WATER	PR	PRIVATE	DUCTILE IRON PIPE	031	LOW	6"	U1203				PROTECT IN PLACE	QLD
05-???-032	WATER	05	SLC UTILITIES	UNKNOWN	032	LOW	???	U1203				REPLACE	QLB
05-DIP-033	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	033	HIGH	12"	U1203	CASING PROPOSED			TEST HOLE #21. CASING PROPOSED. REPLACE WITH HDPE.	QLC
05-DIP-040	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	040	HIGH	8"	U1203				ABANDONED IN PLACE BY PREVIOUS PROJECT	QLD
05-DIP-041	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	041	HIGH	6"	U1203				ABANDONED IN PLACE BY PREVIOUS PROJECT	QLD
05-PVC-042	WATER	05	SLC UTILITIES	POLYVINYL CHLORIDE	042	HIGH	1"	U1203				IRRIGATION LINE. ASSUMED MATERIAL AND SIZE	QLD
05-PVC-043	WATER	05	SLC UTILITIES	POLYVINYL CHLORIDE	043	HIGH	1"	U1203				IRRIGATION LINE. ASSUMED MATERIAL AND SIZE	QLD
11-UFO-044	FIBER OPTIC	11	COMCAST	UNDERGROUND FIBER OPTIC	044	HIGH		U1204				RELOCATE	QLD
11-UFO-045	FIBER OPTIC	11	COMCAST	UNDERGROUND FIBER OPTIC	045	LOW		U1204				PROTECT IN PLACE	QLD
01-UFO-046	FIBER OPTIC	01	MCI/VERIZON	UNDERGROUND FIBER OPTIC	046	LOW		U1204				PROTECT IN PLACE	QLD
01-UFO-047	FIBER OPTIC	16	LUMEN	UNDERGROUND FIBER OPTIC	047	HIGH		U1204				RELOCATE	QLD
02-???-017	GAS	02	ENBRIDGE	UNKNOWN	017	LOW	UNKNOWN	U1204				PROTECT IN PLACE	QLD
16-OFO-005	OVERHEAD FIBER OPTIC	16	LUMEN	OVERHEAD FIBER OPTIC	005	HIGH		U1204				RELOCATE	QLC
04-OHP-008	OVERHEAD POWER	04	ROCKY MOUNTAIN POWER	OVERHEAD POWER	008	HIGH		U1204				RELOCATE	QLC
05-???-044	WATER	05	SLC UTILITIES	UNKNOWN	044	LOW	UNKNOWN	U1204				PROTECT IN PLACE	QLD

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REV	DATE	Description	



Submitted By: _____

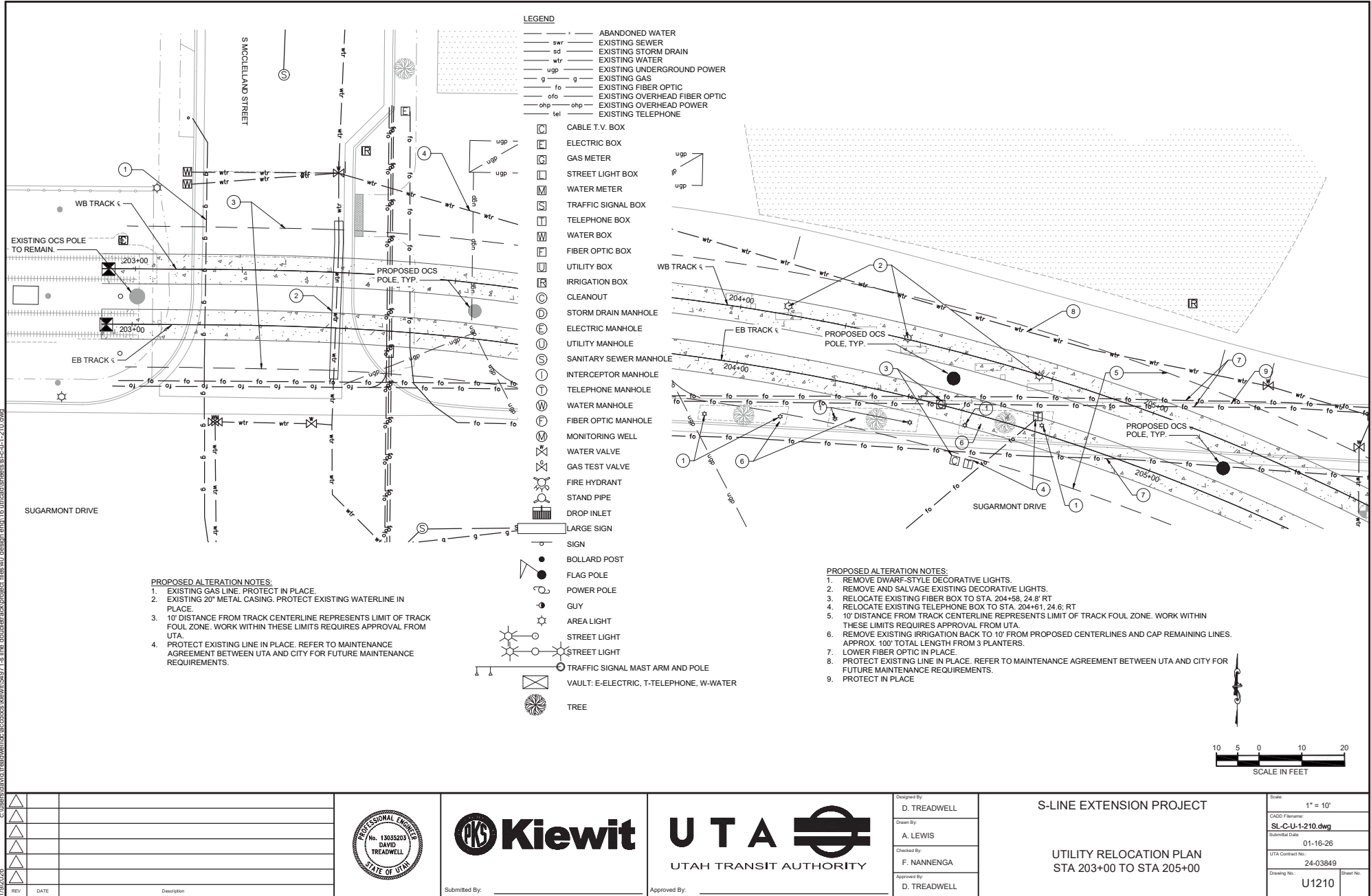
Approved By: _____

Designed By D. TREADWELL
Drawn By T. COVEYOU
Checked By F. NANNENGA
Approved By D. TREADWELL

S-LINE EXTENSION PROJECT

EXISTING UTILITY MATRIX
SHEET 4 OF 4

State NTS
CADD Filename: SL-C-U-1-208.dwg
Submitted Date 01-16-26
UTA Contract No. 24-03849
Drawing No. U1208
Sheet No.



PROPOSED ALTERATION NOTES:

1. EXISTING GAS LINE. PROTECT IN PLACE.
2. EXISTING 20" METAL CASING. PROTECT EXISTING WATERLINE IN PLACE.
3. 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.
4. PROTECT EXISTING LINE IN PLACE. REFER TO MAINTENANCE AGREEMENT BETWEEN UTA AND CITY FOR FUTURE MAINTENANCE REQUIREMENTS.

PROPOSED ALTERATION NOTES:

1. REMOVE DWARF-STYLE DECORATIVE LIGHTS.
2. REMOVE AND SALVAGE EXISTING DECORATIVE LIGHTS.
3. RELOCATE EXISTING FIBER BOX TO STA. 204+58, 24.8' RT
4. RELOCATE EXISTING TELEPHONE BOX TO STA. 204+61, 24.6' RT
5. 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.
6. REMOVE EXISTING IRRIGATION BACK TO 10' FROM PROPOSED CENTERLINES AND CAP REMAINING LINES. APPROX. 100' TOTAL LENGTH FROM 3 PLANTERS.
7. LOWER FIBER OPTIC IN PLACE.
8. PROTECT EXISTING LINE IN PLACE. REFER TO MAINTENANCE AGREEMENT BETWEEN UTA AND CITY FOR FUTURE MAINTENANCE REQUIREMENTS.
9. PROTECT IN PLACE



Designed By:
D. TREADWELL

Drawn By:
A. LEWIS

Checked By:
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Approved By:
D. TREADWELL

S-LINE EXTENSION PROJECT

UTILITY RELOCATION PLAN
STA 203+00 TO STA 205+00

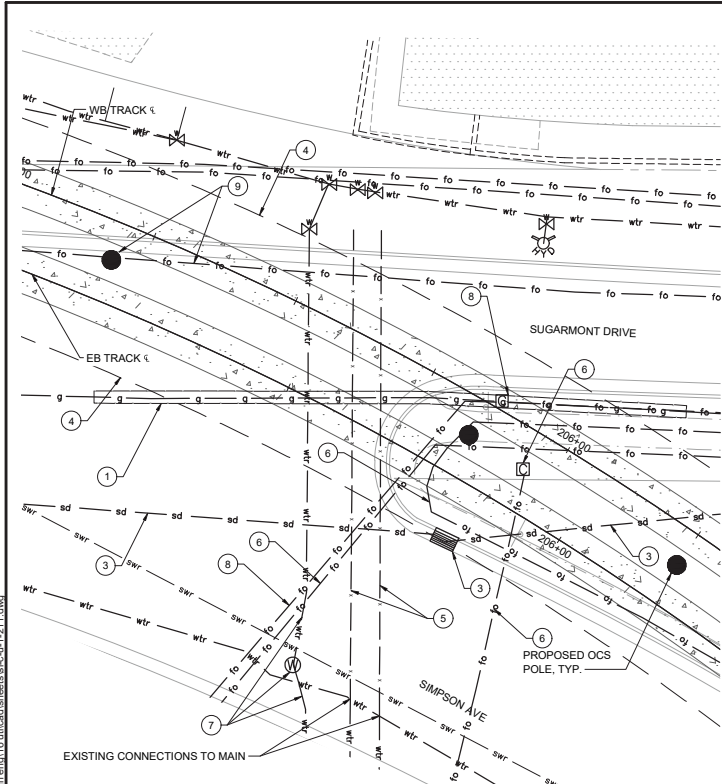
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Submitted Date:
01-16-26

UTA Contract No.:
24-03849

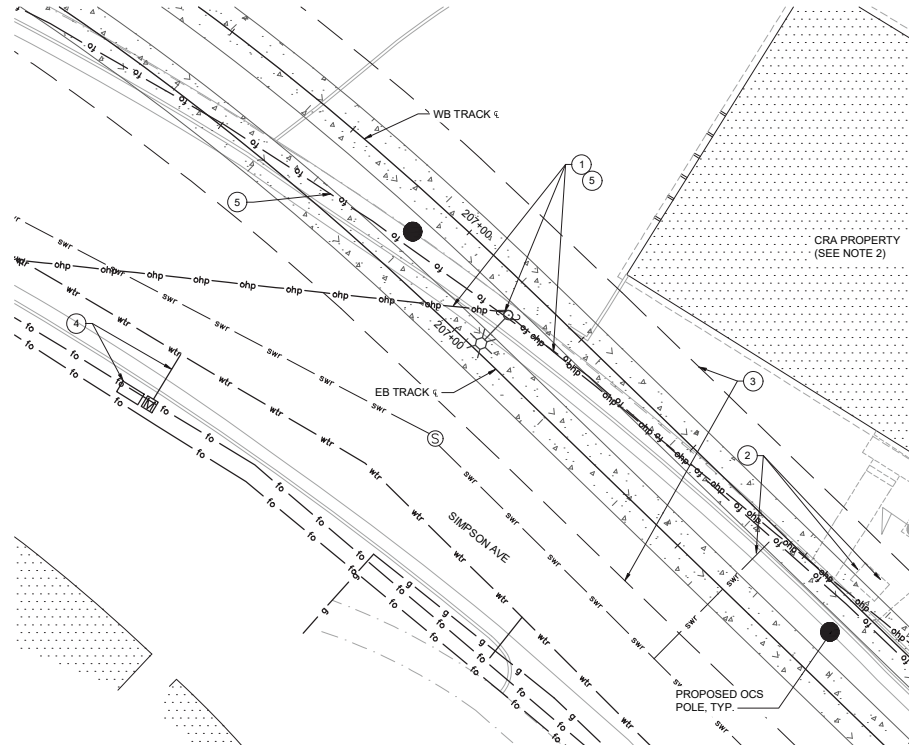
Drawing No.:
U1210



LEGEND

- swr --- ABANDONED WATER
- sd --- EXISTING SEWER
- wtr --- EXISTING STORM DRAIN
- wtr --- EXISTING WATER
- ugp --- EXISTING UNDERGROUND POWER
- g --- EXISTING GAS
- fo --- EXISTING FIBER OPTIC
- ofo --- EXISTING OVERHEAD FIBER OPTIC
- ohp --- EXISTING OVERHEAD POWER
- tel --- EXISTING TELEPHONE

- [Symbol] CABLE T.V. BOX
- [Symbol] ELECTRIC BOX
- [Symbol] GAS METER
- [Symbol] STREET LIGHT BOX
- [Symbol] WATER METER
- [Symbol] TELEPHONE BOX
- [Symbol] WATER BOX
- [Symbol] FIBER OPTIC BOX
- [Symbol] UTILITY BOX
- [Symbol] IRRIGATION BOX
- [Symbol] CLEANOUT
- [Symbol] STORM DRAIN MANHOLE
- [Symbol] ELECTRIC MANHOLE
- [Symbol] UTILITY MANHOLE
- [Symbol] SANITARY SEWER MANHOLE
- [Symbol] INTERCEPTOR MANHOLE
- [Symbol] TELEPHONE MANHOLE
- [Symbol] WATER MANHOLE
- [Symbol] FIBER OPTIC MANHOLE
- [Symbol] MONITORING WELL
- [Symbol] WATER VALVE
- [Symbol] GAS TEST VALVE
- [Symbol] FIRE HYDRANT
- [Symbol] STAND PIPE
- [Symbol] DROP INLET
- [Symbol] LARGE SIGN
- [Symbol] SIGN
- [Symbol] BOLLARD POST
- [Symbol] FLAG POLE
- [Symbol] POWER POLE
- [Symbol] GUY
- [Symbol] AREA LIGHT
- [Symbol] STREET LIGHT
- [Symbol] STREET LIGHT
- [Symbol] TRAFFIC SIGNAL MAST ARM AND POLE
- [Symbol] VAULT: E-ELECTRIC, T-TELEPHONE, W-WATER
- [Symbol] TREE



PROPOSED ALTERATION NOTES:

1. ENBRIDGE TO CONSTRUCT 96 LF OF 8" GAS LINE CASING
2. REFER TO DRAINAGE PLANS FOR TREATMENT
3. 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.
4. EXISTING WATERLINES WERE CONNECTED VIA HOT TAP TO NEW MAIN ON SOUTH SIDE OF SIMPSON AVENUE BY PREVIOUS PROJECT. REMOVE PREVIOUSLY ABANDONED LINES WITHIN LIMITS OF NEW GUIDEWAY. CUT AND CAP REMAINING AND GROUT AROUND CAP.
5. SEE SHEET Y1241 FOR SHARED MCIVERIZON AND COMCAST FIBER OPTIC AND RMP TRENCH (NOT SHOWN). DISCONNECT AND REMOVE EXISTING 3" WATER METER AND VAULT. REMOVE EXISTING LINE WITHIN LIMITS OF NEW GUIDEWAY. CUT AND CAP REMAINING AND GROUT AROUND CAP.
7. LOWER EXISTING LUMEN FIBER OPTIC IN PLACE. REMOVE EXISTING HAND HOLE.
8. LOWER EXISTING UTOPIA FIBER OPTIC IN PLACE AND ROUTE AROUND PROPOSED OCS POLE FOUNDATION.

PROPOSED ALTERATION NOTES:

1. OVERHEAD LINES TO BE REMOVED BY OTHERS. REMOVE POLE.
2. EXISTING BUILDINGS, DRIVEWAYS, UTILITY SERVICES, LANDSCAPING ON THE CRA PROPERTY ARE TO BE DEMOLISHED AND EXISTING WATER, SEWER, STORMWATER, AND GAS SERVICES WILL BE REMOVED BACK TO MAIN. UTILITIES TO REMAIN IN PLACE UNTIL BUILDING DEMOLITION BEGINS.
3. 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.
4. HOT TAP EXISTING 12" MAIN AND INSTALL 9.4 LF OF 2" WATER LINE FROM EXISTING MAIN TO NEW 2" METER. NEW METER TO BE AT WB STATION 206+79.13, 54.7 LF RT. INSTALL NEW WILKINS MODEL 375XLB 2" BACKFLOW PREVENTER OR APPROVED EQUAL. NEW METER AND BACKFLOW PREVENTER TO BE COMPLETELY WITHIN 5' OF BACK OF CURVE. CONNECTION FROM BACKFLOW PREVENTER TO EXISTING IRRIGATION SYSTEM BY SALT LAKE CITY PARKS DEPARTMENT.
5. SEE SHEET Y1241 FOR SHARED FIBER OPTIC AND RMP TRENCH (NOT SHOWN) FIBER OPTIC CABLE TO BE RELOCATED BY MCIVERIZON.



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REV	DATE	Description



Designed By:
D. TREADWELL

Drawn By:
A. LEWIS

Checked By:
F. NANNENGA

Approved By:
D. TREADWELL

S-LINE EXTENSION PROJECT

UTILITY RELOCATION PLAN
STA 205+00 TO STA 208+00

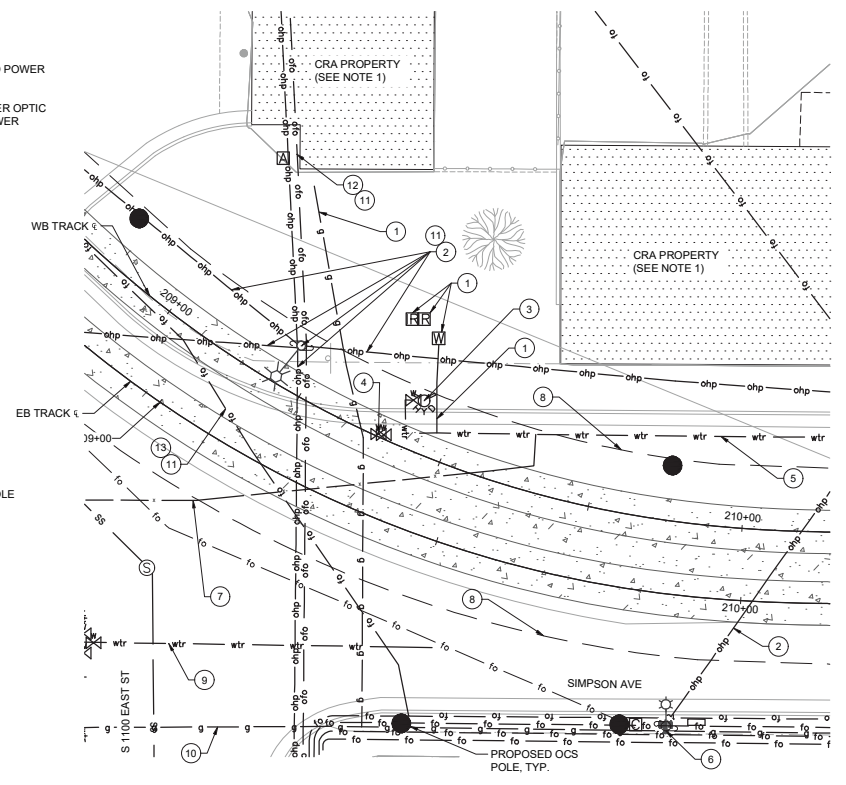
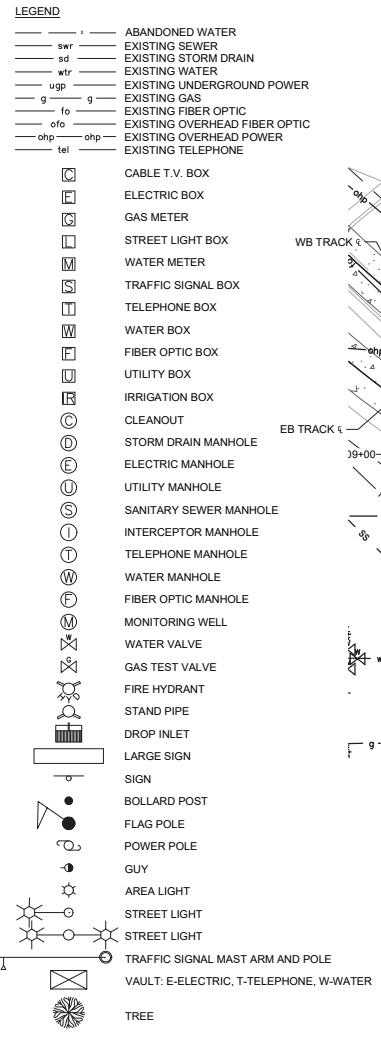
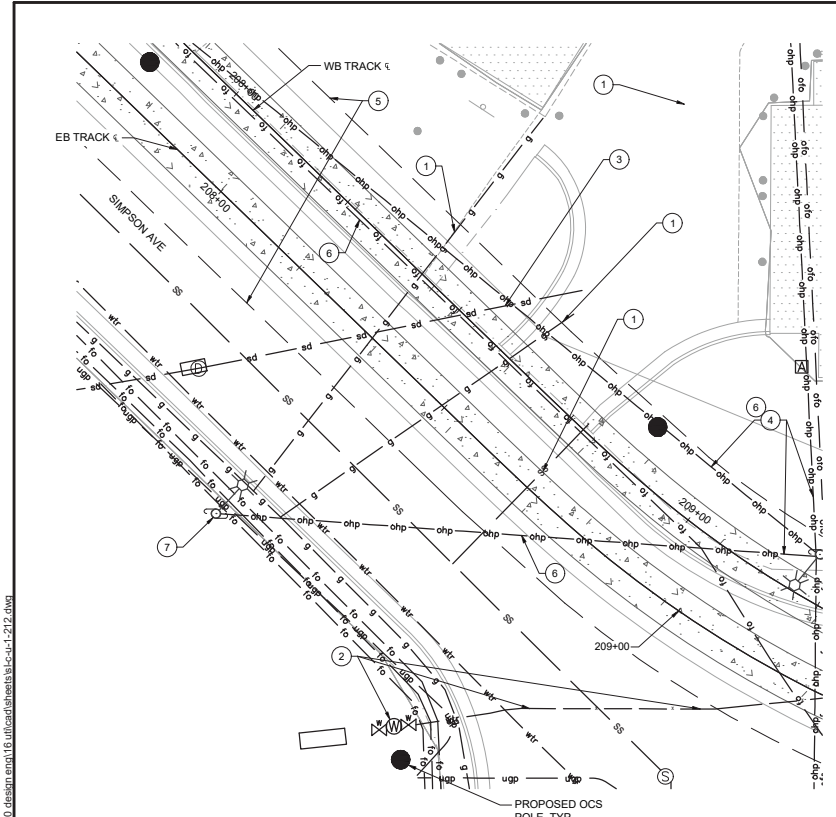
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SL-C-U-1-211.dwg

Submittal Date:
01-16-26

UTA Contract No.:
24-03849

Drawing No.:
U1211



PROPOSED ALTERATION NOTES:

- EXISTING BUILDINGS, DRIVEWAYS, UTILITY SERVICES, LANDSCAPING ON THE CRA PROPERTY ARE TO BE DEMOLISHED AND EXISTING WATER, SEWER, STORMWATER, AND GAS SERVICES WILL BE REMOVED BACK TO MAIN. UTILITIES TO REMAIN IN PLACE UNTIL BUILDING DEMOLITION BEGINS.
- EXISTING WATERLINE WAS CONNECTED VIA HOT TAP TO NEW MAIN ON SOUTH SIDE OF SIMPSON BY PREVIOUS PROJECT. REMOVE PREVIOUSLY ABANDONED LINE WITHIN LIMITS OF NEW GUIDEWAY. CUT AND CAP REMAINING AND GROUT AROUND CAP.
- REFER TO DRAINAGE PLANS FOR TREATMENT.
- REMOVE POLE, OVERHEAD POWER LINES TO BE RELOCATED BY RMP.
- 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.
- SEE SHEET Y1241 FOR SHARED FIBER OPTIC AND RMP TRENCH. FIBER OPTIC CABLE TO BE RELOCATED BY MEI/VERIZON
- REMOVE EXISTING STREETLIGHT. POLE TO REMAIN.

PROPOSED ALTERATION NOTES:

- EXISTING BUILDINGS, DRIVEWAYS, UTILITY SERVICES, LANDSCAPING ON THE CRA PROPERTY ARE TO BE DEMOLISHED. EXISTING WATER, SEWER, STORMWATER, AND GAS SERVICES WILL BE REMOVED BACK TO MAIN. UTILITIES TO REMAIN IN PLACE UNTIL BUILDING DEMOLITION BEGINS.
- REMOVE POLE, OVERHEAD POWER LINES TO BE REMOVED BY RMP.
- REMOVE EXISTING HYDRANT.
- REMOVE EXISTING WATER VALVES.
- ABANDON 251 LF OF EXISTING WATERLINE IN PLACE, TO WB STA. 211+83. FILL ABANDONED LINE WITH FLOWABLE FILL. SEE ALSO SHEET U1213.
- POLE, STREETLIGHT, AND CELL BOOSTER TO REMAIN. PROTECT IN PLACE.
- EXISTING WATERLINE WAS CONNECTED VIA HOT TAP TO NEW MAIN ON SOUTH SIDE OF SIMPSON BY PREVIOUS PROJECT. REMOVE PREVIOUSLY ABANDONED LINE WITHIN LIMITS OF NEW GUIDEWAY. CUT AND CAP REMAINING AND GROUT AROUND CAP.
- 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.
- SEE SHEET U1231 PLANS FOR TREATMENT.
- SEE SHEET U1225 FOR TREATMENT.
- SEE SHEET Y1241 FOR SHARED FIBER OPTIC AND RMP TRENCH.
- FIBER OPTIC TO BE RELOCATED BY COMCAST.
- FIBER OPTIC CABLE TO BE RELOCATED BY MEI/VERIZON



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Submitted By: _____

Approved By: _____

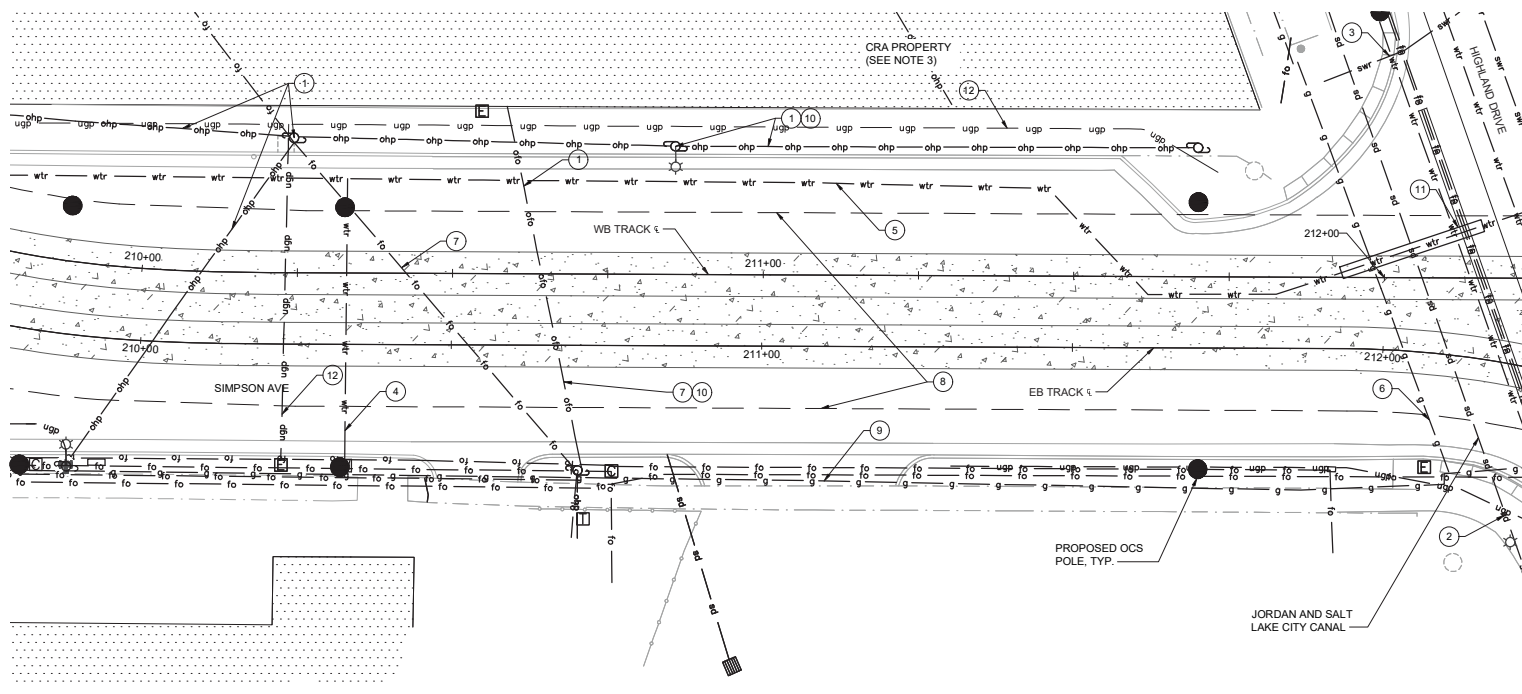
Designed By D. TREADWELL
Drawn By A. LEWIS
Checked By F. NANNENGA
Approved By D. TREADWELL

S-LINE EXTENSION PROJECT

UTILITY RELOCATION PLAN
STA 208+00 TO STA 210+00

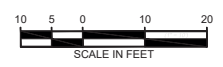
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UTA Contract No. 24-03849
Drawing No. U1212
Sheet No.

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- LEGEND**
- ABANDONED WATER
 - EXISTING SEWER
 - EXISTING STORM DRAIN
 - EXISTING WATER
 - EXISTING UNDERGROUND POWER
 - EXISTING GAS
 - EXISTING FIBER OPTIC
 - EXISTING OVERHEAD FIBER OPTIC
 - EXISTING OVERHEAD POWER
 - EXISTING TELEPHONE
 - CABLE T.V. BOX
 - ELECTRIC BOX
 - GAS METER
 - STREET LIGHT BOX
 - WATER METER
 - TRAFFIC SIGNAL BOX
 - TELEPHONE BOX
 - WATER BOX
 - FIBER OPTIC BOX
 - UTILITY BOX
 - IRRIGATION BOX
 - CLEANOUT
 - STORM DRAIN MANHOLE
 - ELECTRIC MANHOLE
 - UTILITY MANHOLE
 - SANITARY SEWER MANHOLE
 - INTERCEPTOR MANHOLE
 - TELEPHONE MANHOLE
 - WATER MANHOLE
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 - GAS TEST VALVE
 - FIRE HYDRANT
 - STAND PIPE
 - DROP INLET
 - LARGE SIGN
 - SIGN
 - BOLLARD POST
 - FLAG POLE
 - POWER POLE
 - GUY
 - AREA LIGHT
 - STREET LIGHT
 - STREET LIGHT
 - TRAFFIC SIGNAL MAST ARM AND POLE
 - VAULT: E-ELECTRIC, T-TELEPHONE, W-WATER
 - TREE

- PROPOSED ALTERATION NOTES:**
1. REMOVE POLE. OVERHEAD POWER LINE TO BE REMOVED BY RMP.
 2. PROTECT EXISTING JORDAN AND SALT LAKE CANAL IN PLACE. NO WORK IS ALLOWED WITHIN 33 LF OF CANAL CENTERLINE FROM MARCH 1ST TO OCTOBER 1ST.
 3. EXISTING BUILDINGS, DRIVEWAYS, UTILITY SERVICES, LANDSCAPING ON THE CRA PROPERTY ARE TO BE DEMOLISHED. EXISTING WATER, SEWER, STORMWATER, AND GAS SERVICES WILL BE REMOVED BACK TO MAIN. UTILITIES TO REMAIN IN PLACE UNTIL BUILDING DEMOLITION BEGINS.
 4. REMOVE APPROXIMATELY 45 LF OF WATERLINE FROM EXISTING MAIN SOUTH TO EXISTING VALVE. REMOVE EXISTING VALVE.
 5. ABANDON 25 LF OF EXISTING WATERLINE TO WB STA. 211+83. FILL WITH FLOWABLE FILL.
 6. ENBRIDGE TO REPLACE 45 LF OF 6" STEEL GAS LINE WITH 6" HDPE GAS LINE INSTALLED WITHIN 45 LF OF 14" POLYETHYLENE GAS LINE CASING.
 7. OVERHEAD FIBER OPTIC LINE TO BE REMOVED BY LUMEN.
 8. 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.
 9. SEE U1225 FOR TREATMENT.
 10. SEE Y1241 FOR SHARED FIBER OPTIC AND RMP TRENCH.
 11. ABANDON EXISTING WATERLINE FROM WB STA. 211+83 TO WB STA 212+33, 14' LT. FILL CARRIER PIPE WITH FLOWABLE FILL.
 12. SEE Y1242

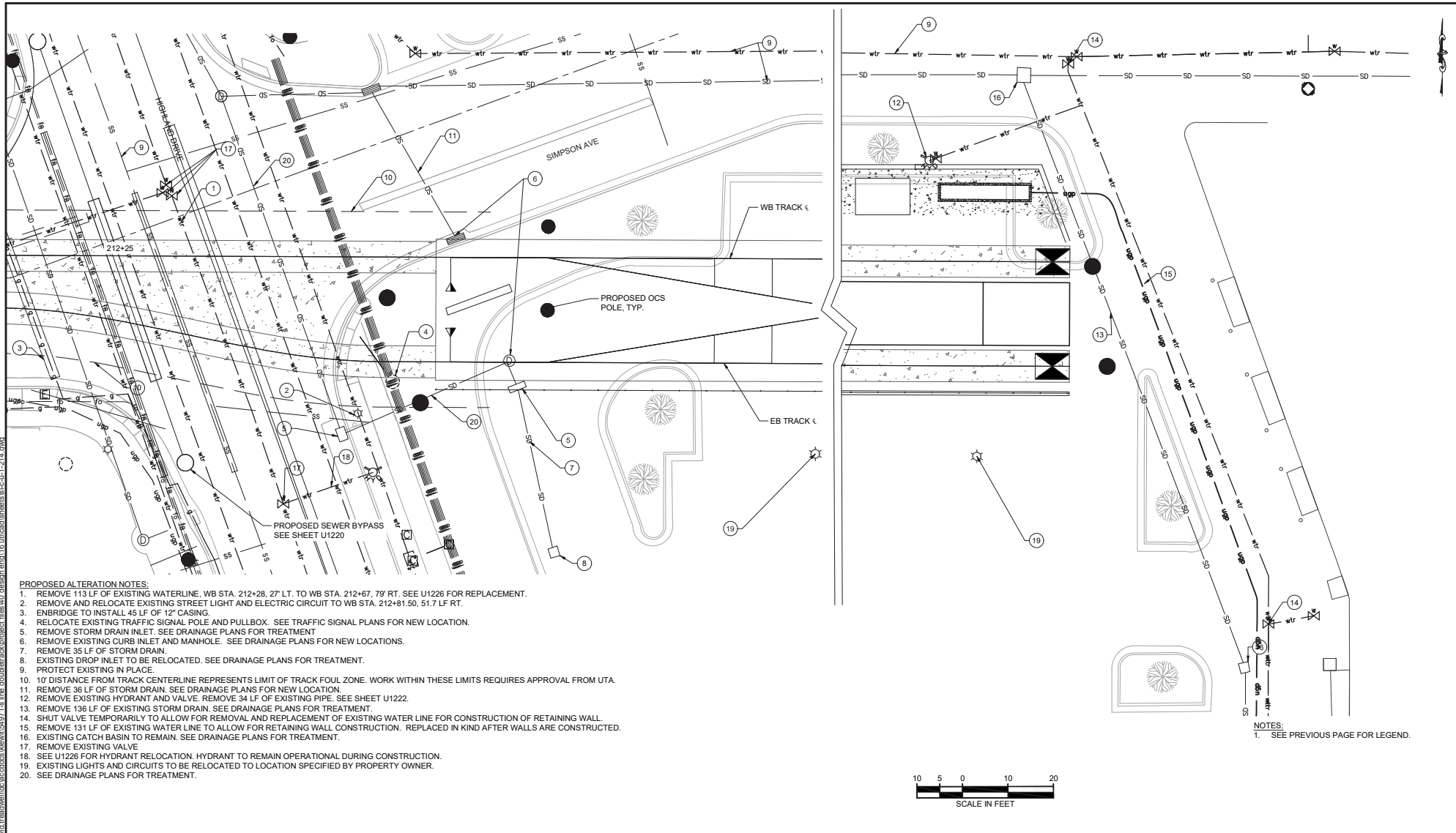


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Designed By: D. TREADWELL
Drawn By: A. LEWIS
Checked By: F. NANNENGA
Approved By: D. TREADWELL

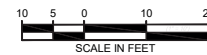
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	Submital Date 01-16-26
	UTA Contract No. 24-03849
Drawing No. U1213	Sheet No.



PROPOSED ALTERATION NOTES:

1. REMOVE 113 LF OF EXISTING WATERLINE, WB STA. 212+28, 27' LT. TO WB STA. 212+67, 79' RT. SEE U1226 FOR REPLACEMENT.
2. REMOVE AND RELOCATE EXISTING STREET LIGHT AND ELECTRIC CIRCUIT TO WB STA. 212+81.50, 51.7 LF RT.
3. ENBRIDGE TO INSTALL 45 LF OF 12" CASING.
4. RELOCATE EXISTING TRAFFIC SIGNAL POLE AND PULLBOX. SEE TRAFFIC SIGNAL PLANS FOR NEW LOCATION.
5. REMOVE STORM DRAIN INLET. SEE DRAINAGE PLANS FOR TREATMENT.
6. REMOVE EXISTING CURB INLET AND MANHOLE. SEE DRAINAGE PLANS FOR NEW LOCATIONS.
7. REMOVE 35 LF OF STORM DRAIN.
8. EXISTING DROP INLET TO BE RELOCATED. SEE DRAINAGE PLANS FOR TREATMENT.
9. PROTECT EXISTING IN PLACE.
10. 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.
11. REMOVE 36 LF OF STORM DRAIN. SEE DRAINAGE PLANS FOR NEW LOCATION.
12. REMOVE EXISTING HYDRANT AND VALVE. REMOVE 34 LF OF EXISTING PIPE. SEE SHEET U1222.
13. REMOVE 136 LF OF EXISTING STORM DRAIN. SEE DRAINAGE PLANS FOR TREATMENT.
14. SHUT VALVE TEMPORARILY TO ALLOW FOR REMOVAL AND REPLACEMENT OF EXISTING WATER LINE FOR CONSTRUCTION OF RETAINING WALL.
15. REMOVE 131 LF OF EXISTING WATER LINE TO ALLOW FOR RETAINING WALL CONSTRUCTION. REPLACED IN KIND AFTER WALLS ARE CONSTRUCTED.
16. EXISTING CATCH BASIN TO REMAIN. SEE DRAINAGE PLANS FOR TREATMENT.
17. REMOVE EXISTING VALVE.
18. SEE U1226 FOR HYDRANT RELOCATION. HYDRANT TO REMAIN OPERATIONAL DURING CONSTRUCTION.
19. EXISTING LIGHTS AND CIRCUITS TO BE RELOCATED TO LOCATION SPECIFIED BY PROPERTY OWNER.
20. SEE DRAINAGE PLANS FOR TREATMENT.

- NOTES:**
1. SEE PREVIOUS PAGE FOR LEGEND.



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Submitted By: _____

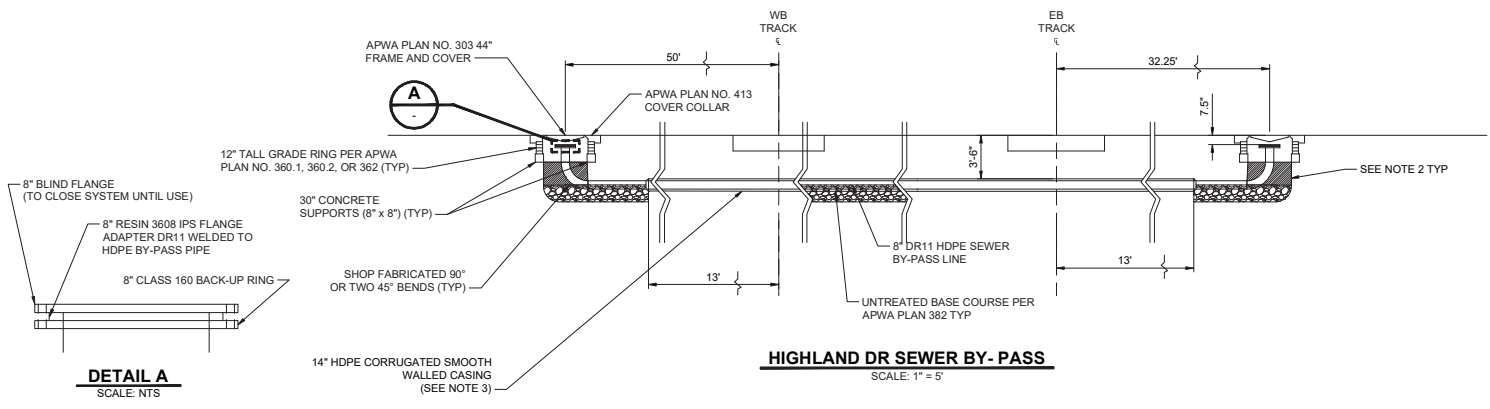
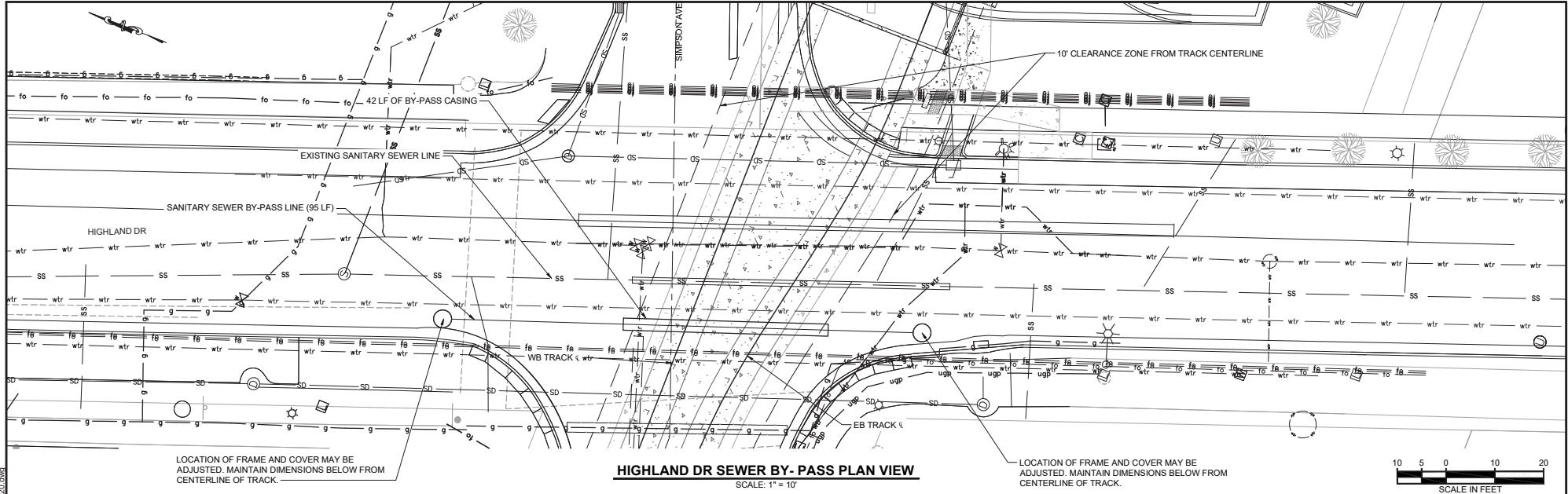
Approved By: _____

Designed By: D. TREADWELL
Drawn By: A. LEWIS
Checked By: F. NANNENGA
Approved By: D. TREADWELL

S-LINE EXTENSION PROJECT

UTILITY RELOCATION PLAN
STA 212+00 TO STA 215+84.18

Scale:	1" = 10'
CADD Filename:	SL-C-U-1-214.dwg
Submittal Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	U1214
Sheet No.:	



- NOTES:**
1. BY-PASS SHALL BE CAPPED WITH HDPE BLIND FLANGE AND PLACED IN APWA PLAN NO. 303 FRAME AND COVER. COVER SHALL BE CLEARLY MARKED SANITARY SEWER.
 2. USE FLOWABLE FILL AS BACKFILL FOR FABRICATED BENDS.
 3. 1 1/2" SHOE HEIGHT REQUIRED



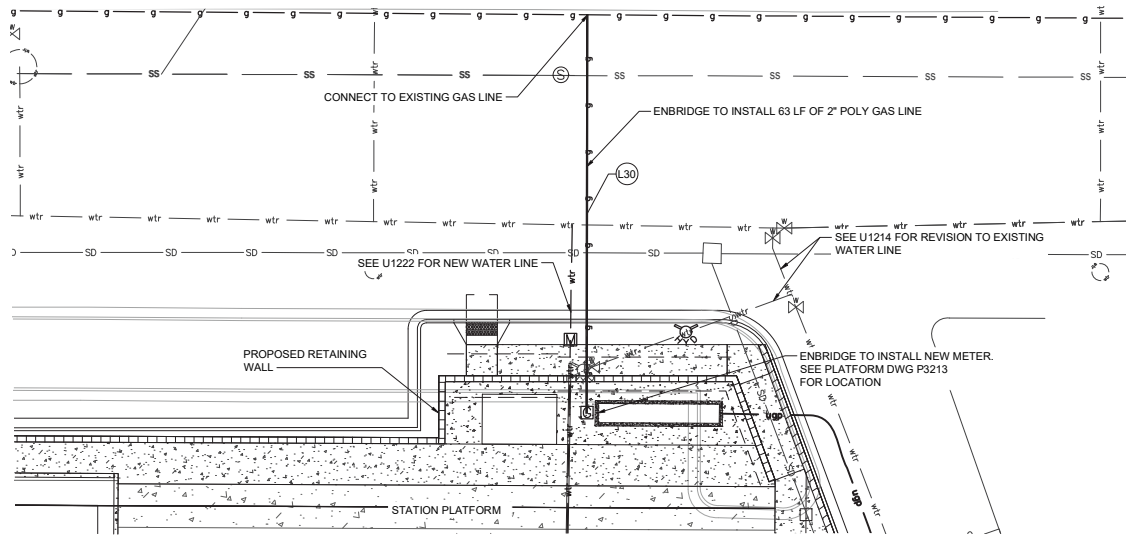
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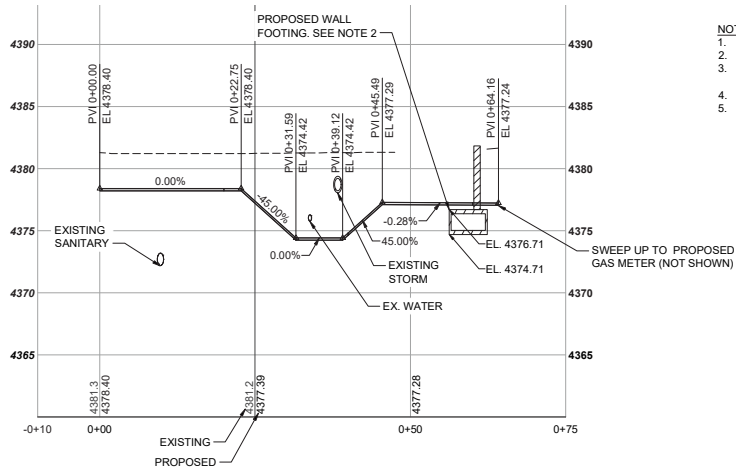
Designed By: D. TREADWELL
 Drawn By: A. LEWIS
 Checked By: F. NANNENGA
 Approved By: D. TREADWELL

S-LINE EXTENSION PROJECT
PROPOSED SEWER HIGHLAND DRIVE SEWER BY-PASS

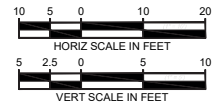
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UTA Contract No.:	24-03849
Drawing No.:	U1220



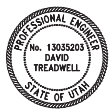
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L30	64.16	S00° 04' 52\"/>		



- NOTES:**
1. ACTUAL GAS SERVICE PROFILE TO BE DETERMINED BY ENBRIDGE IN THE FIELD
 2. PROVIDE 4\"/>



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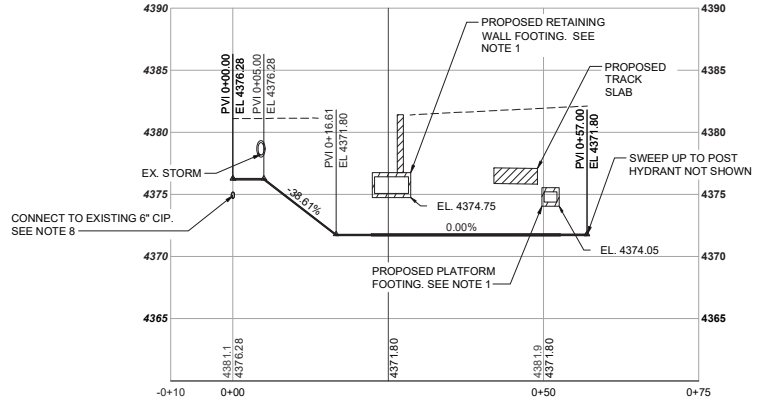
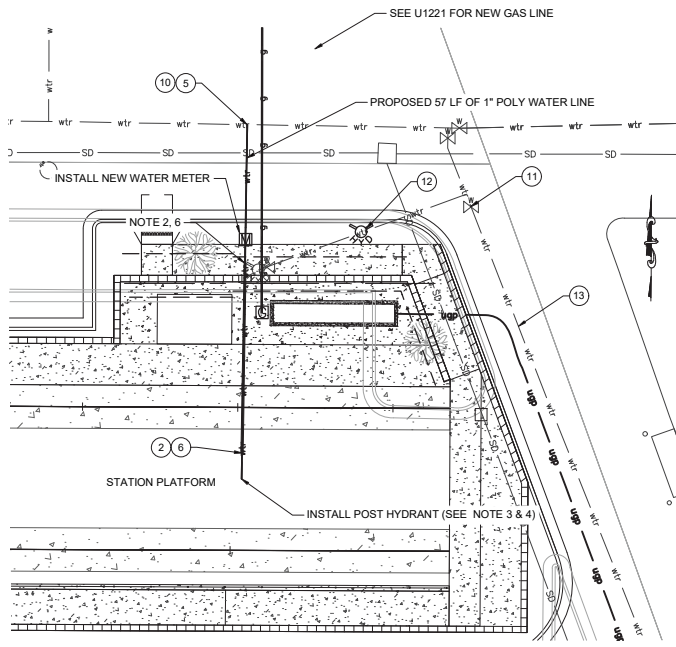
Designed By:	D. TREADWELL
Drawn By:	A. LEWIS
Checked By:	F. NANNENGA
Approved By:	D. TREADWELL

S-LINE EXTENSION PROJECT

PROPOSED GAS LINE SUGAR HOUSE STATION

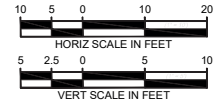
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Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	U1221
Sheet No.:	

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Line Table				
Line #	Length	Direction	Start Point (N,E)	End Point (N,E)
L27	5.00	S00° 56' 22"W	(7431956.89, 1541372.36)	(7431951.89, 1541372.3)
L28	11.61	S00° 54' 54"W	(7431951.89, 1541372.28)	(7431940.28, 1541372.1)
L29	40.42	S00° 54' 54"W	(7431940.28, 1541372.10)	(7431899.87, 1541371.4)

- NOTES:
1. PROVIDE 2' OF COVER FROM FOOTING TO TOP OF CASING MIN.
 2. INSTALL 31 LF OF 4" HDPE CASING, STA. 0+22.28 TO STA. 0+52.69
 3. SEE DRAWING P1201 FOR STATION PLATFORM PLAN AND POST HYDRANT LOCATION.
 4. SEE DRAWING P3216 FOR POST HYDRANT DETAIL.
 5. EXISTING WATERLINE IS PRIVATE. PERMISSION FROM OWNER IS REQUIRED BEFORE CONNECTION CAN BE MADE.
 6. $\frac{1}{2}$ " SHOULDER HEIGHT
 7. ELEVATIONS SHOWN ARE TO TOP OF PIPE UNLESS OTHERWISE NOTED.
 8. ELEVATION OF EXISTING WATER LINE IS ASSUMED. VERIFY IN FIELD.
 9. MINIMUM OF 5' COVER TO TOP OF PIPE REQUIRED
 10. CONNECT TO EXISTING 6" CIP WITH SADDLE CLAMP TAP PER APWA PLAN 551
 11. INSTALL GATE VALVE ON EXISTING 6" DIP LINE
 12. RELOCATE EXISTING HYDRANT ON EXISTING LINE. MINIMIZE HYDRANT DOWN TIME.
 13. SEE ALSO U1214



REV	DATE	Description



Designed By:	D. TREADWELL
Drawn By:	D. TREADWELL
Checked By:	F. NANNENGA
Approved By:	D. TREADWELL

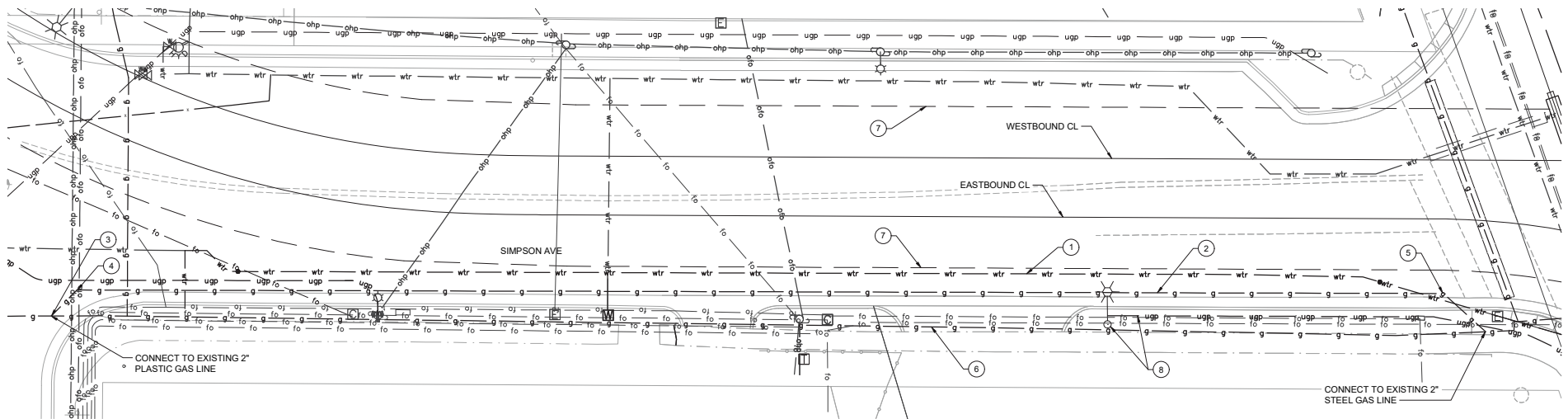
S-LINE EXTENSION PROJECT

PROPOSED WATER LINE
HIGHLAND DRIVE STATION

Scale:	PLAN: 1" = 10'
CADD Filename:	SL-C-U-1-222.dwg
Submission Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	U1222
Sheet No.:	

1/12/2026

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SIMPSON AVE. GAS LINE PLAN

- CONSTRUCTION NOTES:**
1. SEE SHEET U1231
 2. CONSTRUCT 286 LF OF 4" HDPE GAS LINE. CONSTRUCTION BY ENBRIDGE
 3. WB STA. 209+41.88, 49.7' RT
 4. WB STA. 209+44.97, 40.0' RT
 5. WB STA. 211+95.57, 25.6' RT
 6. ABANDON EXISTING GAS LINE IN PLACE
 7. 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. FUTURE WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.
 8. SEE U1242



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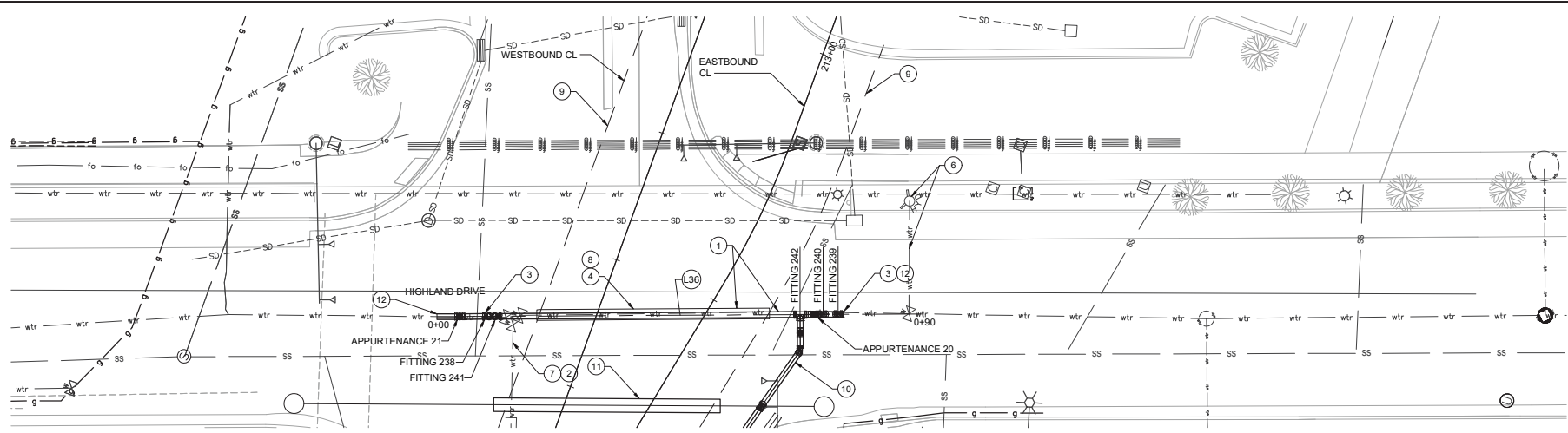


Submitted By: _____ Approved By: _____

Designed By: D. TREADWELL
 Drawn By: D. TREADWELL
 Checked By: F. NANNENGA
 Approved By: D. TREADWELL

S-LINE EXTENSION PROJECT
PROPOSED GAS LINE PLAN
SIMPSON AVENUE

Scale:	H: 1" = 10' V: 1" = 2.5'
CADD Filename:	SL-C-U-1-225.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	U1225
Sheet No.:	



HIGHLAND DRIVE WATER LINE PLAN

LINE TABLE				
LINE #	LENGTH	DIRECTION	START POINT (N,E)	END POINT (N,E)
L36	90.08	S19° 58' 31"E	(7431940.49,1541049.72)	(7431855.83,1541080.49)

APPURTENANCE TABLE		
APPURTENANCE NAME	SIZE	TYPE
APPURTENANCE 20	12 in x 12 in	GATE
APPURTENANCE 21	12 in x 12 in	GATE

FITTING TABLE				
FITTING NAME	HORIZONTAL ANGLE	VERTICAL ANGLE	FITTING ANGLE	SIZE
FITTING 238	0.00	45.00	45	12 in x 12 in
FITTING 239	0.00	22.50	22.50	12 in x 12 in
FITTING 240	0.00	22.50	22.50	12 in x 12 in
FITTING 241	0.00	45.00	45	12 in x 12 in

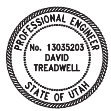
TEE TABLE	
FITTING NAME	SIZE
FITTING 242	12 in x 12 in x 12 in

- NOTES:
1. INSTALL CATHODIC PROTECTION PER SHEET U1233
 2. FILL ABANDONED PIPE WITH FLOWABLE FILL.
 3. TRANSITION TO DUCTILE IRON PIPE
 4. INSTALL 43 LF OF 18" STEEL CASING FROM STA. 0+18.5 TO STA. 0+61.5. 2" SHOE HEIGHT REQUIRED
 5. SEE SHEET U1227 FOR PROFILE
 6. PROTECT IN PLACE
 7. REMOVE EXISTING VALVES AND ABANDON LINE. SEE ALSO U1214
 8. INSTALL 12" HDPE PIPE FROM CONNECTION AT NORTH END TO CONNECTION AT SOUTH END
 9. 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. FUTURE WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA
 10. SEE U1231
 11. SEE U1230
 12. CONNECT TO EXISTING DUCTILE IRON PIPE



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REV	DATE	Description



Designed By D. TREADWELL
Drawn By D. TREADWELL
Checked By F. NANNENGA
Approved By D. TREADWELL

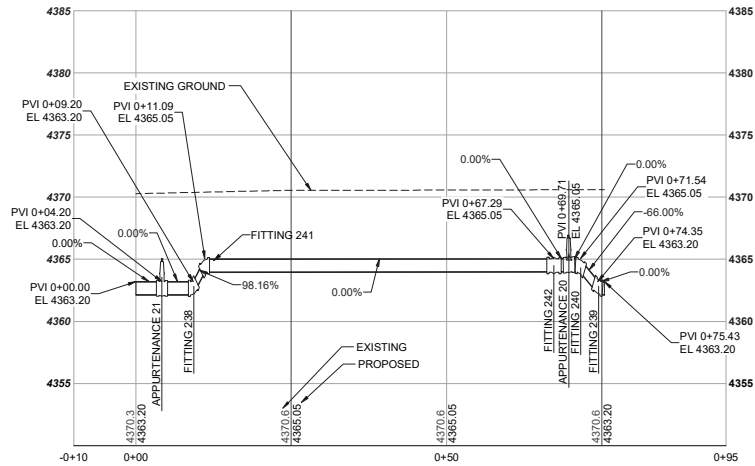
S-LINE EXTENSION PROJECT

PROPOSED WATER LINE PLAN
HIGHLAND DRIVE

Scale 1"=10'
CADD Filename SL-C-U-1-226.dwg
Submittal Date 01-16-26
UTA Contract No. 24-03849
Drawing No. U1226
Sheet No.

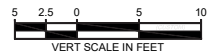
Submitted By: _____

Approved By: _____



HIGHLAND DRIVE WATER LINE PROFILE

- NOTES:**
1. SEE SHEET U1231 FOR PLAN VIEW
 2. SEE SHEETS U1234 AND U1235 FOR CATHODIC PROTECTION DETAILS.
 3. PROPOSED ELEVATIONS SHOWN ARE AT TOP OF PIPE
 4. MAINTAIN MINIMUM 1' HORIZONTAL AND VERTICAL SEPARATION BETWEEN PROPOSED WATER LINE AND EXISTING UTILITIES.



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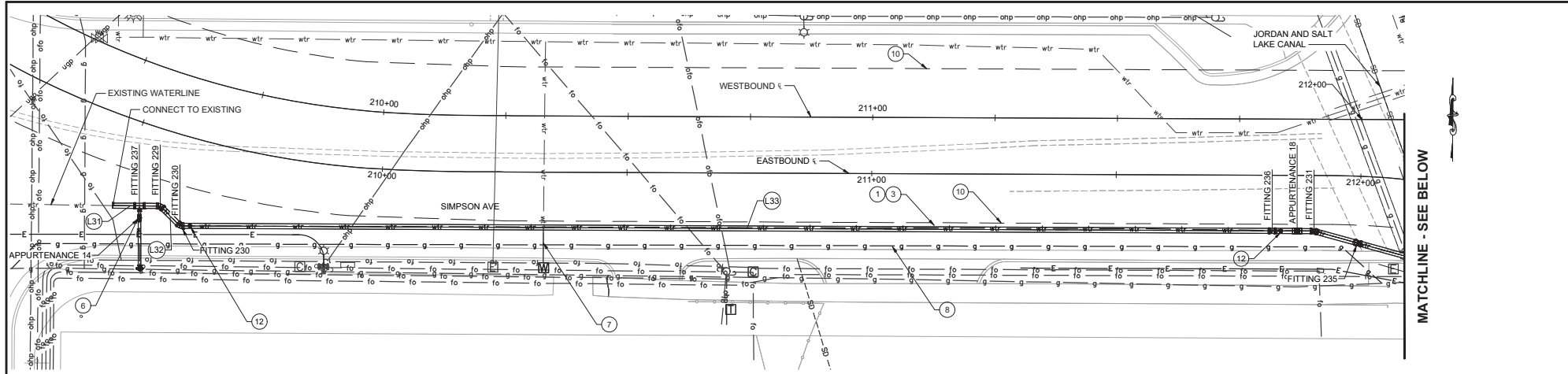


Designed By:	D. TREADWELL
Drawn By:	D. TREADWELL
Checked By:	F. NANNENGA
Approved By:	D. TREADWELL

S-LINE EXTENSION PROJECT

**PROPOSED WATER LINE PROFILE
HIGHLAND DRIVE**

State:	H: 1" = 10' V: 1" = 5'
CADD Filename:	SL-C-U-1-227.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	U1227
Sheet No.:	



MATCHLINE - SEE BELOW

SIMPSON AVE. WATER LINE PLAN

LINE TABLE

LINE #	LENGTH	DIRECTION	START POINT (N,E)	END POINT (N,E)
L31	9.80	S89° 35' 53"E	(7431895.33,1540765.37)	(7431895.26,1540775.17)
L32	5.75	S44° 53' 01"E	(7431895.26,1540775.17)	(7431891.19,1540779.22)
L33	231.80	S89° 44' 06"E	(7431891.19,1540779.22)	(7431890.12,1541011.02)
L34	57.46	S74° 42' 24"E	(7431890.12,1541011.02)	(7431874.96,1541066.44)
L35	6.67	N69° 57' 32"E	(7431874.96,1541066.44)	(7431877.25,1541072.71)

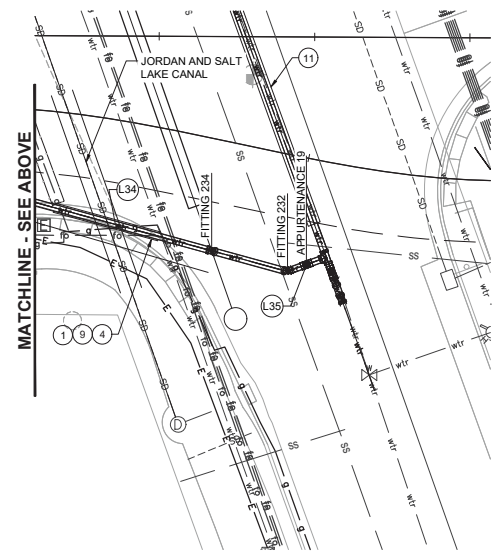
FITTING TABLE

FITTING NAME	HORIZONTAL ANGLE	VERTICAL ANGLE	FITTING ANGLE	SIZE
FITTING 235	0.00	45.00	45	12 in x 12 in
FITTING 236	0.00	11.25	11.25	12 in x 12 in
FITTING 229	44.97	1.86	45	12 in x 12 in
FITTING 230	44.96	2.08	45	12 in x 12 in
FITTING 231	17.89	41.88	45	12 in x 12 in
FITTING 232	33.77	31.85	45	12 in x 12 in
FITTING 234	0.00	22.50	22.50	12 in x 12 in

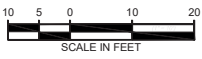
APPURTENANCE NAME	SIZE	TYPE
APPURTENANCE 14	6 in x 6 in	GATE
APPURTENANCE 18	12 in x 12 in	GATE
APPURTENANCE 19	12 in x 12 in	GATE

TEE TABLE	
FITTING NAME	SIZE
FITTING 237	12 in x 12 in x 6 in

- NOTES:
1. INSTALL CATHODIC PROTECTION PER SHEET U1233
 2. NOT USED
 3. INSTALL 12" DUCTILE IRON PIPE FROM EXISTING TO FITTING 235.
 4. INSTALL 17 LF OF 18" STEEL CASING FROM STA. 2+66 TO STA. 2+83. 2" SHOE HEIGHT REQUIRED.
 5. SEE SHEET U1232 FOR PROFILE
 6. INSTALL 12 LF OF 6" DUCTILE IRON PIPE AND FIRE HYDRANT PER APWA PLAN 511
 7. CONSTRUCT 8.5 LF OF 1" TYPE K COPPER PIPE. VERIFY AND MATCH EXISTING PIPE DIAMETER. INSTALL NEW WATER METER.
 8. SEE SHEET U1225
 9. INSTALL 12" HDPE PIPE FROM FITTING 235 TO FITTING 234
 10. 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. FUTURE WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.
 11. SEE ALSO SHEET U1226
 12. SEE SHEET U1233



MATCHLINE - SEE ABOVE



REV	DATE	Description



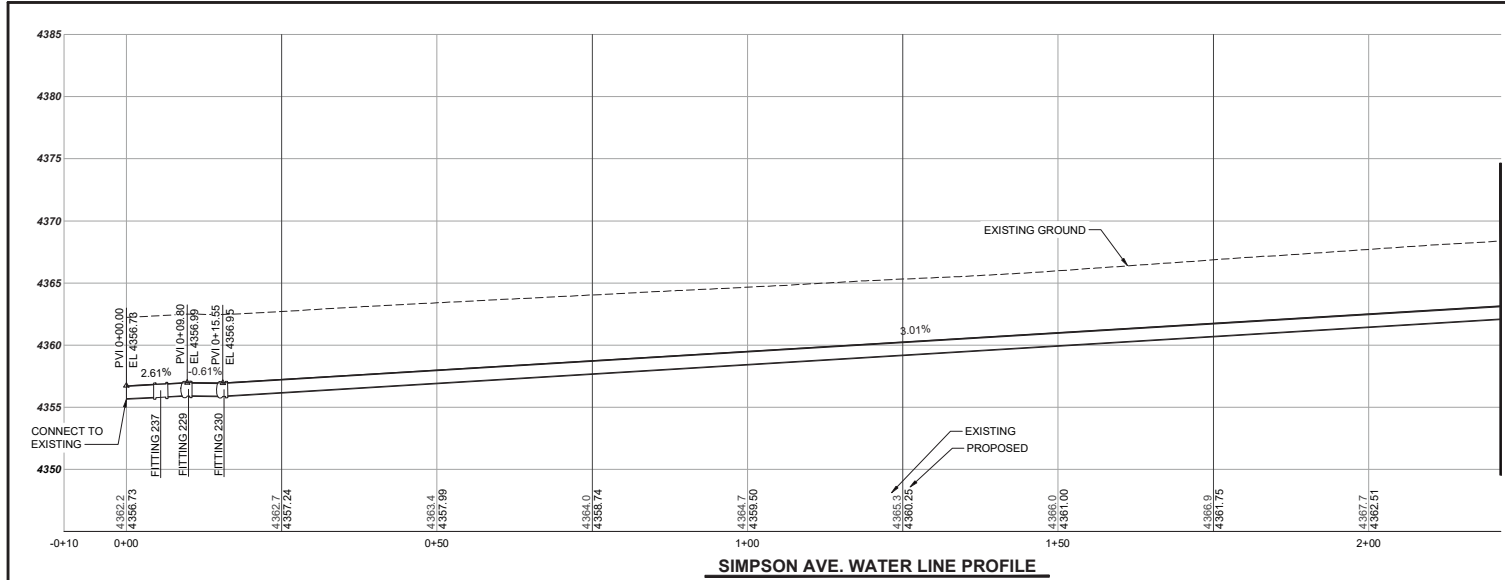
Designed By:	D. TREADWELL
Drawn By:	D. TREADWELL
Checked By:	F. NANNENGA
Approved By:	D. TREADWELL

S-LINE EXTENSION PROJECT

**PROPOSED WATER LINE PLAN
SIMPSON AVENUE**

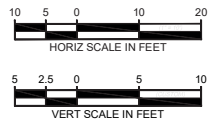
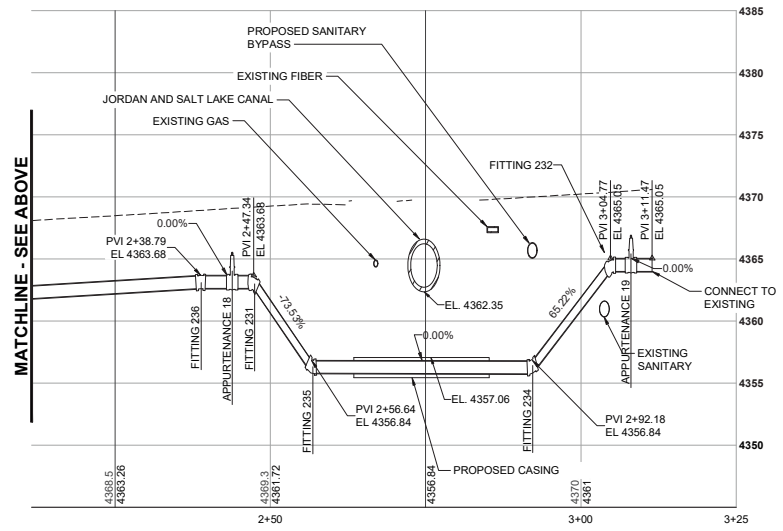
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Submital Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	U1231
Sheet No.:	

1/23/2026



SIMPSON AVE. WATER LINE PROFILE

- NOTES:
1. SEE SHEET U1231 FOR PLAN VIEW
 2. SEE SHEETS U1234 AND U1235 FOR CATHODIC PROTECTION DETAILS.
 3. PROPOSED ELEVATIONS SHOWN ARE AT TOP OF PIPE
 4. MINIMUM 5' VERTICAL SEPARATION REQUIRED FROM EXISTING JORDAN AND SALT LAKE CANAL TO PROPOSED CASING
 5. MAINTAIN MINIMUM 1' HORIZONTAL AND VERTICAL SEPARATION FROM PROPOSED WATER LINE AND EXISTING UTILITIES



1/23/2026			
REV	DATE	Description	



Designed By: D. TREADWELL
 Drawn By: D. TREADWELL
 Checked By: F. NANNENGA
 Approved By: D. TREADWELL

S-LINE EXTENSION PROJECT
 PROPOSED WATER LINE PROFILE
 SIMPSON AVENUE

Scale:	H: 1" = 10' V: 1" = 2.5'
CADD Filename:	SL-C-U-1-232.dwg
Submital Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	U1232
Sheet No.:	

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GENERAL NOTES:

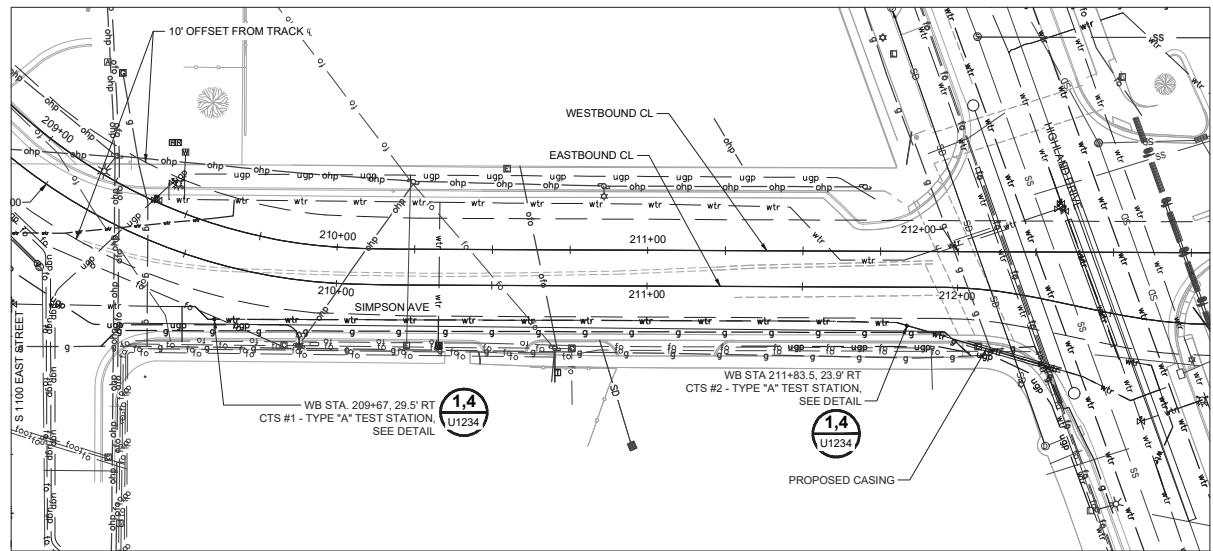
1. KEEP WORK SITE NEAT AND ORDERLY AT ALL TIMES. REMOVE EXCESS EQUIPMENT AND MATERIALS WHEN REQUIRED BY PREVAILING CONDITIONS. CONFINE OPERATIONS TO CONSTRUCTION EASEMENTS AND WORK AREAS. SITE SHALL BE RESTORED TO CONDITION EQUIVALENT TO THE ORIGINAL CONDITION AND TO THE SATISFACTION OF THE ENGINEER AND OWNER. PREVENT CONTAMINATION OF THE PROJECT AREA.
2. CATHODIC PROTECTION MATERIALS TO BE STORED OFF THE GROUND AND PROTECTED AGAINST WEATHER, CONDENSATION, AND MECHANICAL DAMAGE. WIRES SHOULD NOT BE BENT OR TIGHTLY COILED.
3. MATERIALS DAMAGED IN SHIPMENT OR INSTALLATION ARE TO BE REPLACED BY CONTRACTOR.
4. PIPELINE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ELECTRICAL ISOLATION OF THE NEW PIPELINE FROM EXISTING PIPELINES, CONCRETE REBAR, ELECTRICAL GROUNDING, CASINGS, PIPE SUPPORTS, PIPE LATERALS, OR OTHER METALLIC STRUCTURES.
5. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE PLANS FOR THIS PROJECT AND ACTUAL FIELD CONDITIONS WHICH MAY INTERFERE WITH THIS PROJECT.
6. USE THERMITE WELD METHOD FOR ELECTRICAL CONNECTION OF COPPER WIRE TO METALLIC SURFACES. FOLLOW MANUFACTURER'S PROCEDURES FOR INSTALLATION. ASSURE THAT THE PIPE OR FITTING WALL THICKNESS IS OF SUFFICIENT THICKNESS THAT THERMITE WELD PROCESS WILL NOT DAMAGE THE INTEGRITY OF THE PIPE OR FITTING OR PROTECTIVE LINING.
7. ALL TEST STATIONS TO BE INSTALLED ON THE SAME SIDE OF THE ROAD AS DETERMINED BY OWNER/PROJECT REPRESENTATIVE.

TEST STATION NOTES:

1. SEE TEST STATION SCHEDULE FOR LOCATION, TYPE, AND STYLE OF TEST STATIONS.
2. SEE DETAIL 1, SHEET U1234 FOR TYPE "A" TEST STATION AND ANODE INSTALLATION ON THE 12" DIP WATERLINE.
3. FLUSH MOUNT TEST STATION SHALL BE TRAFFIC RATED FLUSH MOUNTED CAST IRON BOX ASSEMBLY BY JENSEN PRECAST, MODEL BROOKS 1-RT OR EQUAL. TEST BOX SHALL BE CONCRETE BODY CAST WITH A CAST IRON RING, WITH A MINIMUM WEIGHT OF 54 POUNDS AND MINIMUM DIMENSIONS OF 8.75" INSIDE DIAMETER AND 12" LONG. FURNISH WITH A 12-POUND CAST IRON LID WITH WORDS "CP TEST" CAST INTO THE LID.
4. TEST LEADS TO BE #10 AWG. SOLID, RHW/USE-2 BLACK INSULATION OR AS SPECIFIED.
5. ALL WIRE CONNECTIONS TO BE WITH CRIMP ON SPADE LUG TERMINALS.
6. INSTALL PANDUIT LABEL TAGS ON ALL WIRES WITHIN TEST STATION BOX AND LABEL TAGS WITH FINE POINT WATERPROOF INK NYLON MARKER PEN.
7. IF POSSIBLE, INSTALL TEST STATIONS OVER CENTERLINE OF PIPE. PLACE TEST STATIONS ON PROTECTED LOCATIONS (NEXT TO FENCES, APPURTENANCES, OUT OF ROADWAYS, ETC.) OR OTHER EASILY ACCESSIBLE AREAS, WHERE REQUIRED, OFFSET TEST STATION TO EDGE OF ROAD.
8. NO BELOW GRADE SPlicing OF WIRES IS ALLOWED WITHOUT PRIOR APPROVAL FROM THE ENGINEER. CONTRACTOR SHALL ENSURE ALL WIRES ARE OF SUFFICIENT LENGTH FOR EACH INTENDED APPLICATION.
9. IN-LINE SPLICES WHERE DEEMED NECESSARY BY ENGINEER SHALL BE "C" TAPS MADE OF CONDUCTIVE WROUGHT IRON OF SIZE TO FIT THE WIRES BEING SPLICED. "BUTT" TYPE WIRE SPLICE CONNECTORS ARE ACCEPTABLE FOR #10 AWG OR SMALLER SPLICES. COAT SPLICES WITH SCOTCH 130C TAPE, SCOTCH SUPER 88 TAPE, AND SCOTCHKOTE ELECTRICAL COATING AS MANUFACTURED BY 3M PRODUCTS. 30 MIL LINERLESS RUBBER HIGH VOLTAGE SPlicing TAPE AND 7 MIL VINYL ELECTRICAL TAPE SUITABLE FOR MOIST OR WET ENVIRONMENTS AND DIRECT BURY.
10. PROVIDE A MINIMUM ANODE SPACING OF 5- FEET FROM ALL BURIED METALLIC STRUCTURES.
11. ANODES TO BE PREPACKAGED 32 LB. HIGH POTENTIAL MAGNESIUM, ASTM B843, GRADE M1C, AND TESTED IN ACCORDANCE WITH ASTM G97.
12. HEAVIER GALVANIC ANODES MAY BE SUBSTITUTED FOR 32-LB ANODES AT THE CONTRACTOR'S OPTION, BUT THE TOTAL QUANTITY OF ANODES REQUIRED WILL NOT CHANGE.
13. ANODES TO BE SUPPLIED WITH #12 AWG SOLID COPPER RHW/USE-2 BLACK INSULATION AND SUFFICIENT LENGTH AS REQUIRED TO REACH FROM PIPELINE TO TEST STATION WITHOUT SPlicing ADDITIONAL WIRE. UNSPLICED LEAD LENGTH REQUIRED TO BE VERIFIED BY CONTRACTOR.
14. ANODES TO BE BURIED A MINIMUM OF 5 FEET BELOW GRADE AT OR BELOW SPRINGLINE OF PIPE.
15. REMOVE ANODE FROM PLASTIC PACKAGING BEFORE INSTALLATION.
16. BORIN STEALTH 2 REFERENCE ELECTRODE, MODEL SRE-007-CUY, TO BE INSTALLED AT ALL TEST STATIONS ACCORDING TO MANUFACTURER INSTRUCTIONS OR AS SPECIFIED BY ENGINEER.
17. BACKFILL WITH NATIVE SOIL. A MINIMUM OF 12 INCHES AROUND ANY COUPONS, ANODES, AND REFERENCE CELLS. THEN FLOOD EACH WITH A MINIMUM OF 5 GALLONS FRESH WATER. AFTER WATER ABSORPTION, CONTINUE BACKFILLING AS SPECIFIED.
18. ROUTE ALL TEST LEADS AND COUPON WIRES IN APPROPRIATELY SIZED SCHEDULE 80 ASTM 1785 PVC CONDUIT BETWEEN THE PIPE AND THE TEST STATION BASE.
19. DURING BACKFILL, INSTALL CATHODIC PROTECTION WARNING TAPE: 3" PLASTIC, APWA BLUE, NON-DETECTABLE, MARKED "CAUTION CATHODIC PROTECTION CABLE BURIED BELOW." INSTALL 12"-18" ABOVE ANY CATHODIC PROTECTION WIRES OR DEVICES.

CONTINUITY BONDING AND COATING NOTES:

1. ALL BURIED METALLIC PRESSURE PIPING SYSTEMS, WHICH CONTAIN MECHANICAL OR NON-METALLURGICAL JOINTS, SHALL BE MADE ELECTRICALLY CONTINUOUS BY BONDING WITH STRANDED COPPER WIRE. DIRECT BONDING SHALL BE ACHIEVED USING THE EXOTHERMIC WELD PROCESS WITH THE NUMBER OF BOND WIRES REQUIRED, PER PIPE JOINT, AS SPECIFIED.
2. MAXIMUM ALLOWABLE RESISTANCE PER JOINT SHALL BE .162 MICRO-OHMS USING TWO BOND CABLES PER JOINT.
3. PROVIDE DIELECTRIC COATING ON ALL BURIED METALLIC FITTINGS, PIPING, AND VALVE BOXES, UNLESS SPECIFIED OTHERWISE.
4. BOND ALL ADJACENT FITTING JOINTS WHERE MULTIPLE METALLIC FITTINGS ARE INSTALLED TOGETHER WITH JOINT BONDS.
5. ALL BARE LINE PIPE, UNCOATED FLANGE BOLTS, UNCOATED MECHANICAL FITTING BOLTS, AND OTHER UNCOATED BOLTS, NUTS, FLANGES, OR FITTINGS WITH METALLIC COMPOSITION SHALL BE PROTECTED WITH WAX-TAPE PRIMER AND #1 WAX-TAPE AS MANUFACTURED BY TRENTON CORPORATION OR APPROVED EQUIVALENT AND APPLIED TO A THICKNESS OF 20 MILS.



SLCDPU SIMPSON AVENUE WATERLINE - CATHODIC PROTECTION OVERVIEW

SCALE: 1" = 20'



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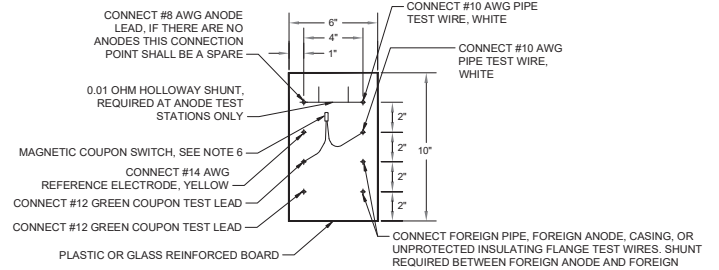
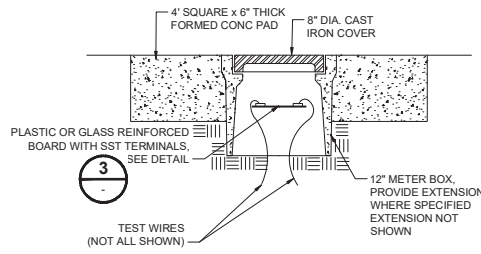
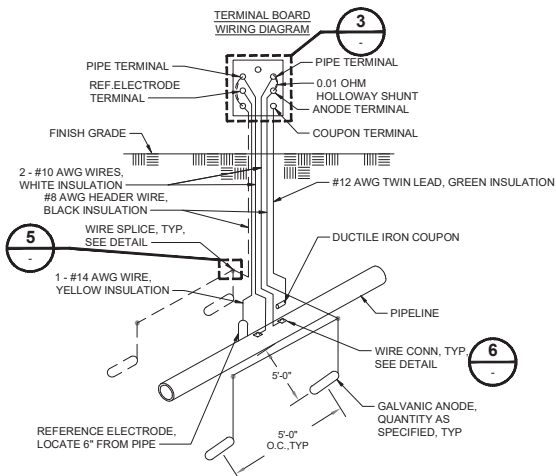
Designed By:	D. TREADWELL
Drawn By:	A. LEWIS
Checked By:	F. NANNENGA
Approved By:	D. TREADWELL

S-LINE EXTENSION PROJECT	
WATERLINE CATHODIC PROTECTION	
Submitted:	U1233

Scale:	1"=20'
CADD Filename:	SL-C-U-1-233.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	U1233
Sheet No.:	

Submitted By: _____

Approved By: _____



NOTES:
 1. COLOR CODE WIRE INSULATION AS SHOWN IN APPLICABLE TEST STATION DETAILS. CONNECT EACH TEST WIRE TO SEPARATE TERMINAL.
 2. WIRE CONFIGURATION FOR FLUSH MOUNTED TEST STATIONS SIMILAR TO POST MOUNTED TEST STATIONS.
 3. PROVIDE 18 INCHES SLACK IN TEST WIRES, MINIMUM

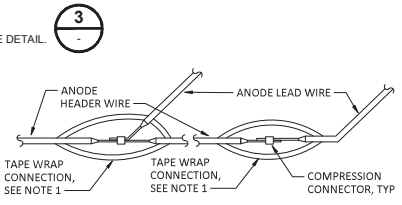
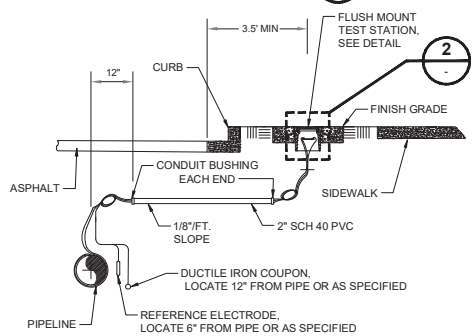
NOTES:
 1. TERMINAL BOARD LAYOUT FOR REFERENCE ONLY AND MAY BE DIFFERENT ON PHYSICAL BOARD.
 2. TERMINALS SHALL BE 1/4" STAINLESS STEEL WITH LOCKING WASHER, TWO FLAT WASHERS, AND DOUBLE NUTS.
 3. ALL WIRE CONNECTIONS TO BE WITH RING TONGUE COMPRESSION TERMINALS.
 4. INSTALL AND LABEL EACH TEST LEAD IN TEST STATION.
 5. TEST WIRES NOT SHOWN FOR CLARITY.
 6. ONE (1) COUPON TO BE INSTALLED OR AS SPECIFIED BY ENGINEER WITH MAGNETIC COUPON SWITCH INSTALLED BETWEEN COUPON TEST LEAD TERMINAL AND PIPE TEST LEAD TERMINAL FOR ALL TEST STATION TYPES.

FLUSH MOUNT TEST STATION (2)
 SCALE: NTS

TEST STATION TERMINAL BOARD (3)
 SCALE: NTS

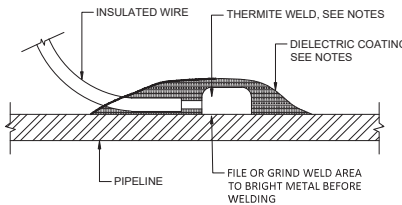
NOTES:
 1. SEE FLUSH MOUNTED TEST STATION DETAIL.
 2. POSITION STEEL COUPON 12" AND PARALLEL TO PIPE. COUPON SHOULD BE APPROX. 6" FROM REFERENCE ELECTRODE.
 3. SEE TEST STATION SCHEDULE FOR ANODE QUANTITY AND TYPE.
 4. INSTALL AND LABEL EACH TEST LEAD IN TEST STATION.
 5. NOT ALL TEST WIRES SHOWN FOR CLARITY. FOR TERMINAL BOARD LAYOUT, SEE DETAIL.

TYPE A TEST STATION (1)
 SCALE: NTS



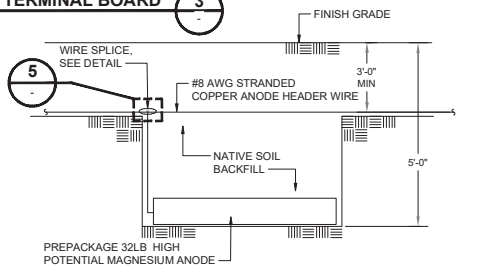
NOTES:
 1. FILL VOIDS AND IRREGULARITIES WITH INSULATING PUTTY. WRAP CONNECTION WITH TWO LAYERS OF SCOTCH 130C SELF VULCANIZING RUBBER TAPE AND TWO LAYERS OF SCOTCH 88 VINYL ELECTRICAL TAPE.
 2. DETAIL SIMILAR FOR ANODE HEADER WIRE SPLICES. SIZE COMPRESSION CONNECTORS AS REQUIRED.

GALVANIC ANODE WIRE SPLICES (5)
 SCALE: NTS



NOTES:
 1. COPPER SLEEVE REQUIRED FOR #2 AWG JOINT BONDS OR FOR #12 AWG OR SMALLER TEST WIRES.
 2. WELDER AND CARTRIDGE SIZE VARIES ACCORDING TO PIPE SIZE AND PIPE MATERIAL. CONSULT WELDER MANUFACTURER FOR RECOMMENDED WELDER AND CARTRIDGE
 3. COAT ALL THERMITE WELDS, PIPE, AND EXPOSED COPPER WIRE AS SPECIFIED.
 4. PIPELINE COATING NOT SHOWN FOR CLARITY.

STEEL AND DUCTILE IRON PIPE WIRE CONNECTION (6)
 SCALE: NTS



NOTES:
 1. ANODES TO BE INSTALLED HORIZONTALLY UNLESS SPECIFIED OTHERWISE.
 2. ANODES INCLUDE AN ATTACHED LEAD WIRE FOR INSTALLATION.
 3. REMOVE ANODE FROM PLASTIC BEFORE INSTALLATION.
 4. ENSURE ANODES ARE NOT IN CONTACT WITH ANY OTHER BELOW GRADE STRUCTURES.
 5. AFTER ANODE INSTALLATION, BACKFILL TO 1-FOOT OVER THE ANODES. WATER ANODES WITH 5 GALLONS OF WATER PER ANODE, IF SOILS ARE DRY AS DETERMINED BY THE ENGINEER.
 6. WHEN POSSIBLE, PLACE ANODES WITHIN MOIST LOAM AND CLAY SOIL. AVOID PLACEMENT OF ANODES WITHIN DRY SAND AND DO NOT PLACE WITHIN GRAVEL.

HORIZONTAL GALVANIC ANODE INSTALLATION (7)
 SCALE: NTS

NOTES:
 1. FILL BOTH ENDS OF CONDUIT WITH DUCT PUTTY.
 2. ALL WIRES WILL BE SPLICED USING THE SAME COLOR CODE AS EXISTING WIRES, AND THE SAME TYPE WIRE.

TEST STATION OFFSET (4)
 SCALE: NTS

CATHODIC PROTECTION TEST STATION SCHEDULE					
CTS #	STATION	TYPE	STYLE	NUMBER AND BARE WEIGHT OF HIGH POTENTIAL MAGNESIUM ANODES	REMARKS
1	TBD	A	FLUSH	4 - 32 LB.	OFFSET TEST STATION AS SHOWN IN PLAN VIEW
2	TBD	A	FLUSH	4 - 32 LB.	OFFSET TEST STATION AS SHOWN IN PLAN VIEW.

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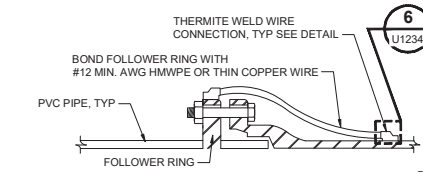
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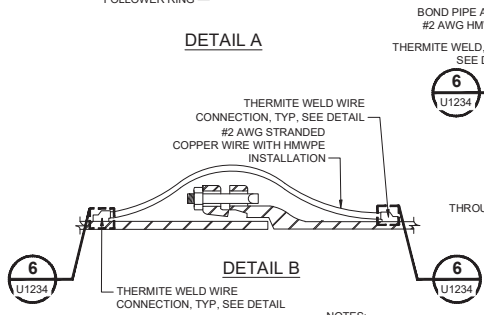
Designed By: D. TREADWELL
 Drawn By: A. LEWIS
 Checked By: F. NANNENGA
 Approved By: D. TREADWELL

S-LINE EXTENSION PROJECT
 CATHODIC PROTECTION DETAILS 1 OF 2

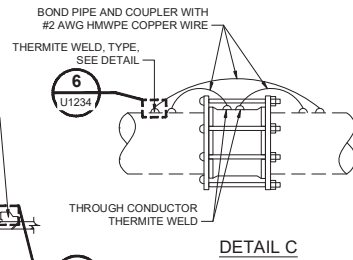
State	NTS
CADD Filename	SL-C-U-1-234.dwg
Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	U1234
Sheet No.	



DETAIL A



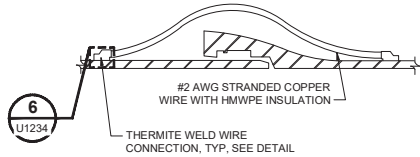
DETAIL B



DETAIL C

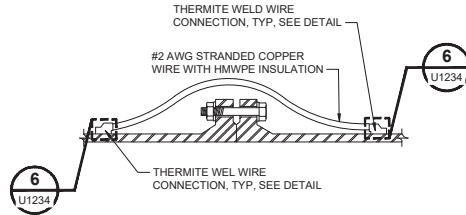
- NOTES:**
1. INSTALL NUMBER OF BOND WIRES SPECIFIED PER JOINT FOR PIPE DIAMETER AND MATERIAL.
 2. COAT ALL THERMITE WELDS, PIPE, AND EXPOSED COPPER WIRE WITH AQUATA-POXY, WAX TAPE, DENSO PROTAL 7200, OR COATING SYSTEM AS SPECIFIED.
 3. PIPELINE COATING NOT SHOWN FOR CLARITY.

MECHANICAL JOINT BOND 8
SCALE: NTS



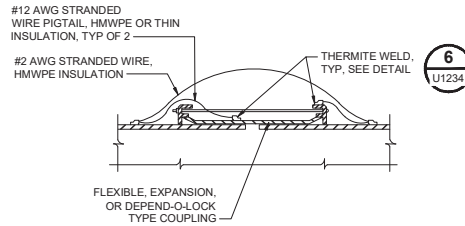
- NOTES:**
1. PUSH ON DUCTILE IRON BOND SHOWN, SIMILAR FOR DUCTILE MECHANICAL AND RESTRAINED JOINTS, AND STEEL CARNEGIE JOINTS.
 2. INSTALL NUMBER OF BOND WIRES SPECIFIED PER JOINT FOR PIPE DIAMETER AND MATERIAL.
 3. COAT ALL THERMITE WELDS, PIPE, AND EXPOSED COPPER WIRE WITH AQUATA-POXY, WAX TAPE, DENSO PROTAL 7200, OR COATING SYSTEM AS SPECIFIED.
 4. PIPELINE COATING NOT SHOWN FOR CLARITY.

DUCTILE IRON JOINT BOND 10
SCALE: NTS

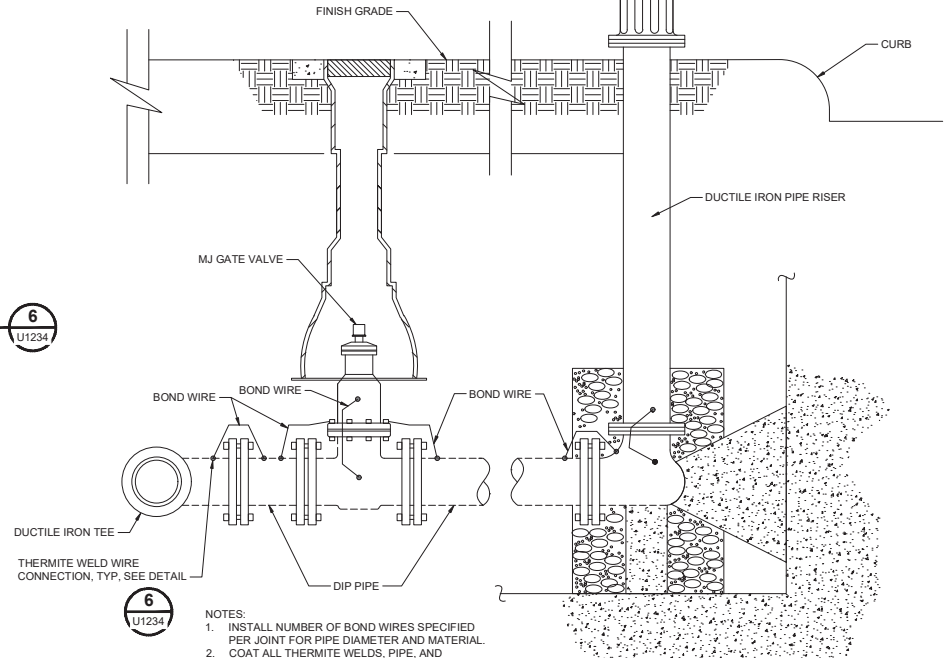


- NOTES:**
1. INSTALL NUMBER OF BOND WIRES SPECIFIED PER JOINT FOR PIPE DIAMETER AND MATERIAL.
 2. COAT ALL THERMITE WELDS, PIPE, AND EXPOSED COPPER WIRE WITH AQUATA-POXY, WAX TAPE, DENSO PROTAL 7200, OR COATING SYSTEM AS SPECIFIED.
 3. PIPELINE COATING NOT SHOWN FOR CLARITY.

FLANGED JOINT BOND 11
SCALE: NTS



- NOTES:**
1. INSTALL NUMBER OF BOND WIRES SPECIFIED PER JOINT FOR PIPE DIAMETER AND MATERIAL.
 2. COAT ALL THERMITE WELDS, PIPE, AND EXPOSED COPPER WIRE, WITH AQUATA-POXY, WAX TAPE, DENSO PROTAL 7200, OR COATING SYSTEM AS SPECIFIED.
 3. PIPELINE COATING NOT SHOWN FOR CLARITY.
- FLEXIBLE JOINT BOND 9**
SCALE: NTS

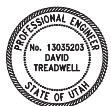


- NOTES:**
1. INSTALL NUMBER OF BOND WIRES SPECIFIED PER JOINT FOR PIPE DIAMETER AND MATERIAL.
 2. COAT ALL THERMITE WELDS, PIPE, AND EXPOSED COPPER WIRE WITH AQUATA-POXY, WAX TAPE, DENSO PROTAL 7200, OR COATING SYSTEM AS SPECIFIED.
 3. PIPELINE COATING NOT SHOWN FOR CLARITY.

FIRE HYDRANT BONDING 12
SCALE: NTS

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Designed By: D. TREADWELL
 Drawn By: A. LEWIS
 Checked By: F. NANNENGA
 Approved By: D. TREADWELL

S-LINE EXTENSION PROJECT

CATHODIC PROTECTION
 DETAILS 2 OF 2

State	NTS
CADD Filename	SL-C-U-1-235.dwg
Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	U1235
Sheet No.	

Submitted By:

Approved By:

ABBREVIATIONS

GENERAL NOTES

AB ABUT ABV ACI ADJ A/G AHD AISC	ANCHOR BOLT ASUREMENT ABOVE AMERICAN CONCRETE INSTITUTE ADJACENT AT GRADE AHEAD AMERICAN INSTITUTE OF STEEL CONSTRUCTION	ELEC EL EQ EQN EQUIP EOS ES	ELECTRIC, ELECTRICAL ELEVATION EQUAL EQUATION EQUIPMENT ELECTRICAL OPERATED SWITCH EXTRA STRENGTH	M MAX MCM MD MH MI MIN ML MOP MOS MOW MPA MPH MSO MW	MEDIUM LOADING MAXIMUM SEE KCMIL MAXIMUM DISPLACEMENT MANHOLE MILD IRON MINIMUM MAIN LINE MOTOR OPERATED MANUALLY OPERATED SWITCH MAINTENANCE OF WAY MIDPOINT ANCHOR MILES PER HOUR MIDSPAN OFFSET MESSENGER WIRE	S SB SCADA SC SCAT SE SECT SHT SIG SIG SIM SL SLC SOP SP SPTC	SOUTH SOUTHBOUND SUPERVISORY CONTROL & DATA ACQUISITION SPIRAL TO CURVE SIMPLE CATENARY AUTO TENSION SUPER ELEVATION SECTION SHEET SECTION INSULATOR (NOTE 15) SIMILAR STRINGLINE SALT LAKE CITY SETOUT POINT SPRING SOUTHERN PACIFIC TRANSPORTATION COMPANY
ANC APPROX AREMA ASSY ASTM	ANCHOR APPROXIMATE AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION ASSEMBLY AMERICAN SOCIETY OF TESTING & MATERIALS	F F/F FBO FDN FDR FFJ FG FJ FOP FOS FP FT FTK FUT FWY	FAHRENHEIT FACE TO FACE FURNISHED BY OTHERS FOUNDATION FEEDER FULL FEEDING JUMPER FINISH GRADE FEEDER JUMPER FACE OF POLE FACTOR OF SAFETY FULL PENETRATION FOOT, FEET FOOT KIPS FUTURE FREEWAY	N (N) N/A NB NBR NC NEC NESC NF NIC NO No NOM NR NS NSR NTS	NORTH NEW NOT APPLICABLE NONBRIDGING (NOTE 15) NORMALLY CLOSED NATIONAL ELECTRICAL CODE NATIONAL ELECTRICAL SAFETY CODE NEAR FACE NOT IN CONTRACT NORMALLY OPEN NUMBER NOMINAL NOT REGISTERED NOT SUPPORTED NOT SUPPORTED OR REGISTERED NOT TO SCALE	SPC SPS SPST SQ. S/SPAN SST STA STN STC STD STL STRUC/STR SUB SW SWA SWAT SWFT SWST	SPECIFICATION SMALL PART STEELWORK SINGLE POLE SINGLE THROW SQUARE STEADY SPAN STAINLESS STEEL SPIRAL TO TANGENT STATION, STATIONING SINGLE TRACK CANTILEVER STANDARD STEEL STRUCTURE SUBSTATION SWITCH SINGLE WIRE ANCHOR SINGLE WIRE AUTO TENSION SINGLE WIRE-FIXED TERMINATED SINGLE WIRE SPRING TENSION
BAT B/B BC BEG BFA BK BKR BL BLDG BM BO BR BRKT BTM BTWN BW BWA BZ	BATTERY BACK TO BACK BOLT CIRCLE BEGIN BY PASS FEEDER ANCHOR BACK BREAKER BASE LINE BUILDING BENDING MOMENT BLOW-OFF BRIDGE BRACKET BOTTOM BETWEEN BALANCE WEIGHT BALANCE WEIGHT ANCHOR BRONZE	GA GALV GI G/L GND GRS GRX GW H HD HDX HEX HH HO HORZ HRL H/SPAN HS HT HWY	GAUGE GALVANIZED GENERAL INFORMATION GROUND LINE GROUND GALVANIZED RIGID STEEL GRADE CROSSING GUY WIRE HEAVY LOADING HARD DRAWN HOT DIP GALVANIZED HEXAGONAL HANDHOLE HAND OPERATED HORIZONTAL HIGH RAIL LEVEL HEADSPAN HIGH STRENGTH HEIGHT HIGHWAY	PAN PB PC PEJ PI PITD PKT PL P/L PS PSF PSI PT PVC PNL PO QTY (R) RAD R/A RE REF RC RD RE-BAR REINF REQD RET WALL REV R/L RMP ROW RT RTU RR RRX RGS	PANTOGRAPH PULL BOX POINT OF CURVE POTENTIAL EQUALIZING JUMPER POINT OF FROG POINT OF INTERSECTION POINT OF INTERSECTION OF TURNOUT POCKET TRACK PLATE PROPERTY LINE POINT OF SWITCH POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POINT OF TANGENT POLYVINYL CHLORIDE PANEL PULL OFF QUANTITY RELOCATE OR REMOVE AND SALVAGE RADIUS ROCK ANCHOR RUNNING EDGE OF RAIL REFERENCE REINFORCED CONCRETE ROAD CONCRETE REINFORCING BAR REINFORCED REQUIRED RETAINING WALL REVISION RIGHT/LEFT ROCKY MOUNTAIN POWER RIGHT-OF-WAY RIGHT REMOTE TERMINAL UNIT RAILROAD RAILROAD GRADE CROSSING RIGID GALVANIZED STEEL	TAN TBD TC TEMP TEM TERM TOF T/G TL T/LR T/C TPSS TOR TRK/TK TS TTIC TWA TYP UBC UG UGB UPRR U/S UNINS UNO UTA UTL VAR VERT VLM W WR WB WP WT WW WWF XFMR XING X/O X/SECT X/CAT X/SPAN	TANGENT TO BE DETERMINED TRACK CENTER TEMPERATURE TEMPORARY TERMINATION TOP OF FOUNDATION TOP OF FINISH GRADE TENSION LENGTH TOP OF LOW RAIL TOP OF CURB, TOP OF CONCRETE TRACTION POWER SUBSTATION TOP OF RAIL (NEAREST HIGH RAIL) TRACK TANGENT TO SPIRAL TWO TRACK CANTILEVER TIE WIRE ANCHOR TYPICAL UNIFORM BUILDING CODE UNDERGRADE, UNDERGROUND UNDERGRADE BRIDGE UNION PACIFIC RAIL ROAD UNDERSIDE UNINSULATED UNLESS OTHERWISE NOTED UTAH TRANSIT AUTHORITY UTILITY VARIES VERTICAL VEHICLE LATERAL MOVEMENT WEST, WATT WIRE RUN WESTBOUND WOOD POLE WEIGHT WALKWAY WELDED WIRE FABRIC TRANSFORMER CROSSING CROSSOVER CROSS SECTION CROSS CATENARY CROSS SPAN
AT ATM ATR ATS AWG AWS AUX BAT B/B BC BEG BFA BK BKR BL BLDG BM BO BR BRKT BTM BTWN BW BWA BZ CAB CANT CF CIDH CKT CLR C COMM CONC COND CONST CONT CONTR CR CS CTR CTRS C TO C CU CW CWA CWH DEG DET DGA DIA OR Ø DIM DISC DISC SW DE DISTR DSG DWG. (E),EXIST E EA EB EHS	AUTOTENSIONED ALONG TRACK MOVEMENT ABOVE TOP OF RAIL AUTOTENSIONED SYSTEM AMERICAN WIRE GAUGE AMERICAN WELDING SOCIETY AUXILIARY BATTERY BACK TO BACK BOLT CIRCLE BEGIN BY PASS FEEDER ANCHOR BACK BREAKER BASE LINE BUILDING BENDING MOMENT BLOW-OFF BRIDGE BRACKET BOTTOM BETWEEN BALANCE WEIGHT BALANCE WEIGHT ANCHOR BRONZE CABINET CANTILEVER CUBIC FEET CAST-IN DRILLED HOLE CIRCUIT CLEARANCE CENTER LINE COMMUNICATION CONCRETE CONDUIT CONSTRUCTION CONTINUOUS, CONTINUATION CONTRACTOR CONDUIT RISER CURVE TO SPIRAL CENTER CENTERS CENTER LINE TO CENTER LINE COPPER CONTACT WIRE CONTACT WIRE ANCHOR CONTACT WIRE HEIGHT DEGREE DETAIL DOWN GUY ANCHOR DIAMETER DIMENSION DISCONNECT DISCONNECT SWITCH DEAD END DISTRIBUTION DISCONNECT SWITCH GROUP DRAWING EXISTING EAST EACH EASTBOUND EXTRA HIGH STRENGTH	IB ID IMP INCH INSR INSUL IR I/S I/SJ J JB JCT K KCMIL KSF KSI KW L LA LB LB/FT LF LG LGTH LOC LPSCAT LPSCAT LPT LR LRT LRV LT	IMPEDANCE BOND INSIDE DIAMETER INSULATED MIDPOINT INCH INSULATOR INSULATION IN-RUNNING (RIDING CONTACT WIRE) IN-SPAN IN-SPAN JUMPER JUMPER JUNCTION BOX JUNCTION KIP, KILO THOUSAND CIRCULAR MILS KIPS PER SQUARE FEET KIPS PER SQUARE INCH KILOWATT LIGHT LOADING LIGHTNING ARRESTER POUND POUNDS PER FOOT LINEAR FOOT LONG LENGTH LOCATION LOW PROFILE SIMPLE CATENARY-AUTO TENSION TERMINATION LOW PROFILE SIMPLE CATENARY-AUTO TENSION LOW POINT LOW RAIL LIGHT RAIL TRANSIT LIGHT RAIL VEHICLE LEFT	PAN PB PC PEJ PI PITD PKT PL P/L PS PSF PSI PT PVC PNL PO QTY (R) RAD R/A RE REF RC RD RE-BAR REINF REQD RET WALL REV R/L RMP ROW RT RTU RR RRX RGS			

- ASSEMBLIES AND COMPONENTS IN THE DRAWING PACKAGE ARE GENERIC IN NATURE. SUPPLIERS ARE ENCOURAGED TO SUPPLY UTA STANDARD ASSEMBLIES OR THEIR OWN STANDARD ASSEMBLIES AND COMPONENTS THAT MEET THE SPECIFIED DIMENSIONS AND LOADING REQUIREMENTS, AND ARE PROVEN IN SIMILAR APPLICATIONS.
- DETAILING OF THE OCS ASSEMBLIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. ALL ASSEMBLIES SHALL MEET THE REQUIREMENTS OF THE SPECIFICATION. ALL OCS SUPPORT AND REGISTRATION ASSEMBLIES SHALL CLEAR THE PANTOGRAPH CLEARANCE ENVELOPE.
- AESTHETICS SHALL BE A MAJOR CONSIDERATION IN THE DESIGN, IN ORDER TO MINIMIZE VISUAL IMPACT. WELL BLENDED, IF POSSIBLE, REDUCED SYSTEM HEIGHT ASSEMBLIES AND COMPONENTS SHALL BE USED.
- HANGER LENGTHS SHOWN ON CALCULATION SHEETS ARE MEASURED FROM CENTERLINE OF MESSENGER TO BOTTOM OF CONTACT WIRE AND ARE GIVEN FOR REFERENCE ONLY.
- LOADINGS SHOWN ON ASSEMBLY DRAWINGS ARE FOR REFERENCE AND INFORMATION ONLY. THE CONTRACTOR SHALL DETERMINE THE ACTUAL LOADING RANGES FOR THE HARDWARE AND ASSEMBLIES BEING FURNISHED.
- POLE ATTACHMENT DEVICES AND HARDWARE SHALL BE SUITABLE FOR THE APPLICATION FOR WHICH IT IS INTENDED. FOR EXAMPLE, CROSS SPAN ATTACHMENTS MAY BE BOLTED FORMED STEEL BRACKETS, POLE BANDS OR WIRE SLINGS.
- STRAIN INSULATORS SHALL BE OF THE NONCERAMIC ROD TYPE, WITHOUT WEATHER SHEDS.
- PAD-MOUNTED DISCONNECT SWITCHES ARE SHOWN IN TRACTION POWER DRAWINGS.
- OVERHEAD CONTACT WIRE HEIGHTS ARE REFERENCED TO THE TOP OF HIGH RAIL LEVEL OF THE TRACK AT EACH SUPPORT LOCATION.
- INSTALLATION OF THE OVERHEAD CATENARY SYSTEM SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS AND THE LOCAL CODES.
- ALONG TRACK STATIONING AND OFFSET OF THE CATENARY POLE FOUNDATIONS SHALL BE VERIFIED FROM AS BUILT TRACK BY THE CONTRACTOR PRIOR TO COMMENCING WORK.
- CATENARY POLE OFFSET DIMENSIONS, UNLESS OTHERWISE INDICATED, ARE MEASURED FROM THE CENTERLINE OF MAINLINE TRACK TO THE CENTERLINE OF POLE AT TRACK LEVEL, AND MUST BE VERIFIED PRIOR TO THE FABRICATION OF ANY CATENARY ASSEMBLIES.
- THE OCS STRUCTURE LAYOUT AND STATIONING ARE BASED ON THE ALIGNMENT PLAN AND PROFILE DRAWINGS. CHANGES TO THE ALIGNMENT IN ANY LINE SECTION MAY REQUIRE REVISIONS TO THE ASSOCIATED CATENARY LAYOUT PLAN OR PLANS.
- ALL PARALLEL FEEDER CLAMPS SHOULD BE TESTED AT THE RECOMMENDED TORQUE VALUES.
- SECTION INSULATORS WILL BE BRIDGING TYPE UNLESS ANNOTATED 'NBR' - NON-BRIDGING TYPE.
- LOADINGS GIVEN IN ASSEMBLY DRAWINGS SHALL BE CONSIDERED AS MAXIMUM FOR THE ASSEMBLY ANNOTATED.
- ALL CURRENT CARRYING CLAMPS ON JUMPERS AND CABLES SHALL BE "DUPLICATE."
- OCS SUPPLIER TO ENSURE ALL INSULATION REQUIREMENTS ARE MET.

TERMINOLOGY:
FOR PREFERRED OCS TERMINOLOGY SEE IEEE P1791 DRAFT RECOMMENDED PRACTICE FOR TERMINOLOGY USED FOR DIRECT CURRENT ELECTRIC TRANSIT OVERHEAD CONTACT SYSTEMS.

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REV	DATE	Description



Designed By	B.DEMERS
Drawn By	N.WU
Checked By	Y.LIU
Approved By	B.DEMERS

S-LINE EXTENSION PROJECT	
GENERAL	
OVERHEAD CONTACT SYSTEM ABBREVIATIONS AND GENERAL NOTES	

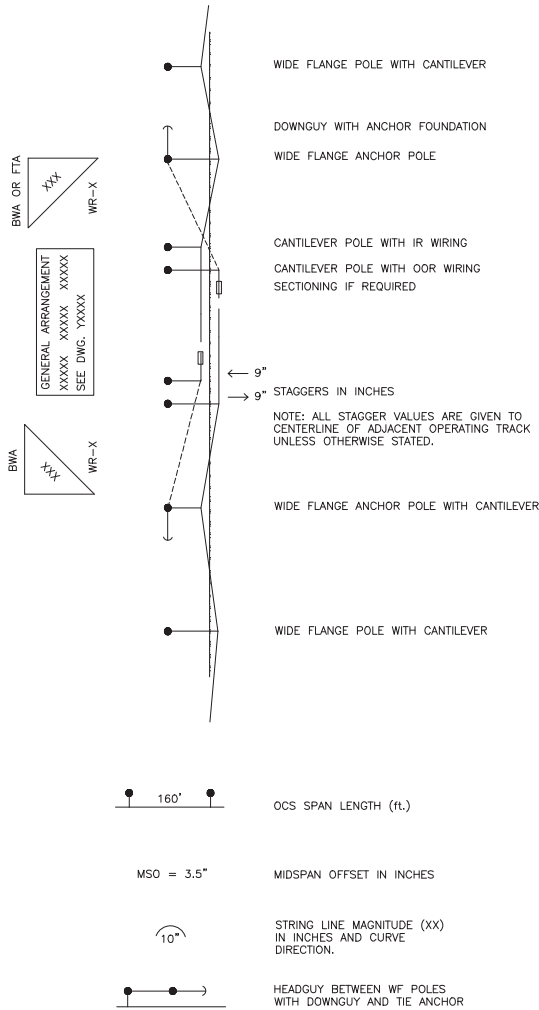
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CADD Filename	SL-C-Y-0-001.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y0001

Submitted By: _____

Approved By: _____

SYMBOLS

SAMPLE OCS WIRING LAYOUT



	DSC	DISCONNECT SWITCH (NORMALLY CLOSED)
	FP	FEEDER POLE
	WR-X	WIRE RUN (NUMBER)
		ZERO STAGGER
	CB	CONTACT BRIDGE
		JUMPER, IN-SPAN
		JUMPER, POTENTIAL EQUALIZING
		JUMPER, CONTINUITY
	SI	SECTION INSULATOR
	ST	SPRING TENSIONER TERMINATION WITH DISTANCE TO MPA OR FTA
	MPA	MIDPOINT ANCHOR LOCATION WITH DISTANCE TO BALANCE WEIGHT ASSEMBLY
	FTA	FIXED END TERMINATION WITH DISTANCE TO BALANCE WEIGHT ASSEMBLY
	TPSS	TRACTION POWER SUBSTATION
		PASSENGER STATION
	GENERAL ARRANGEMENT XXXXX XXXXX XXXXX SEE DWG. YXXXX	WIRING REFERENCE DRAWING CALLOUT
		EXISTING OCS POLE

STRUCTURAL NOTES:

- A) GENERAL:
- ALL STRUCTURAL STEEL SHALL BE ASTM A36, A570, A572, A595, A992 OR AS NOTED ON THE DRAWING AND SPECIFICATIONS.
 - ALL STEEL SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A123 FOR STRUCTURAL STEEL AND ASTM A153 FOR STEEL HARDWARE.
 - ALL FIELD CONNECTIONS SHALL BE BOLTED UNLESS OTHERWISE NOTED.
 - ALL DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE PERFORMED IN ACCORDANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
 - ALL WELDING SHALL CONFORM TO STRUCTURAL WELDING CODE AWS D.1.1., LATEST EDITION. ELECTRODES SHALL BE E70-XX.
 - ALL CONNECTION BOLTS, EXCEPT THE FOUNDATION ANCHOR BOLTS, SHALL BE EITHER A307 UNFINISHED MACHINE BOLT OR A325 HIGH TENSION BOLT, HEXAGONAL HEAD COMPLETE WITH HEX NUT AND WASHER, AS INDICATED ON CONTRACT PLANS AND SHALL BE GALVANIZED IN ACCORDANCE WITH THE SPECIFICATION, UNLESS OTHERWISE NOTED.
 - SIZE OF THE CONNECTION BOLT HOLES TO BE 1/16" LARGER THAN BOLT DIAMETER, UNLESS OTHERWISE NOTED.
 - ALL DIMENSIONS, DETAILS AND ELEVATIONS OF EXISTING ITEMS INCLUDING TRACK TOLERANCES SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD PRIOR TO THE FABRICATION OF OCS CANTILEVER SUPPORTS AND ALL APPURTENANT COMPONENTS AND ASSEMBLIES.
 - THE CONTRACTOR SHALL VERIFY THE LOCATION, OFFSET, ELEVATION RELATIVE TO THE MAINLINE TOP OF HIGH RAIL AND FOUNDATION TYPE INCLUDING THE ANCHOR BOLT PATTERNS PRIOR TO FINAL INSTALLATION OF POLES, GUYS AND HARDWARE.
- B. FOUNDATIONS
- OFFSET DIRECTION IS DETERMINED LOOKING IN THE DIRECTION OF INCREASING STATIONING.
 - TOP OF FOUNDATION LEVEL IS IN REFERENCE TO THE TOP ADJACENT RAIL.
 - REMOVE TOP 2' OF TOP SOIL AND REPLACE WITH GRANULAR FILL. LIMITS ARE 10'-0" ALONG TRACK BY 5'-0" NORMAL WITH FOUNDATION CENTERED IN LIMITS. FOUNDATION DEPTH REMAINS 12' BUT REQUIRES THE ADDITION OF 2 - #8 BARS.
 - FOR POLE GROUNDING DETAILS SEE DWG. B3001.
 - REMOVE TOP 3' OF TOP SOIL AND REPLACE WITH GRANULAR FILL. LIMITS ARE 10'-0" ALONG TRACK BY 8'-0" NORMAL TO TRACK. FOUNDATION SHALL BE CENTERED ALONG TRACK DIMENSION, BUT SHIFTED 1'-0" IN THE NORMAL DIMENSION SO THAT 5'-0" OF REPLACEMENT AREA IS PROVIDED NEAREST THE TRACK. NOTE THAT DIAMETER OF FOUNDATION IS 3'-6".
 - REMOVE TOP 3' OF TOP SOIL AND REPLACE WITH GRANULAR FILL. LIMITS ARE BOUNDED BY SIDEWALK ON WEST AND SOUTH SIDES, AND FENCE ON NORTH AND EAST SIDES. NOTE THAT DIAMETER OF FOUNDATION IS 3'-6"
 - REMOVE TOP 3' OF TOP SOIL AND REPLACE WITH GRANULAR FILL. LIMITS ARE 10'-0" ALONG TRACK BY 3'-6" NORMAL WITH FOUNDATION CENTERED IN LIMITS. NOTE THAT DIAMETER OF FOUNDATION IS 3'-6"
 - REMOVE TOP 3' OF TOP SOIL AND REPLACE WITH GRANULAR FILL. LIMITS ARE 10'-0" ALONG TRACK BY 5'-0" NORMAL WITH FOUNDATION CENTERED IN LIMITS. NOTE THAT DIAMETER OF FOUNDATION IS 3'-6".
 - CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH FORCE OF 5,000 PSI
 - STEEL REINFORCEMENTS SHALL COMPLY WITH ASTM A615 WITH A MINIMUM YIELD STRENGTH OF 60 KSI

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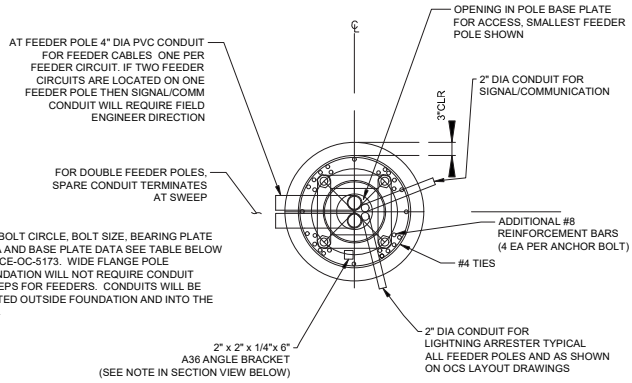
Designed By	B.DEMERS
Drawn By	N.WU
Checked By	Y.LIU
Approved By	B.DEMERS

S-LINE EXTENSION PROJECT
GENERAL
OVERHEAD CONTACT SYSTEM
STANDARD SYMBOLS AND STRUCTURAL NOTES

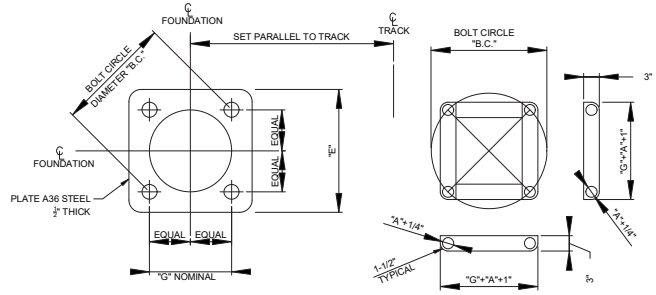
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Drawing No.	Y0002
Sheet No.	

Submitted By: _____

Approved By: _____

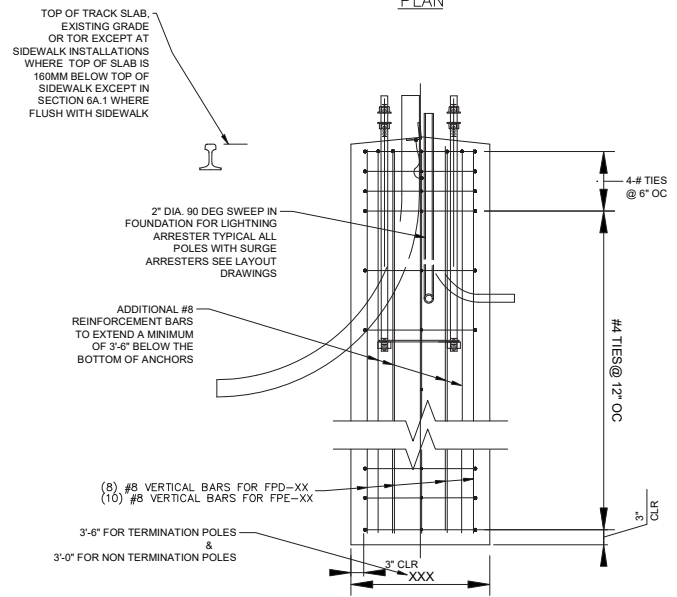


PLAN

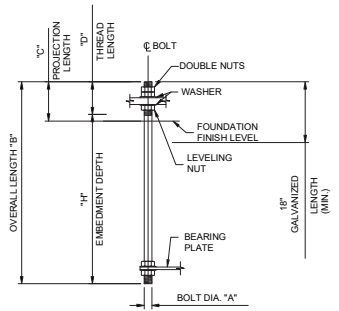


TEMPLATE DETAIL "C"
SCALE: NTS

BEARING PLATE DETAIL "B"
SCALE: NTS



FOUNDATION TYPE FPE-XX
POLE TYPE PD-XX, PE-XX
SCALE: NTS



ANCHOR BOLT DETAIL (TYPICAL)

*FOUNDATION REFERENCE	BOLT CIRCLE "B.C."	BASE PLATE SIZE "E"	BASE PLATE THICKNESS	BOLT DIAMETER "A"	BOLT SPACING "G"	EMBEDMENT DEPTH "H"	BOLT PROJECTION "C"	BOLT THREAD LENGTH "D"	OVERALL BOLT LENGTH "B"	***MAX ALLOWABLE DESIGN MOMENT (kip*ft)	POLE TYPE
FPE-14	22"	23"	2"	2"	15.56"	50"	12"	10"	54"	66	PD-XX OR PE-XX
FPE-16	22"	23"	2"	2"	15.56"	50"	12"	10"	54"	99	PD-XX OR PE-XX
FPE-18	22"	23"	2"	2"	15.56"	50"	12"	10"	54"	143	PD-XX OR PE-XX
FPE-20 (Term.)	22"	23"	2"	2"	15.56"	50"	12"	10"	54"	175	PD-XX OR PE-XX
FPE-20(Non-Term)	22"	23"	2"	2"	15.56"	50"	12"	10"	54"	250	PD-XX OR PE-XX

NOTES:
 * THE LATTER PORTION OF THE FOUNDATION REFERENCE (4.6, 5.5, 6.1, 7.6) INDICATES THE FOUNDATION DEPTH IN METRES.
 ** "F" REPRESENTS FEEDER POLE. "BW" REPRESENTS BALANCE WEIGHT POLE. SEE OCS LAYOUT PLANS.
 *** THE MAXIMUM ALLOWABLE DESIGN MOMENTS ARE BASED ON FOUNDATION DRILLED PIER CALCULATIONS AND ARE DESIGNED TO LIMIT THE DEPTH PIER WHILE MEETING THE REQUIREMENTS FOR OCS POLE STRENGTH. FOR GENERAL NOTES, SEE DRAWING CE-OC-5173.

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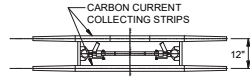
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Drawn By S.KHAYYAT
Checked By Y.LIU
Approved By B.DEMERS

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OCS POLE FOUNDATIONS

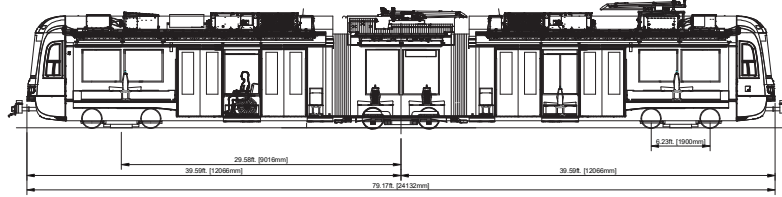
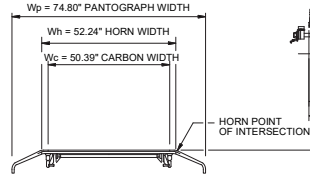
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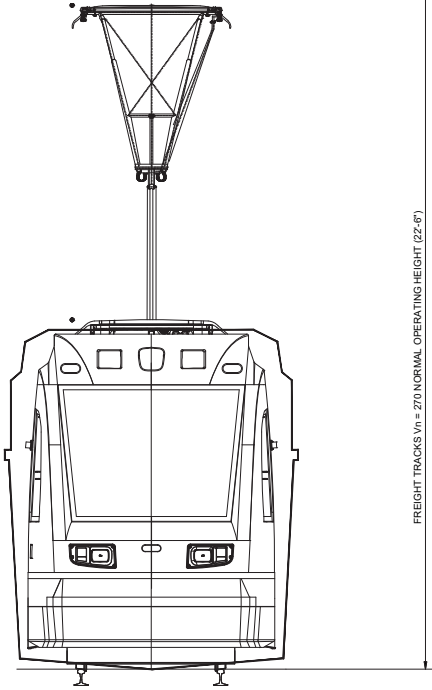
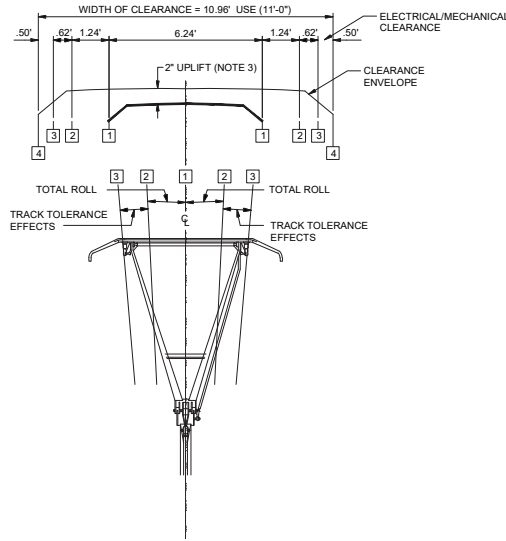
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PAN HEAD PLAN



VEHICLE CRITERIA



CONTACT WIRE OPERATING HEIGHTS

UNIVERSAL PANTOGRAPH CLEARANCE ENVELOPE FOR ALL CONTACT WIRE HEIGHTS ON ALL UTA LINES

NOTES:

1. FOR UNIVERSAL PANTOGRAPH CLEARANCE PURPOSES, TRACK TOLERANCES ARE TAKEN FROM AIRPORT LRT .
2. PER DESIGN CRITERIA CHAPTER 11.
3. CONTACT WIRE UPLIFT ALLOWANCE INTERPRETED AS 2\"/>

SELECTED MAIN LINE TRACK PARAMETERS FOR CLEARANCE ENVELOPE		
DESCRIPTION	IN	FT
GAUGE	56.50	4.71
HORIZONTAL ALIGNMENT TOLERANCE (SEE NOTE 1)	1.5	0.13
CROSS LEVEL TOLERANCE (SEE NOTE 1)	1.25	0.10
RAIL CENTERS (NOTE 1)	69.22	4.94

VEHICLE PARAMETERS		
DESCRIPTION	IN	FT.
TRUCK ROLL CENTER HEIGHT (NOTE 1)	25.15	2.10
LATERAL SHIFT AT TRUCK ROLL CENTER (NOTE 2)	2.0	0.17
MAXIMUM VEHICLE REPETITIVE ROLL ANGLE (NOTE 2)	3 DEGREES	

PANTOGRAPH PARAMETERS		
DESCRIPTION	IN	FT
OVERALL WIDTH OVER HORNS	74.80	6.23
PANTOGRAPH ROLL AT ALL HEIGHTS (NOTE 2)	2.0	0.17
PANTOGRAPH UPLIFT ALLOWANCE (NOTE 1) (NOTE 3)	2.0	0.17
MAXIMUM PANTOGRAPH OPERATING HEIGHT (NOTE 2)	276	23.00
MINIMUM PANTOGRAPH OPERATING HEIGHT (NOTE 2)	160	13.33

OVERHEAD CONTACT SYSTEM PARAMETERS		
DESCRIPTION	IN	FT
MAXIMUM CONTACT WIRE HEIGHT FOR DESIGN	270	22'6"
CONTACT WIRE UPLIFT ALLOWANCE (NOTE 3)	3	0.25

CLEARANCE ENVELOPE DETAILS:

WORST CASE CONDITIONS ARE WITH FULL VEHICLE ROLL WITHOUT WIND AT 22'6":

HALF WIDTH OF PANTOGRAPH: @ TO [1] IN DIAGRAM = 6.23 FT / 2 =	ET	3.12 FT
FULL ROLL OF VEHICLE = 3.00 DEGREES EACH SIDE OF CENTERLINE		
FULL ROLL		
OPERATING HEIGHT	MAX = 22.50 FT	
TOP OF RAIL TO CENTER OF ROLL	= 2.10 FT (-)	
TOP OF PANTOGRAPH TO CENTER OF ROLL	20.40 FT	
FULL ROLL - 20.40 TAN (3.00)	= 12.83 IN	
ROLL OF PANTOGRAPH	= 2.00 IN (+)	
TOTAL ROLL [1] TO [2]	= 14.83 IN =	1.24 FT
TRACK ALIGNMENT: (NOTE 4)		
TRACK ALLOWANCES ALIGNMENT = 1 3/4 IN	= 1.75 IN	
CROSS LEVEL @ 1 1/4" DIFFERENCE	= 5.70 IN (+)	
7.45 IN		
TOTAL TRACK TOLERANCE EFFECTS, [2] TO [3],	7.45 IN =	0.62 FT
ELECTRICAL/MECHANICAL CLEARANCE ALLOWANCE, (NOTE 4) [3] TO [4]	6.00 IN =	0.50 FT
REQUIRED CLEARANCE ENVELOPE (ONE HALF)	=	5.48 FT
REQUIRED CLEARANCE ENVELOPE (TOTAL)	=	10.96 FT

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REV	DATE	Description



Designed By: B.DEMERS
Drawn By: N.WU
Checked By: Y.LIU
Approved By: B.DEMERS

S-LINE EXTENSION PROJECT	
STANDARD DRAWINGS	
OCS TECHNICAL SHEET	
UNIVERSAL PANTOGRAPH CLEARANCE ENVELOPE	

State:	NTS
CADD Filename:	SL-C-Y-7-005.dwg
Submit Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Y7005
Sheet No.:	

Submitted By: _____ Approved By: _____

A. GENERAL

- 1. THE SCOPE, CONTENT, AND PRESENTATION OF CONTRACTOR PREPARED DRAWINGS SHALL BE MODELED ON CONTRACT SITE SPECIFIC AND BASIC DESIGN DRAWINGS WHERE APPROPRIATE.

B. SITE SPECIFIC DRAWINGS

- 1. OCS SITE SPECIFIC DRAWINGS INCLUDE MASTER OVERLAP CHARTS, OCS WIRING LAYOUT PLANS, FOUNDATION AND POLE SCHEDULES.
- A MASTER OVERLAP CHART IS A SINGLE LINE DIAGRAM OF THE ROUTE SHOWING EACH TENSION LENGTH, ITS TERMINATION TYPE, AND MID-POINT ANCHOR RELATIVE TO TRACK ALIGNMENT AND CIVIL FEATURES.
- FOUNDATION AND POLE SCHEDULES PROVIDE VALUES FOR STATIONING AND 3. OFFSET FOR THE CENTER OF EACH NEW STRUCTURE AND THE ASSEMBLY REFERENCE CALLOUTS FOR POLE FOUNDATION AND POLE TYPES.
- ALONG TRACK STATIONING OF THE POLE FOUNDATIONS AND DOWN GUY ANCHOR FOUNDATIONS SHALL BE VERIFIED AGAINST THE AS-BUILT TRACK ALIGNMENT BY THE POLE AND FOUNDATION CONTRACTOR PRIOR TO COMMENCING WORK.
- THE POLE AND FOUNDATION STATIONING IS BASED ON THE DESIGNED TRACK ALIGNMENT AND PROFILE DRAWINGS OF THE LIGHT RAIL SYSTEM. AS-BUILT VARIATIONS IN THE ALIGNMENT BEYOND THE STATED TOLERANCES SHALL BE REFERRED TO THE PROJECT MANAGER IMMEDIATELY.
- OFFSET DIMENSIONS ARE MEASURED FROM THE CENTERLINE OF TRACK TO CENTERLINE OF POLE AT TRACK LEVEL AND SHALL BE VERIFIED PRIOR TO THE FABRICATION OF ANY OCS ASSEMBLIES.
- THE TOP OF FOUNDATION HEIGHT GIVEN IN THE FOUNDATION AND POLE SCHEDULE DRAWINGS IS REFERENCED TO THE ADJACENT RAIL LEVEL OF THE NOMINATED LIGHT RAIL TRACK.
- OCS WIRING LAYOUT PLANS SHOW ALL WIRING SUPPORT AND RESTRACTION 8. LOCATIONS, AND ORIENTATION OF WIRES AND EQUIPMENT, PRINCIPAL WIRING DIMENSIONS AND ASSEMBLY REFERENCES.
- CONTACT WIRE HEIGHT DIMENSIONS ARE REFERENCED TO THE DESIGNED 9. RAIL LEVEL AT CENTERLINE OF THE TRACK SERVICED BY THAT WIRE.
- LOADS GENERATED BY THE ATTACHMENT OF FUTURE OR TEMPORARY WIRING OR ANCILLARY WIRES TO THE STRUCTURES HAVE NOT BEEN CONSIDERED EXCEPT WHERE NOTED ON THE DRAWING OR CONTRACT SPECIFICATION.
- ALL DIMENSIONS, DETAILS AND ELEVATIONS OF EXISTING CONDITIONS INCLUDING 11. TRACK TOLERANCES SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD PRIOR TO THE FABRICATION OF STRUCTURES AND OTHER ASSOCIATED EQUIPMENTS.

C. BASIC DESIGN DRAWINGS

- 1. OCS BASIC DESIGN DRAWINGS INCLUDE TECHNICAL SHEETS, GENERAL ARRANGEMENT DRAWINGS, TYPICAL SPAN DRAWINGS, TYPICAL STRUCTURE DRAWINGS, AND ASSEMBLY DRAWINGS.
- 2. TECHNICAL SHEET DRAWINGS PROVIDE BASIC DATA AND DEVELOPED CRITERIA RELATING TO THE OVERHEAD CONTACT SYSTEM AND ITS RELATIONSHIP WITH OTHER EQUIPMENT AND SYSTEMS.
- 3. GENERAL ARRANGEMENT DRAWINGS SHOW THE REQUIRED RELATIONSHIP BETWEEN MULTIPLE SPANS OF WIRING AND MULTIPLE STRUCTURES.
- 4. TYPICAL SPAN DRAWINGS SHOW CONTACT AND MESSENGER WIRE SPANS AND THE RELATIONSHIP BETWEEN VARIOUS OCS ASSEMBLIES NEEDED TO FIT OUT EACH SPAN OF A GIVEN TYPE.
- 5. TYPICAL STRUCTURE DRAWINGS SHOW A CROSS SECTION VIEW OF INDIVIDUAL STRUCTURE TYPES AND THE RELATIONSHIP BETWEEN VARIOUS OCS ASSEMBLIES NEEDED TO FIT OUT THE STRUCTURE.
- 6. ASSEMBLY DRAWINGS SHOW ONE OR MORE ASSEMBLIES OF GENERIC PARTS WITH REQUIRED DIMENSIONS, INSTALLATION REQUIREMENTS, AND BILL OF MATERIALS TABLE. ASSEMBLIES ARE IDENTIFIED BY DISCRETE REFERENCE NUMBERS.
- 7. FINAL DETAILING OF ASSEMBLIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WHO SHALL PRODUCE SHOP DRAWING FOR EACH AND EVERY ASSEMBLY REFERENCE REQUIRED FOR THE COMPLETE INSTALLATION OF THE OCS. CONTRACTORS AND SUPPLIERS ARE ENCOURAGED TO PROVIDE THEIR OWN STANDARD ASSEMBLIES AND COMPONENTS PROVIDED THAT THEY MEET THE REQUIREMENTS FOR PURPOSE, DIMENSIONAL PERFORMANCE, AND SPECIFICATION. DETAILING SHALL INCLUDE PARTS IDENTIFICATION AND BILL OF MATERIALS TABLE.
- 8. CONSISTENCY OF ASSEMBLIES AND PARTS SHALL BE MAINTAINED FOR ALL APPLICATIONS THROUGHOUT THE PROJECT.
- 9. THE LOADING VALUES SHOWN ON OCS ASSEMBLY DRAWINGS ARE FOR INFORMATION ONLY. SUCH VALUES MAY HAVE FORMED THE BASIS FOR ASSEMBLIES CALLED FROM OTHER CONTRACT DRAWINGS. THE CONTRACTOR SHALL DETERMINE AND RECORD THE ACTUAL LOADING CAPACITIES FOR THE ASSEMBLIES AND COMPONENTS TO BE PROVIDED ON SHOP DRAWINGS.
- 10. ALL OCS ASSEMBLIES SHALL BE TESTED TO DEMONSTRATE MECHANICAL STRENGTH CAPABILITY INCLUDING THE REQUIRED FACTORS OF SAFETY. PAST TEST RESULTS MAY BE USED.
- 11. TEST RECORDS OF ALL ASSEMBLIES INCLUDING PHOTOGRAPHS OF THE TEST RIG IN EACH CASE, IF APPROPRIATE, SHALL BE SUPPLIED TO THE PROJECT MANAGER BEFORE INSTALLATION.

D. CONTRACTOR SUPPLIED SHOP DRAWINGS

- 1. CONTRACTOR SHOP DRAWINGS SHALL BE PREPARED BY SUPPLIERS FOR ALL ASSEMBLIES USED IN THE WORK.
- 2. CONTRACTOR SHOP DRAWINGS SHALL CARRY THE SAME TITLES AND ASSEMBLY REFERENCES AS THESE CONTRACT DRAWINGS.
- 3. EXAMPLE MATERIALS LISTS SHOWN ON CONTRACT ASSEMBLY DRAWINGS GIVE TYPICAL COMPONENT NAMES. SUPPLIER NAMES FOR COMPONENTS WILL BE ACCEPTED IN SHOP DRAWING MATERIALS LISTS. SUPPLIER PARTS NUMBERS SHALL BE GIVEN.
- 4. COMPONENT DRAWINGS SHALL ACCOMPANY SHOP DRAWINGS.
- 5. ALTERNATIVE ASSEMBLY CONFIGURATIONS MAY BE USED IF ELECTRICAL AND MECHANICAL FUNCTIONS ARE EQUIVALENT AND APPROVED BY THE ENGINEER.
- 6. THE WEIGHT OF SECTION INSULATOR ASSEMBLIES SHALL BE GIVEN ON THEIR SHOP DRAWINGS.
- 7. THE BREAKING LOAD AND MAXIMUM OPERATING LOAD FOR ALL STRAIN CLAMPS SHALL BE GIVEN ON CORRESPONDING COMPONENT DRAWINGS.
- 8. IN ORDER TO DEMONSTRATE ADEQUATE PANTOGRAPH CLEARANCE, CANTILEVER DRAWINGS SHALL BE DRAWN TO SCALE. FOR A CONTACT WIRE HEIGHT OF 19'-6" AND THE MINIMUM POLE CLEARANCE PERMITTED FOR THE RELEVANT TRACK CURVATURE AND TRACK SUPERELEVATION FEATURED, SCALED CANTILEVER DRAWINGS SHALL INCLUDE THE OUTLINE OF THE PANTOGRAPH CLEARANCE ENVELOPE.
- 9. EACH CANTILEVER SHOP DRAWING SHALL SHOW:
 - A. MAXIMUM RADIAL LOAD PERMITTED ON EACH CONDUCTOR
 - B. MAXIMUM CANTILEVER REACH PERMITTED
- 10. FOR EACH HEADSPAN STRUCTURE, CONTRACTOR SHALL PREPARE INDIVIDUAL SITE SPECIFIC SHOP DRAWINGS DRAWN TO SCALE WITH INDIVIDUAL OCS ASSEMBLIES SHOWN AND DIMENSIONED, INCLUDING COMPONENT LISTS.

E. CONTRACTOR AS BUILT RECORD DRAWINGS

- 1. THE ELECTRICAL CONTRACTOR SHALL PREPARE OCS AS BUILT STRUCTURE RECORD DRAWINGS
- 2. EACH OCS STRUCTURE RECORD DRAWING SHALL CONTAIN THE INFORMATION REQUIRED.
- 3. AN OCS STRUCTURE RECORD DRAWING DEPICTS ONE OR MORE POLES OR BUILDING ATTACHMENTS, PLUS EQUIPMENT ARRANGED TO SUPPORT AND/OR REGISTER MESSENGER AND CONTACT WIRES AT ONE SPECIFIC LOCATION.
- 4. AS-BUILT FOUNDATION SCHEDULES SHALL BE COMPLETED AS DETAILED IN DRAWING Y7195 AND THE TITLE ENDORSED 'AS-BUILT'.
- 5. THE ELECTRICAL CONTRACTOR SHALL PREPARE REDLINE DRAWINGS FOR ALL OCS WIRING LAYOUTS SHOWING ALL DESIGN CHANGES MADE IN THE INSTALLATION.
- 6. CHANGES TO THE OCS WIRING LAYOUTS WHICH DO NOT BRING THE DESIGN INTO COMPLIANCE WITH DESIGN CRITERIA OR FOR POLE STATIONINGS MOVED ONE FOOT OR MORE.
- 7. AFTER THESE UPDATES HAVE BEEN INCORPORATED THE OCS WIRING LAYOUT SHALL BE ENDORSED 'DESIGN UPDATE' SINCE IT DOES NOT SHOW ACTUAL STAGGER VALUES AND WIRE HEIGHTS AS INSTALLED.
- 8. ACTUAL 'AS-BUILT' STAGGER VALUES AND CONTACT WIRE HEIGHTS RECORDED DURING ACCEPTANCE MEASUREMENT TESTS SHALL BE SHOWN APPROPRIATELY ON THE STRUCTURE RECORD DRAWINGS.
- 9. THE ELECTRICAL CONTRACTOR SHALL PREPARE REDLINE DRAWINGS OF MASTER OVERLAP CHARTS AND SECTIONING DIAGRAMS SHOWING CHANGES FROM THE SUPPLIED CONTRACT DRAWINGS.

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Submitted By: _____

Approved By: _____

Designed By: B.DEMERS
Drawn By: N.WU
Checked By: Y.LIU
Approved By: B.DEMERS

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
DRAWING HIERARCHY AND
CONTENT REQUIREMENTS

State: NTS
CADD Filename: SL-C-Y-7-006.dwg
Submittal Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Y7006
Sheet No.: _____

NOTES:

1. MAX. SPAN FOR 22'-6" CWH SHALL BE 180 FEET.
2. DROOP IS DEFINED AS THE ADDITIONAL MIDSPAN SAG OF AN OCS DUE TO ICE ON THE CONDUCTORS.

SPAN (FT) NOTE 1	BLOW-OFF (IN)
210	8.82
205	8.41
200	8.00
195	7.61
190	7.22
185	6.85
180	6.48
175	6.13
170	5.78
165	5.45
160	5.12
155	4.81
150	4.50
145	4.21
140	3.92
135	3.65
130	3.38
125	3.13
120	2.88
115	2.65
110	2.42
105	2.21
100	2.00
95	1.81
90	1.62
85	1.45
80	1.28
75	1.13
70	0.98
65	0.85
60	0.72

TABLE 1

BLOW-OFF

SPAN (FT) NOTE 1	MIDSPAN OFFSET (IN)	
	19'-6"	22'-6"
210	5.24	NOTE 1
205	5.66	NOTE 1
200	6.06	NOTE 1
195	6.46	NOTE 1
190	6.84	NOTE 1
185	7.22	NOTE 1
180	7.58	6.49
175	7.94	6.85
170	8.28	7.19
165	8.62	7.53
160	8.94	7.85
155	9.26	8.17
150	9.56	8.47
145	9.86	8.77
140	10.14	9.05
135	10.42	9.33
130	10.68	9.59
125	10.94	9.85
120	11.18	10.09
115	11.42	10.33
110	11.64	10.55
105	11.86	10.77
100	12.06	10.97
95	12.26	11.17
90	12.44	11.35
85	12.62	11.53
80	12.78	11.69
75	12.94	11.85
70	13.08	11.99
65	13.22	12.13
60	13.34	12.25

TABLE 2

MAX PERMISSIBLE
MIDSPAN OFFSET

SPAN (FT) NOTE 1	MW SAG NORMAL (FT)	DROOP DUE TO ICE (FT)
	210	
205	1.69	0.99
200	1.61	0.95
195	1.53	0.90
190	1.45	0.85
185	1.38	0.81
180	1.30	0.77
175	1.23	0.72
170	1.16	0.68
165	1.09	0.64
160	1.03	0.61
155	0.97	0.57
150	0.90	0.53
145	0.85	0.50
140	0.79	0.46
135	0.73	0.43
130	0.68	0.40
125	0.63	0.37
120	0.58	0.34
115	0.53	0.31
110	0.49	0.29
105	0.44	0.26
100	0.40	0.24
95	0.36	0.21
90	0.33	0.19
85	0.29	0.17
80	0.26	0.15
75	0.23	0.13
70	0.20	0.12
65	0.17	0.10
60 AND LESS	0.14	0.09

TABLE 3

CATENARY DROOP
DUE TO ICE
NOTE 2

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REV	DATE	Description	



Submitted By: _____



Approved By: _____

Designed By B.DEMERS
Drawn By N.WU
Checked By Y.LIU
Approved By B.DEMERS

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS

OCS TECHNICAL SHEET
MAX PERMISSIBLE MIDSPAN OFFSET,
BLOW-OFF AND CATENARY DROOP

State NTS
CADD Filename SL-C-Y-7-009.dwg
Submital Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7009
Sheet No.

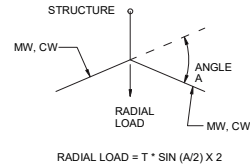
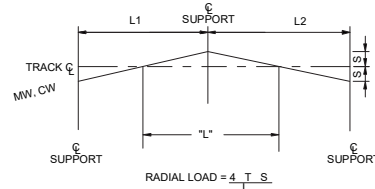
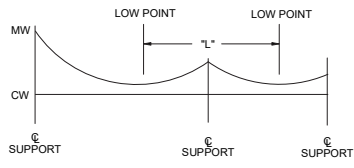
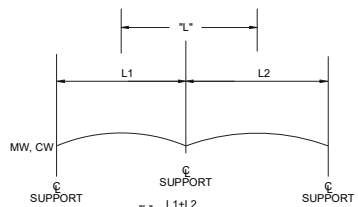
SPAN "L" (FT)	VERTICAL AND WIND LOADS									
	VERTICAL LOAD (LB)					WIND LOAD (LB)				
	WEIGHT W/ICE - 4.159 LB/FT					OPERATING				
	WEIGHT W/OUT ICE - 2.547 LB/FT					NON-OPERATING				
	NO ICE		1/2" ICE		55MPH		40MPH w/1/2" ICE		90MPH	
	MW	CW	MW	CW	MW	CW	MW	CW	MW	CW
30	79	125	86	121	39	27	42	30	42	30
35	93	140	99	134	41	29	49	31	49	31
40	106	155	111	144	43	31	56	32	56	32
45	119	170	123	153	44	32	63	33	63	33
50	132	185	135	162	45	33	70	34	70	34
55	145	200	147	171	46	34	77	35	77	35
60	159	215	159	180	47	35	84	36	84	36
65	172	230	171	189	48	36	91	37	91	37
70	185	245	183	198	49	37	98	38	98	38
75	199	260	194	207	50	38	105	39	105	39
80	212	275	206	216	51	39	112	40	112	40
85	225	290	217	225	52	40	119	41	119	41
90	238	305	228	234	53	41	126	42	126	42
95	251	320	239	243	54	42	133	43	133	43
100	265	335	250	252	55	43	140	44	140	44
105	278	350	261	261	56	44	147	45	147	45
110	291	365	272	270	57	45	154	46	154	46
115	304	380	283	279	58	46	161	47	161	47
120	318	395	294	288	59	47	168	48	168	48
125	331	410	305	297	60	48	175	49	175	49
130	344	425	316	306	61	49	182	50	182	50
135	357	440	327	315	62	50	189	51	189	51
140	371	455	338	324	63	51	196	52	196	52
145	384	470	349	333	64	52	203	53	203	53
150	397	485	360	342	65	53	210	54	210	54
155	410	500	371	351	66	54	217	55	217	55
160	424	515	382	360	67	55	224	56	224	56
165	437	530	393	369	68	56	231	57	231	57
170	450	545	404	378	69	57	238	58	238	58
175	463	560	415	387	70	58	245	59	245	59
180	476	575	426	396	71	59	252	60	252	60
185	490	590	437	405	72	60	259	61	259	61
190	503	605	448	414	73	61	266	62	266	62
195	516	620	459	423	74	62	273	63	273	63
200	529	635	470	432	75	63	280	64	280	64
205	543	650	481	441	76	64	287	65	287	65
210	556	665	492	450	77	65	294	66	294	66

SPAN (FT)	RADIAL LOADS - TANGENT TRACK (NOTE 4)			
	OPERATING TENSION (NORMAL)		NON-OPERATING TENSION (MAXIMUM)	
	MW	CW	MW	CW
30	640	400	938	599
35	549	343	804	513
40	480	300	704	449
45	427	267	626	399
50	384	240	563	359
55	349	218	512	327
60	320	200	469	299
65	295	185	433	276
70	274	171	402	257
75	256	160	375	240
80	240	150	352	225
85	226	141	331	211
90	213	133	313	200
95	202	126	296	189
100	192	120	281	180
105	183	114	268	171
110	175	109	256	163
115	167	104	245	156
120	160	100	235	150
125	154	96	225	144
130	148	92	217	138
135	142	89	209	133
140	137	86	201	128
145	132	83	194	124
150	128	80	188	120
155	124	77	182	116
160	120	75	176	112
165	116	73	171	109
170	113	71	166	106
175	110	69	161	103
180	107	67	156	100
185	104	65	152	97
190	101	63	148	95
195	98	62	144	92
200	96	60	141	90
205	94	59	137	88
210	91	57	134	86

ANGLE "A" DEGREES	RADIAL LOADS BY ANGLE			
	OPERATING TENSION (NORMAL)		NON-OPERATING TENSION (MAXIMUM)	
	MW	CW	MW	CW
0.5	42	26	61	39
1	84	52	123	78
1.5	126	79	184	118
2	168	105	246	157
2.5	209	131	307	196
3	251	157	368	235
3.5	293	183	430	274
4	335	209	491	313
4.5	377	236	553	353
5	419	262	614	392
5.5	461	288	675	431
6	502	314	737	470
6.5	544	340	798	509
7	586	366	859	548
7.5	628	392	920	587
8	670	419	982	627
8.5	711	445	1043	666
9	753	471	1104	705
9.5	795	497	1165	744
10	837	523	1227	783
10.5	878	549	1288	822
11	920	575	1349	861
11.5	962	601	1410	900
12	1003	627	1471	939
12.5	1045	653	1532	978
13	1087	679	1593	1017
13.5	1128	705	1654	1056
14	1170	731	1715	1095

NOTES:

- NON OPERATING CONDITION IS -30° F WITH 1/2" RADIAL ICE ON MESSENGER WIRE AND 1/2" RADIAL ICE ON CONTACT WIRE AND BALANCE WEIGHT ANCHORS LOCKED AT 0° F.
- THE EXTREME WIND NON-OPERATING CONDITION IS 90 MPH AT 0° F WITHOUT ICE AS DEFINED ON DRAWING Y7003.
- TANGENT TRACK RADIAL LOADS ASSUME A 12" STAGGER AT EACH END OF THE SPAN.
- FOR MAXIMUM TENSIONS IN CONDUCTORS, SEE TECHNICAL SHEET CONDUCTOR AND WIRE PARTICULARS SUMMARY DRAWING Y7003.
- EQUIPMENT SHALL BE DESIGNED OR SELECTED TO HAVE MAXIMUM SAFE LOADS THAT EXCEED LOADS FOR THE CONDITIONS SHOWN.



L* = SUM OF THE DISTANCE TO THE LOW POINT OF THE MESSENGER ON BOTH SIDES OF CENTER SUPPORT.

$$RADIAL\ LOAD = \frac{4}{L} T \cdot S$$

$$RADIAL\ LOAD = T \cdot \sin(A/2) \times 2$$

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REV	DATE	Description



Designed By: B. DEMERS
Drawn By: N.WU
Checked By: Y. LIU
Approved By: B. DEMERS

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
TECHNICAL SHEET
SCAT VERTICAL, WIND & RADIAL LOADS

State:	NTS
CADD Filename:	SL-C-Y-7-010.dwg
Submital Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Sheet No. Y7010

SPAN LENGTH(FT)	NUMBER OF HANGERS	HANGER SPACING (FT)		HANGER LENGTHS (FT) (NOTE 1)						
		DISTANCE TO 1ST HANGER (FT)	HANGER SPACING (FT)	H1	H2	H3	H4	H5	H6	H7
210	7	15	30	3.53	2.81	2.38	2.23	2.38	2.81	3.53
205	7	14.64	29.29	3.55	2.86	2.45	2.31	2.45	2.86	3.55
200	7	14.29	28.57	3.57	2.92	2.53	2.4	2.53	2.92	3.57
195	7	13.93	27.86	3.6	2.97	2.6	2.48	2.6	2.97	3.6
190	7	13.57	27.14	3.62	3.02	2.67	2.55	2.67	3.02	3.62
185	7	13.21	26.43	3.64	3.08	2.74	2.63	2.74	3.08	3.64
180	6	15	30	3.6	3.03	2.74	2.74	3.03	3.6	
175	6	14.58	29.17	3.62	3.08	2.81	2.81	3.08	3.62	
170	6	14.17	28.33	3.65	3.13	2.87	2.87	3.13	3.65	
165	6	13.75	27.5	3.67	3.18	2.94	2.94	3.18	3.67	
160	6	13.33	26.67	3.69	3.23	3	3	3.23	3.69	
155	6	12.92	25.83	3.71	3.28	3.06	3.06	3.28	3.71	
150	5	15	30	3.68	3.24	3.1	3.24	3.68		
145	5	14.5	29	3.7	3.29	3.16	3.29	3.7		
140	5	14	28	3.72	3.34	3.21	3.34	3.72		
135	5	13.5	27	3.74	3.39	3.27	3.39	3.74		
130	5	13	26	3.76	3.43	3.32	3.43	3.76		
125	4	12.5	25	3.77	3.47	3.47	3.47	3.77		
120	4	15	30	3.75	3.46	3.46	3.75			
115	4	14.38	28.75	3.77	3.5	3.5	3.77			
110	4	13.75	27.5	3.79	3.55	3.55	3.79			
105	4	13.13	26.25	3.81	3.59	3.59	3.81			
100	4	12.5	25	3.82	3.62	3.62	3.82			
95	4	11.88	23.75	3.84	3.66	3.66	3.84			
90	3	15	30	3.82	3.68	3.82				
85	3	14.17	28.33	3.84	3.71	3.84				
80	3	13.33	26.67	3.83	3.7	3.83				
75	3	12.5	25	3.87	3.77	3.87				
70	3	11.67	23.33	3.89	3.8	3.89				
65	3	10.83	21.67	3.91	3.83	3.91				
60	2	15	30	3.89	3.89					
55	2	13.75	27.5	3.91	3.91					
50	2	12.5	25	3.92	3.92					
45	2	11.25	22.5	3.94	3.94					
40	2	10	20	3.95	3.95					

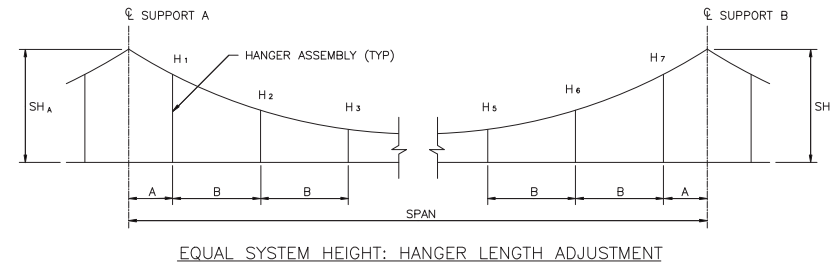
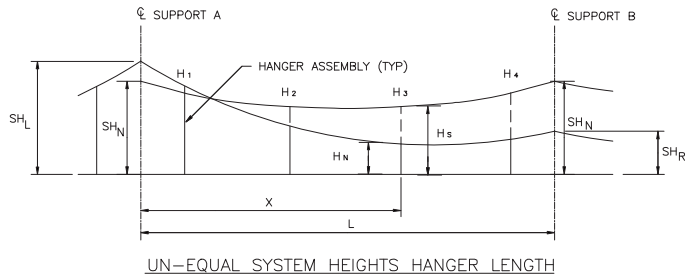
NOTES:

1. NORMAL SYSTEM HEIGHT: SCAT AUTO-TENSIONED = 4'-0"
2. HANGER LENGTHS ARE FOR SPANS WITH 4'0" SYSTEM HEIGHTS EACH END.
3. HANGER LENGTHS FOR AUTO-TENSIONED, LOW PROFILE/NORMAL SYSTEM HEIGHT ARE BASED ON A 500 kcmil HARD DRAWN COPPER MESSENGER AT 4800 POUND TENSION AND A 350 kcmil HARD DRAWN GROOVED CONTACT WIRE AT 3000 POUND TENSION. 0.04 LBS/FT HAS BEEN ADDED TO THE WEIGHT OF CONDUCTORS TO ACCOUNT FOR THE WEIGHT OF MISCELLANEOUS HARDWARE.
4. CONTRACTOR SHALL FIELD MEASURE THE HANGER LENGTHS AND COMPARE RELATIVE TO CALCULATED THEORETICAL HANGER LENGTHS. IN ORDER TO ACHIEVE THE PROPER CONTACT WIRE HEIGHT AND PROFILE WHEN IT IS MEASURED FROM TOP OF RAIL.

$$H_n = H_g + ((A_L - A_R) - (A_L - A_R) \frac{X}{L})$$

WHERE: H_n = ADJUSTED HANGER LENGTH (IN.)
 H_g = NORMAL HANGER LENGTH (IN.)
 SH_n = STANDARD SYSTEM HEIGHT (IN.)
 SH_L, SH_R = UNEQUAL SYSTEM HEIGHTS (IN.)
 X = DISTANCE TO HANGER (FT.)
 L = SPAN LENGTH (FT.)

FOR EQUAL SYSTEM HEIGHTS ($SH_L=SH_R$), WHERE SYSTEM HEIGHT (SH) IS LESS THAN NORMAL SYSTEM HEIGHT, REDUCE ALL HANGER LENGTHS BY THE DIFFERENCE ($SH_n=SH_g$).



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Designed By: B.DEMERS
Drawn By: N.WU
Checked By: Y.LIU
Approved By: B.DEMERS

S-LINE EXTENSION PROJECT	
STANDARD DRAWINGS	
OVERHEAD CONTACT SYSTEM	
TECHNICAL SHEET	
HANGER LENGTH TABLE	
Submitted By:	
Approved By:	

Sheet No.	Y7012
UTA Contract No.	24-03849
Submission Date	01-16-26
CADD Filename	SL-C-Y-7-012.dwg
State	NTS

TABLE 1

		DISTANCE FROM MIDPOINT ANCHOR (FT)												
TEMP. °F		200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	
		y = ALONG TRACK MOVEMENT (IN)												
TOWARD MIDPOINT ANCHOR (-)	0	1.35	2.71	4.06	5.41	6.77	8.12	9.48	10.83	12.18	13.54	14.89	16.24	
	10	1.13	2.26	3.38	4.51	5.64	6.77	7.90	9.02	10.15	11.28	12.41	13.54	
	20	0.90	1.80	2.71	3.61	4.51	5.41	6.32	7.22	8.12	9.02	9.93	10.83	
	30	0.68	1.35	2.03	2.71	3.38	4.06	4.74	5.41	6.09	6.77	7.44	8.12	
	40	0.45	0.90	1.35	1.80	2.26	2.71	3.16	3.61	4.06	4.51	4.96	5.41	
	50	0.23	0.45	0.68	0.90	1.13	1.35	1.58	1.80	2.03	2.26	2.48	2.71	
AWAY FROM MIDPOINT ANCHOR (+)	NORMAL	60	0	0	0	0	0	0	0	0	0	0	0	
	70	0.23	0.45	0.68	0.90	1.13	1.35	1.58	1.80	2.03	2.26	2.48	2.71	
	80	0.45	0.90	1.35	1.80	2.26	2.71	3.16	3.61	4.06	4.51	4.96	5.41	
	90	0.68	1.35	2.03	2.71	3.38	4.06	4.74	5.41	6.09	6.77	7.44	8.12	
	100	0.90	1.80	2.71	3.61	4.51	5.41	6.32	7.22	8.12	9.02	9.93	10.83	
	110	1.13	2.26	3.38	4.51	5.64	6.77	7.90	9.02	10.15	11.28	12.41	13.54	
	120	1.35	2.71	4.06	5.41	6.77	8.12	9.48	10.83	12.18	13.54	14.89	16.24	
	130	1.58	3.16	4.74	6.32	7.90	9.48	11.05	12.63	14.21	15.79	17.37	18.95	

* NORMAL CONDITION CANTILEVER IS INSTALLED PERPENDICULAR TO TRACK

TABLE 2

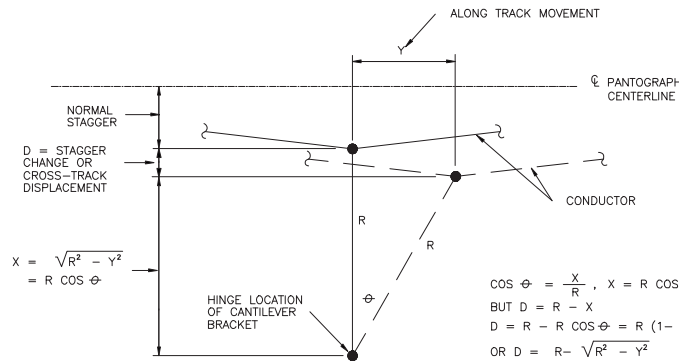
ALONG TRACK MOVEMENT Y (IN)	CANTILEVER REACH (DIMENSION R) FT-IN														
	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"
	D = STAGGER CHANGE (IN)														
2	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
4	0.12	0.11	0.10	0.10	0.09	0.08	0.08	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.05
6	0.27	0.25	0.23	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.14	0.14	0.13	0.13	0.12
8	0.49	0.45	0.41	0.38	0.36	0.33	0.31	0.30	0.28	0.27	0.25	0.24	0.23	0.22	0.21
10	0.76	0.70	0.64	0.60	0.56	0.52	0.49	0.46	0.44	0.42	0.40	0.38	0.36	0.35	0.33
12	1.10	1.01	0.93	0.86	0.80	0.75	0.71	0.67	0.63	0.60	0.57	0.55	0.52	0.50	0.48
14	1.50	1.37	1.27	1.17	1.10	1.03	0.97	0.91	0.86	0.82	0.78	0.74	0.71	0.68	0.65
16	1.97	1.80	1.66	1.54	1.43	1.34	1.26	1.19	1.13	1.07	1.02	0.97	0.93	0.89	0.86
18	2.50	2.29	2.11	1.95	1.82	1.70	1.60	1.51	1.43	1.36	1.29	1.23	1.18	1.13	1.08
20	3.10	2.83	2.61	2.42	2.25	2.11	1.98	1.87	1.77	1.68	1.60	1.52	1.46	1.40	1.34
22	3.77	3.44	3.17	2.93	2.73	2.55	2.40	2.26	2.14	2.03	1.94	1.85	1.76	1.69	1.62
24	4.52	4.12	3.78	3.50	3.26	3.05	2.86	2.70	2.55	2.42	2.31	2.20	2.10	2.01	1.93

ALONG TRACK MOVEMENT
AUTO-TENSIONED SIMPLE CATENARY

STAGGER CHANGE
AUTO-TENSIONED SIMPLE CATENARY

RECOMMENDED INSTALLATION PROCEDURE:
IT IS RECOMMENDED THAT STAGGERS BE SET TO THE DESIGN VALUE WITH THE BALANCE WEIGHT(S) LOCKED IN THEIR NORMAL POSITION AT 60 F.

APPLICATION NOTE:
MAXIMUM TENSION LENGTH SHALL BE BASED ON LAST IN-RUNNING CANTILEVER NOT EXCEEDING 2640 FT FROM FIXED TERMINATION OR MIDPOINT.



NOTE:

- 1. CANTILEVER REACH IS FROM BRACKET HINGE TO CONTACT WIRE ON STAGGER.

Y = ALONG TRACK DISPLACEMENT
D = STAGGER CHANGE
R = CANTILEVER REACH (DISTANCE FROM HINGE TO CONTACT WIRE)
Y = α L Δ T

WHERE α = COEFF. OF THERMAL EXPANSION
L = DISTANCE FROM MIDPOINT ANCHOR
Δ T = TEMPERATURE CHANGE

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REV	DATE	Description	



Designed By: B.DEMERS
Drawn By: N.WU
Checked By: Y.LIU
Approved By: B.DEMERS

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
TECHNICAL SHEET
TRACK MOVEMENT & STAGGER CHANGE

State: NTS
CADD Filename: SL-C-Y7-014.dwg
Submital Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Y7014
Sheet No.:

NOTES:

1. FOR ABBREVIATIONS AND GENERAL NOTES SEE DWG. Y0001.
2. FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG. Y0002.
3. WEIGHT OF CATENARY INCLUDING AN ASSUMED HANGER LOAD OF 0.04 LB/FT.
4. ICE CONDITION IS WITH ONE HALF INCH RADIAL ICE THICKNESS ON MESSENGER AND CONTACT WIRE.
5. MESSENGER TENSION IS AT THE LOADED CONDITION WITH CONTACT WIRE AND HANGERS.
6. DROOP IS DEFINED AS THE ADDITIONAL SAG OF AN OCS DUE TO ICE ON THE CONDUCTORS.
7. WIND PRESSURES ARE BASED ON NESC, RULE 250B FOR HEAVY LOADING DISTRICT & SPEC. SEC. 12.5.12.
8. OPERATING AND NON-OPERATING CASES MUST BE COMPARED TO DETERMINE WORST POSSIBLE LOAD COMBINATION FOR STRUCTURAL AND OCS COMPONENT DESIGN CONSIDERATION.
9. 90 MPH WIND SPEED TRANSLATES TO EQUIVALENT 21LB/FT² HORIZONTAL WIND PRESSURE WITH CORRESPONDING OVERLOAD FACTOR OF 1.0 FOR STRUCTURAL DESIGN PURPOSES.
10. IT IS ASSUMED THAT 40 MPH IS THE MAXIMUM WIND SPEED WHERE ICE ON THE CONTACT WIRE AND MESSENGER WIRE IS STILL CAPABLE OF ADHERING. IN EXCESS OF 40 MPH WIND SPEED ALL ICE ON THE WIRES IS CONSIDERED TO BE BLOWN AWAY.
11. THE OCS IS IN AUTO-TENSION MODE FOR A TEMPERATURE RANGE OF 0°F TO 120°F. THE SYSTEM BECOMES A FIXED TERMINATED SYSTEM BY MEANS OF BALANCE WEIGHT STOPS AT TEMPERATURES BELOW 0°F AND AT HIGH TEMPERATURES ABOVE 120°F.
12. THE FOLLOWING EQUIVALENT SPAN LENGTHS ARE USED IN DETERMINING TENSIONS IN THE FIXED TERMINATED CONDITION: MESSENGER WIRE 100FT CONTACT WIRE 25FT
13. LOAD FACTORS ONLY APPLY TO CALCULATIONS FOR DETERMINING: POLE ALLOWABLE BENDING MOMENT VALUES

CATENARY CONDUCTOR PROPERTIES			
DESIGN ITEM	UNITS	MESSENGER WIRE	CONTACT WIRE
MAKE UP OF CONDUCTOR	-	500 KCMIL/37 STRAND	350 KCMIL GROOVED
MATERIAL	-	HARD DRAWN COPPER	HARD DRAWN COPPER
DIAMETER	IN	0.813	0.620
CROSS SECTION AREA	SQ. IN	0.392	0.276
WEIGHT OF CONDUCTOR	LB/FT	1.544	1.063
WEIGHT OF CATENARY (INCLUDING HANGERS)	LB/FT	2.647 (SEE NOTE 3)	
RADIAL THICKNESS OF ICE	IN	0.500	0.500
WEIGHT OF ICE	LB/FT	0.816	0.696
WEIGHT OF CATENARY WITH ICE	LB/FT	4.159 (SEE NOTE 4)	
BREAKING STRENGTH	LB	22495	11810
MODULUS OF ELASTICITY FINAL	PSI	17.0 X 10 ⁶	17.0 X 10 ⁶
COEFFICIENT OF EXPANSION	PER DEG F	9.4 X 10 ⁻⁶	9.4 X 10 ⁻⁶

LOADING CONDITIONS (NOTE 8)								
OPERATING CONDITIONS	TEMP (DEG)	WIND (MPH)	WIND (PSF) NOTE 7	RADIAL ICE (IN)	TENSION MW (LB) NOTE 5	TENSION CW (LB)	APPLICATION	DRAWING REFERENCE
OC - 1	60	0	N/A	0	4800	3000	ALONG TRACK MOVEMENT, NORMAL CONDITION	Y7014
OC - 2	130	55	N/A	0	4800	3000	PANTOGRAPH SECURITY ANALYSIS	Y7011
OC - 3	-30	40	N/A	0	5885	4035	MAX TENSIONS WITH B.W. STOPS ENGAGED	-
NON-OPERATING CONDITIONS								
NO - 1	32	0	N/A	0.5	4800	3000	CATENARY DROOP, NOTE 6	Y7009
NO - 2	0	40	N/A	0.5	7017	4471	MAX TENSIONS AND RADIAL LOADS	Y7010
NO - 3	0	90	N/A	0	5761	3868	MAX WIND LOADS	Y7010

POLE LOADING	TEMP (DEG)	WIND (MPH)	WIND (PSF)	RADIAL ICE (IN)	TENSION MW (LB) NOTE 5	TENSION CW (LB)	LOAD FACTORS (NOTE 13)		
							GRAVITY	WIND	TENSION
N250B HEAVY	0	N/A	4.3	0.5	7037	4491	1.5	2.5	1.65
N250C	60	90	N/A	0	4800	3000	N/A	N/A	N/A

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Drawn By N.W.U.
Checked By Y. LIU
Approved By B. DEMERS

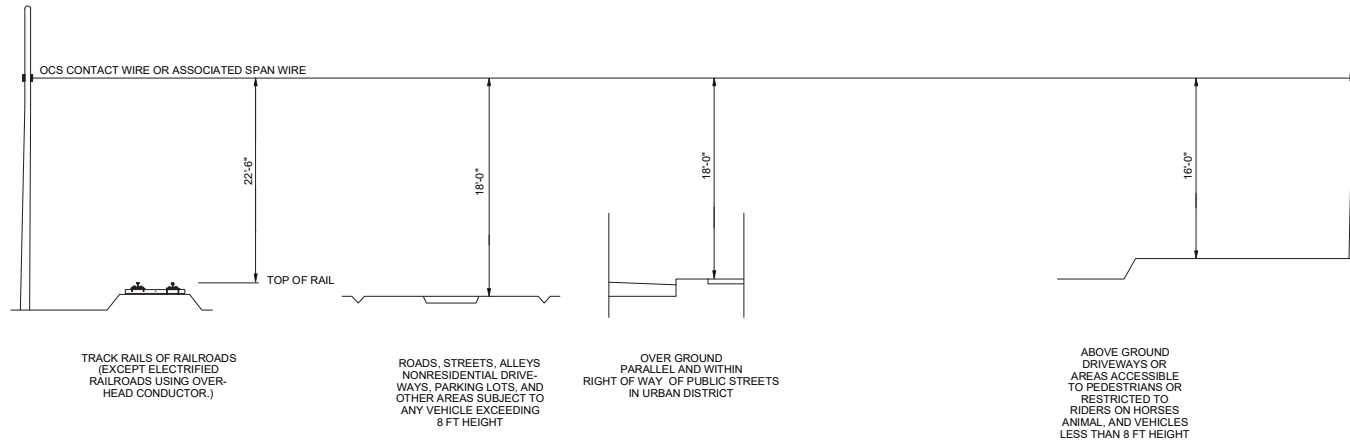
S-LINE EXTENSION PROJECT

STANDARD DRAWINGS

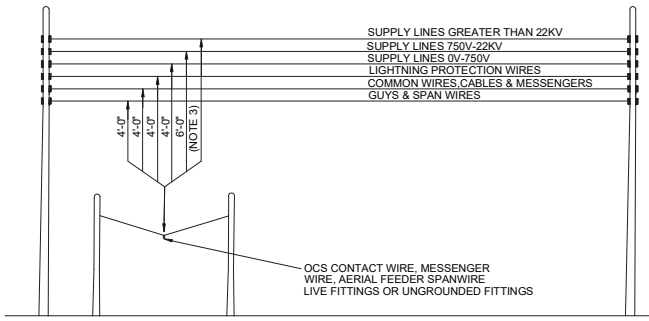
OVERHEAD CONTACT SYSTEM
CONDUCTOR PARTICULARS

State NTS
CADD Filename SL-C-Y-7-015.dwg
Submit Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7015
Sheet No.

Submitted By: _____ Approved By: _____



MINIMUM OCS WIRE CLEARANCES ABOVE GROUND OR RAILS
SEE NOTE 2



NON-OCS WIRE CROSSING CLEARANCES TO OCS WIRES AND EQUIPMENT
SEE NOTE 4

NOTES:

- ALL CLEARANCES ARE MINIMUM.
- VERTICAL CLEARANCES APPLY UNDER ALL WEATHER CONDITIONS:
 - CONDUCTOR TEMPERATURE RANGE OF -30° TO 130° F, NO WIND, WITH FINAL UNLOADED SAG IN THE WIRE.
 - SPAN LENGTHS NOT GREATER THAN THE FOLLOWING:
SINGLE CONTACT WIRE - 125 FT.
SIMPLE CATENARY - 210 FT.
- FOR VOLTAGES EXCEEDING 22KV (UP TO 470KV) THE CLEARANCE SHALL BE INCREASED BY 0.4 INCHES FOR EACH 1KV, OR FRACTION THEREOF.
- VERTICAL CLEARANCES TO NON-OCS CONDUCTORS APPLY UNDER THE FOLLOWING CONDITIONS WHICHEVER PRODUCES THE LARGEST SAG IN THE CONDUCTOR:
 - CONDUCTOR SAG AT 125° F NO WIND DISPLACEMENT, OR
 - MAXIMUM CONDUCTOR DESIGNED OPERATING TEMPERATURE IF GREATER THAN 120° F, OR
 - 32° F WITH RADIAL ICE OF 0.5 INCHES
- ALL ELECTRICAL CLEARANCES SHALL COMPLY WITH NATIONAL ELECTRICAL SAFETY CODE.
- NON-OCS EQUIPMENT SHALL NOT BE WITHIN 10 FEET OF OCS EQUIPMENT.

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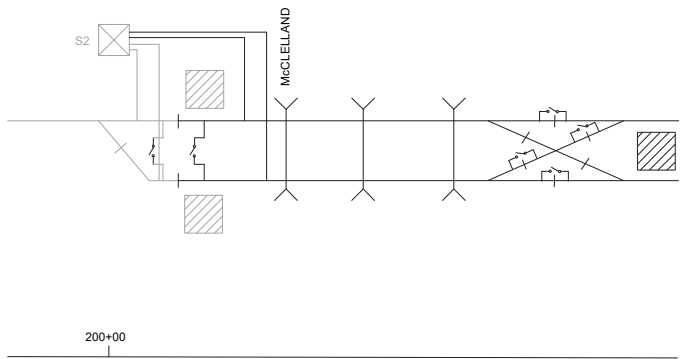
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REV	DATE	Description	



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Drawn By N.WU
Checked By Y.LIU
Approved By B.DEMERS

S-LINE EXTENSION PROJECT STANDARD DRAWINGS OCS VERTICAL ELECTRICAL CLEARANCE REQUIREMENTS	State NTS
	CADD Filename SL-C-Y7-016.dwg
	Submital Date 01-16-26
	UTA Contract No. 24-03849
Drawing No. Y7016	Sheet No.

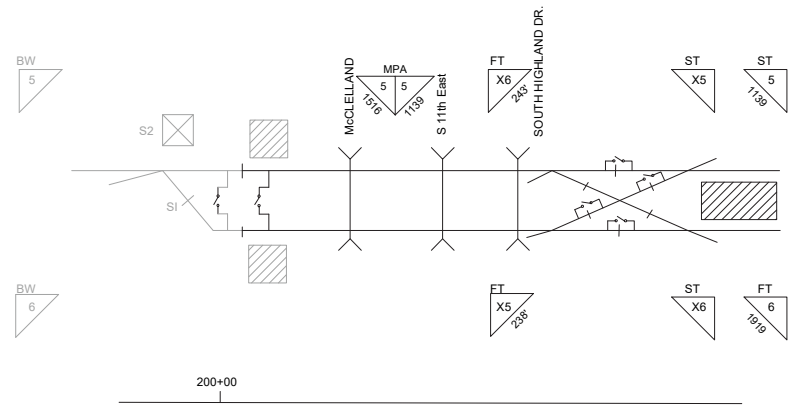
Submitted By: _____ Approved By: _____



SECTIONING DIAGRAM

LEGEND FOR SECTIONING DIAGRAM

- INSULATED OVERLAP
SECTION INSULATOR WITH DISCONNECT SWITCH
TPSS
GRADE CROSSING
STATION



MASTER OVERLAP CHART

LEGEND FOR MASTER OVERLAP CHART

- OVERLAP
FUTURE TRACK
BW BALANCE WEIGHT
FT FIXED TERMINATION
ST SPRING TENSIONER
MPA MIDPOINT ANCHOR
TPSS
DISCONNECT SWITCH
GRADE CROSSING
STATION
MPA MIDPOINT ANCHOR SHOWING WIRE RUN
SECTION INSULATOR

Revision table with columns for REV, DATE, and Description.



Designed By: B.DEMERS
Drawn By: N.WU
Checked By: Y.LIU
Approved By: B.DEMERS

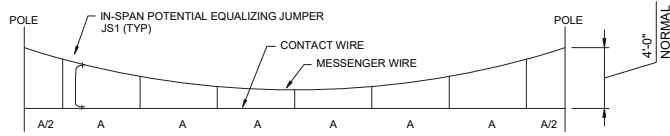
S-LINE EXTENSION PROJECT
OVERHEAD CONTACT SYSTEM
MASTER OVERLAP CHART
AND SECTIONING DIAGRAM

Project information table including Title (S-LINE EXTENSION PROJECT), State (NTS), CADD Filename (SL-C-Y-7-100.dwg), Submission Date (01-16-26), UTA Contract No. (24-03849), Drawing No. (Y7100), and Sheet No.

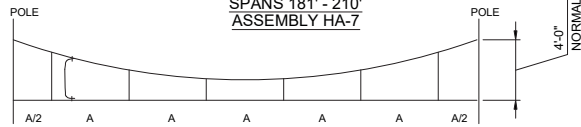
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NOTES:

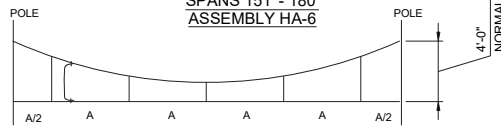
1. THE HANGER SET ASSEMBLY REQUIRED FOR EACH SPAN IS SHOWN IN THE OCS WIRING LAYOUT PLANS AND ALLOCATION SCHEDULES.
2. FOR "A" AND "1/2" DIMENSIONS DIVIDE ACTUAL SPAN BY NUMBER OF HANGERS ASSIGNED.
3. MAXIMUM HANGER SPACING IS 30 FEET.



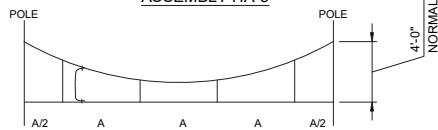
**SPANS 181' - 210'
ASSEMBLY HA-7**



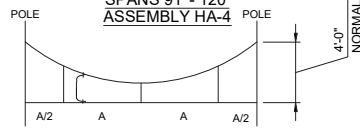
**SPANS 151' - 180'
ASSEMBLY HA-6**



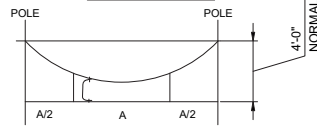
**SPANS 121' - 150'
ASSEMBLY HA-5**



**SPANS 91' - 120'
ASSEMBLY HA-4**



**SPANS 61' - 90'
ASSEMBLY HA-3**



**SPANS 30' - 60'
ASSEMBLY HA-2**

STANDARD SPANS

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Submitted By: _____ Approved By: _____

Designed By: B.DEMERS
Drawn By: N.WU
Checked By: Y.LIU
Approved By: B.DEMERS

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS

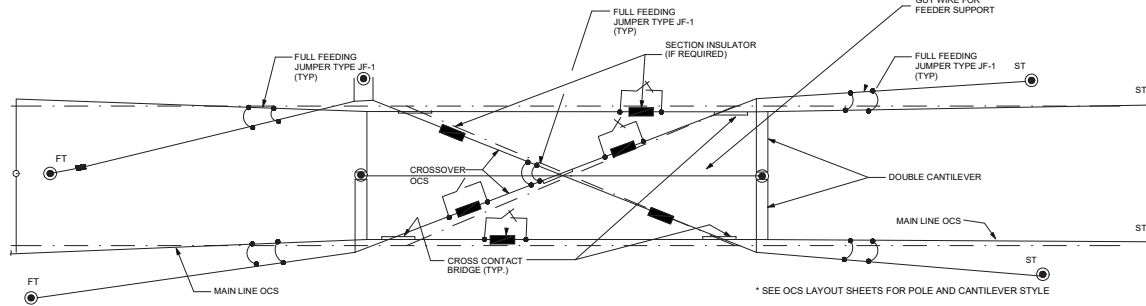
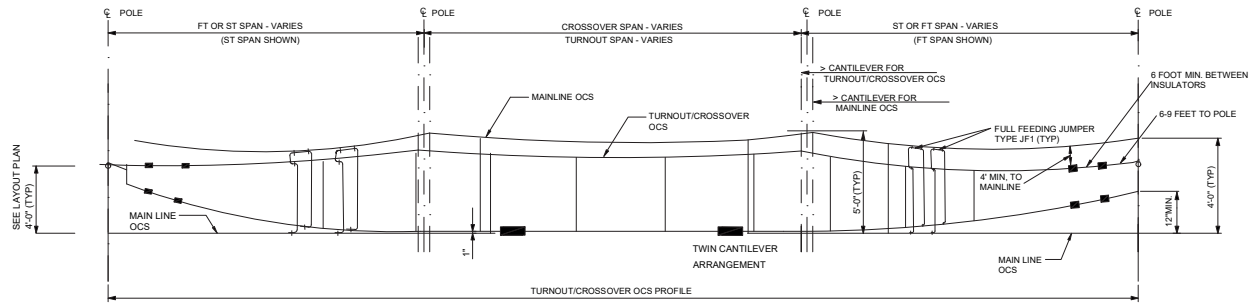
OVERHEAD CONTACT SYSTEM

TYPICAL STANDARD SPANS

State: NTS
CADD Filename: SL-C-Y7-180.dwg
Submital Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Y7180
Sheet No.:

NOTE:

1. DIMENSION SHOWN FOR SYSTEM HEIGHTS AND TERMINATIONS ARE TYPICAL; FOR ACTUAL VALUES REFER TO OCS LAYOUT AND ALLOCATION PLANS.



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REV	DATE	DESCRIPTION	



Designed By: B. DEMERS
Drawn By: N.W.U
Checked By: Y. LIU
Approved By: B. DEMERS

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OCS DIAMOND CROSSOVER

State:	NTS
CADD Filename:	SL-C-Y-7-183.dwg
Submittal Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Y7183
Sheet No.:	

Submitted By: _____ Approved By: _____

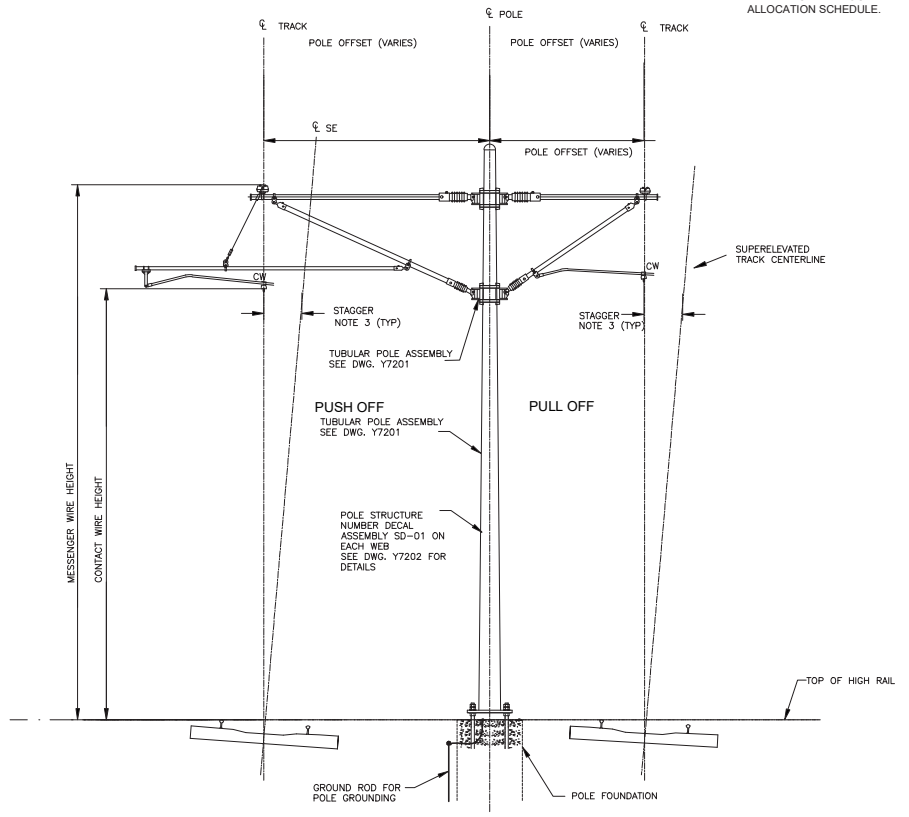
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 1/16/2026

- NOTES:**
1. FOR ABBREVIATIONS AND GENERAL NOTES SEE DWG. Y0001.
 2. FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG. Y0002.
 3. FOR SITE SPECIFIC POLE OFFSETS, WIRE HEIGHTS AND STAGGERS SEE OCS LAYOUT PLAN AND ALLOCATION SCHEDULE.
 4. FOR SITE SPECIFIC POLE AND WIRING ASSEMBLY REFERENCES SEE OCS WIRING LAYOUT PLAN AND ALLOCATION SCHEDULE.



FOR FOUNDATION AND GROUNDING DETAILS SEE FOUNDATION DRAWINGS

**TYPICAL OCS CENTER POLE STRUCTURE
TANGENT TRACK**



FOR FOUNDATION AND GROUNDING DETAILS SEE FOUNDATION DRAWINGS

**TYPICAL OCS CENTER POLE STRUCTURE
CURVED TRACK**

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REV	DATE	Description	



Designed By: B.DEMERS
Drawn By: N.WU
Checked By: Y.LIU
Approved By: B.DEMERS

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS

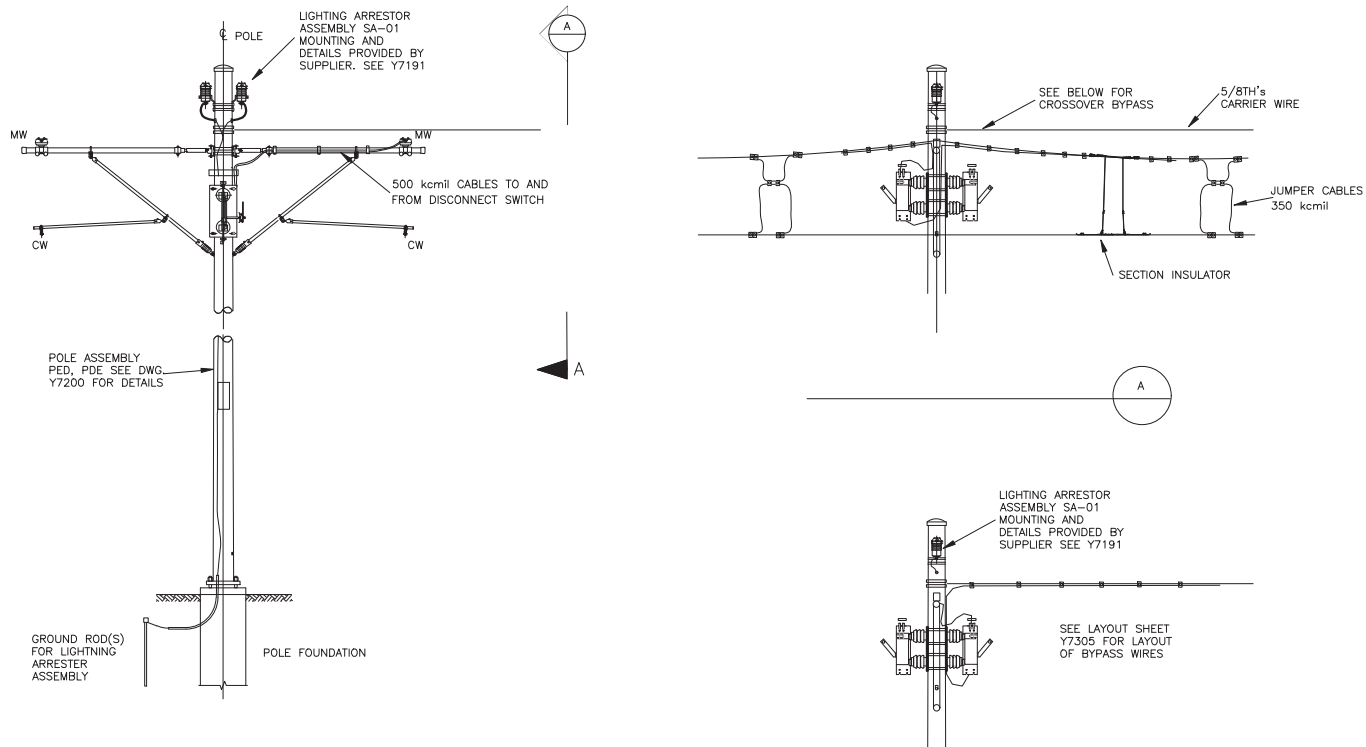
OVERHEAD CONTACT SYSTEM

TYPICAL CENTER POLE STRUCTURES

State:	NTS
CADD Filename:	SL-C-Y-7-190.dwg
Submital Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Y7190
Sheet No.:	

Submitted By: _____

Approved By: _____



FOR FOUNDATION TYPE AND GROUNDING DETAILS SEE DRAWING Y3001 AND OCS LAYOUT SHEETS

TYPICAL DISCONNECT STRUCTURE AT DIAMOND CROSSOVER

NOTES:

1. FOR ABBREVIATIONS AND GENERAL NOTES, SEE DRAWING Y0001.
2. FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG Y0002.
3. LIGHTNING ARRESTER SHALL BE MOUNTED ON POLES AS SHOWN ON DRAWING Y7233.
4. OUT-OF-RUNNING SECTION INSULATORS ARE NOT PART OF ASSEMBLY TYPES SHOWN IN THIS DRAWING, FOR LOCATION, SEE WIRING LAYOUT PLANS AND ALLOCATION SCHEDULES.
5. LIST OF MATERIAL & COMPONENTS SHOWN AND QUANTITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE OCS SUPPLIER.
6. TYPICAL CABLES FOR BYPASS DISCONNECT SWITCH ARE 2-500 kcmil CABLES.
7. EXTERNAL OPENING DEVICE SUITABLE FOR MANUAL HOOK STICK OPERATION.
8. ALL JUMPER CLAMPS SHALL BE DUPLICATE.

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Submitted By: _____ Approved By: _____

Designed By B.DEMERS
Drawn By N.WU
Checked By Y.LIU
Approved By B.DEMERS

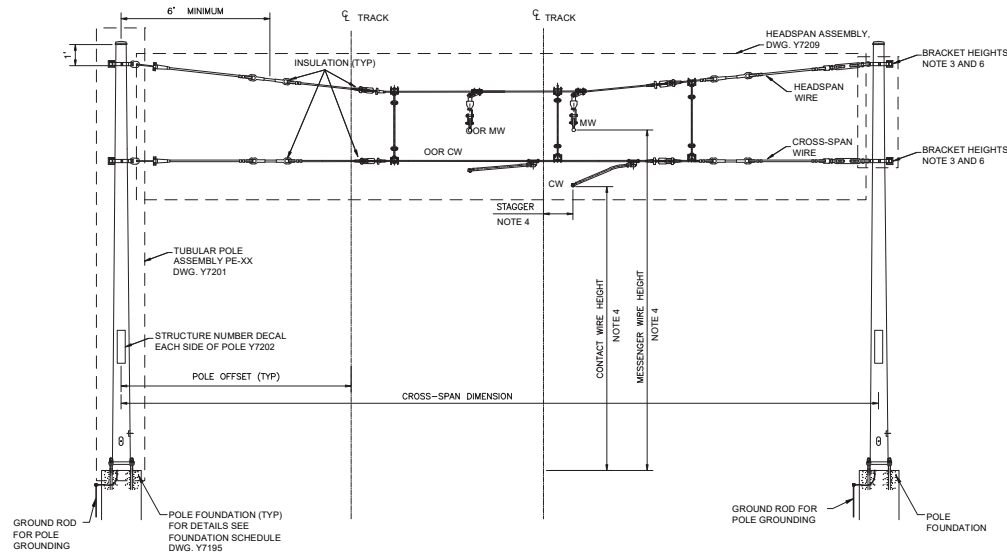
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
BYPASS DISCONNECT SWITCH
STRUCTURE

State NTS
CADD Filename SL-C-Y-7-192.dwg
Submit Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7192
Sheet No.

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NOTES:

1. HEADSPAN STRUCTURES SHALL ONLY BE USED WHERE SITE CONDITIONS DO NOT ALLOW CANTILEVER POLES TO BE INSTALLED.
2. A SITE SPECIFIC SCALED CROSS SECTION DRAWING OR SHOP DRAWING SHALL BE PREPARED FOR EACH HEADSPAN STRUCTURE.
3. SAG OF HEADSPAN SHALL BE APPROXIMATELY SPAN/8.
4. CONTACT AND MESSENGER WIRE HEIGHTS AND STAGGERS SHALL BE AS SHOWN ON OCS WIRING LAYOUT AND ALLOCATION SCHEDULES.
5. EACH CROSS SECTION DRAWING SHALL INCLUDE A COMPLETE LIST OF ASSEMBLIES FOR THE TOTAL INSTALLATION OF THE STRUCTURE.
6. ATTACHMENT HEIGHTS OF HEADSPAN POLE BRACKETS SHALL BE SHOWN ON EACH SITE SPECIFIC CROSS SECTION DRAWING.



TYPICAL HEADSPAN STRUCTURE

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REV	DATE	Description	



Submitted By: _____

Approved By: _____

Designed By:
B. DEMERS

Drawn By:
N.WU

Checked By:
Y. LIU

Approved By:
B. DEMERS

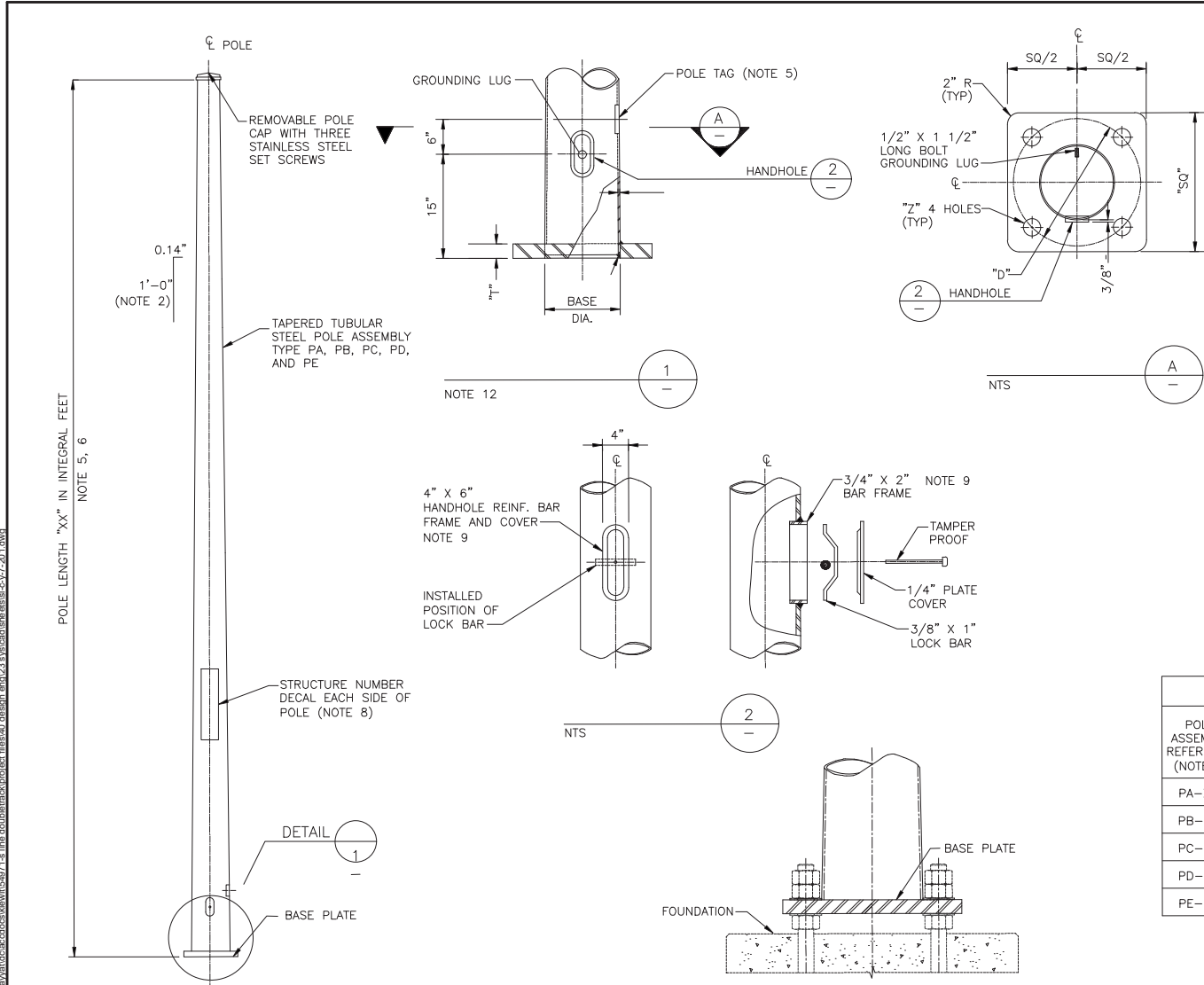
S-LINE EXTENSION PROJECT

STANDARD DRAWINGS

OVERHEAD CONTACT SYSTEM

TYPICAL HEADSPAN STRUCTURES

State	NTS
CADD Filename	SL-C-Y-7-194.dwg
Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y7194
Sheet No.	



- NOTES:**
1. THE FABRICATION OF POLE ASSEMBLY SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF THE STRUCTURAL STEEL OF BUILDINGS, LATEST EDITION.
 2. POLE SHALL HAVE A UNIFORM TAPER OF APPROXIMATELY FOURTEEN HUNDREDTHS (1/4) OF AN INCH PER LINEAR FOOT. THE 0.14" : 1' SLOPE IS THE REDUCTION RATE IN DIAMETER.
 3. WELDING SHALL BE IN CONFORMANCE WITH THE AWS D11 SPECIFICATIONS OF LATEST EDITION.
 4. THE CONTRACTOR SHALL PREPARE SHOP DRAWINGS FOR EACH POLE ASSEMBLY REFERENCE REQUIRED.
 5. POLE HARDMARK SHALL INCORPORATE POLE ASSEMBLY REFERENCE.
 6. ALLOCATE POLES WITH LENGTH IN INTEGRAL FEET, SHOWN AS "XX" IN THE POLE ASSEMBLY REFERENCE.
 7. FOR POLE LENGTH, SEE OCS WIRING LAYOUT AND MATERIAL ALLOCATION DRAWINGS.
 8. STRUCTURE NUMBER DECALS SHALL FACE ALONG TRACK EACH WAY. TWO NUMBER DECALS ARE REQUIRED PER POLE. SEE DWG. Y7210.
 9. THE HANDHOLE SHALL BE REINFORCED TO MEET THE ALLOWABLE BENDING MOMENT SHOWN IN THE POLE SCHEDULE TABLE.
 10. INSTALL POLE SUCH THAT THE HAND HOLE IS LOCATED SO THAT IT FACES THE DIRECTION OF INCREASING TRACK STATIONING.
 11. ALLOWABLE BENDING MOMENT SHOWN IN THE POLE SCHEDULE IS THE MAXIMUM ALLOWABLE BENDING MOMENT AT POLE BASE, AND ASSUMES LOAD IS APPLIED AT THE MESSENGER WIRE HEIGHT FROM TOP OF THE BASE PLATE. POLE SHAFT SHALL HAVE A MINIMUM YIELD STRESS OF 55,000 PSI.

POLE ASSEMBLY REFERENCE (NOTE 6)	POLE BASE OUTSIDE DIA. (IN)	WALL THICKNESS "TW" (IN)	POLE BASE				ANCHOR BOLT DIA. (IN)	ALLOW. BENDING MOMENT (KIP-FT)
			SQUARE "SQ" (IN)	BOLT CIRCLE "D" (IN)	THK "T" (IN)	HOLE "Z" (IN)		
			PA-XX	13	.1875	23		
PB-XX	13	.2500	23	22	2	2 5/16	2	91
PC-XX	13	.3125	23	22	2	2 5/16	2	113
PD-XX	13	.5000	23	22	2	2 5/16	2	176
PE-XX	14	.6250	23	22	2	2 5/16	2	252

STANDARD TAPERED TUBULAR POLE ASSEMBLY POLE

INSTALLATION DETAIL

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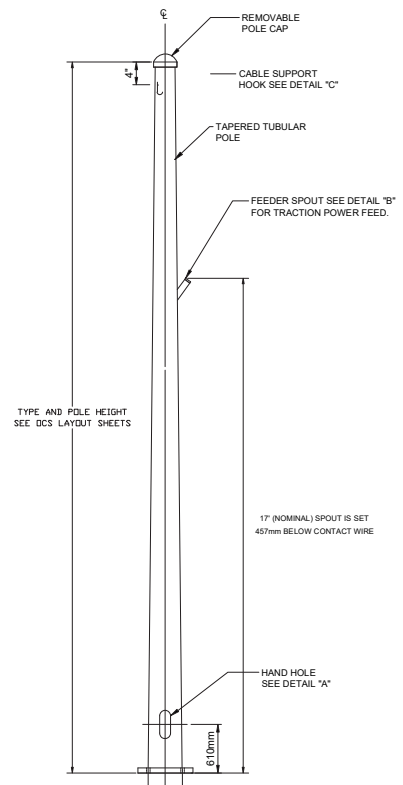
Designed By: B.DEMERS
 Drawn By: N.WU
 Checked By: Y.LIU
 Approved By: B.DEMERS

S-LINE EXTENSION PROJECT
 OCS STANDARD DRAWINGS
 TAPERED TUBULAR STEEL POLE ASSEMBLIES, TYPE PA, PB, PC, PD, & PE

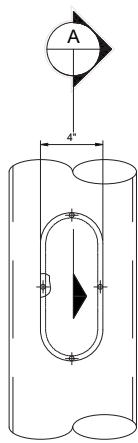
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CADD Filename	SL-C-Y-7-201.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y7201
Sheet No.	

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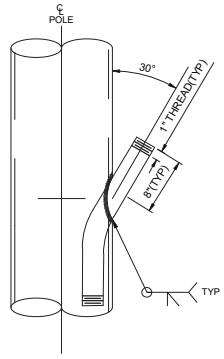
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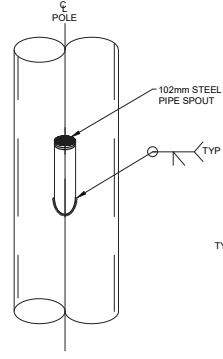
ELEVATION
TUBULAR FEEDER POLE PE-XX-F
SCALE: NTS



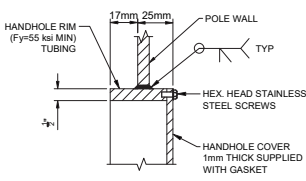
DETAIL "A"
SCALE: NTS



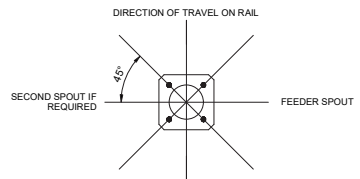
DETAIL "B"
(FOR TRACTION POWER FEED)
SCALE: NTS



DETAIL "C"
(SECTION THRU POLE)
SCALE: NTS



SECTION
SCALE: NTS



HANDHOLE DETAIL "A"
ORIENTATION OF FEEDER SPOUT AND HANDHOLE
SCALE: NTS

- NOTES:**
1. MODIFICATIONS SHOWN ARE TO BE INCORPORATED IN THE STANDARD POLE DETAIL, TO ACCOMMODATE FEEDER/SNOW MELTER CABLES TO BE INSTALLED WITHIN THE TUBULAR POLES.
 2. ORIENTATION AND LOCATION OF FEEDER SPOUT AND HANDHOLES WITH RESPECT TO ANCHOR BOLTS TO BE SUPPLIED AS SHOWN UNLESS OTHERWISE NOTED ON THE LAYOUT AND ALLOCATION DRAWINGS.
 3. ALL STEEL FABRICATED PARTS TO BE MANUFACTURED PER SPECIFICATIONS.
 4. DETAILS SHOWN ARE TYPICAL. MANUFACTURER'S STANDARD DETAILS MAY BE SUBSTITUTED UPON APPROVAL OF THE ENGINEER.

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REV	DATE	Description	



Designed By	B.DEMERS
Drawn By	S.KHAYYAT
Checked By	Y.LIU
Approved By	B.DEMERS

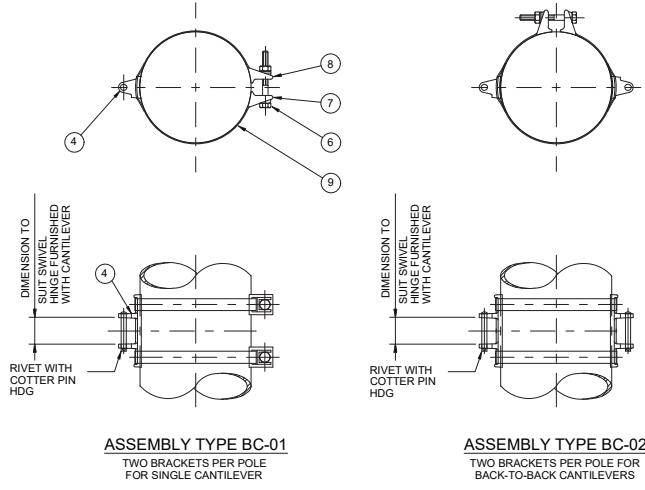
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM

State	NTS
CADD Filename	SL-C-Y7-203.dwg
Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y7203
Sheet No.	

Submitted By: _____ Approved By: _____

NOTES:

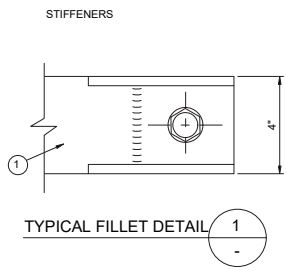
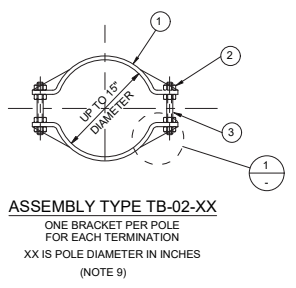
1. FOR GENERAL NOTES, SEE DWG NO. Y0001.
2. FOR SYMBOLS AND ABBREVIATIONS, SEE DWG NO. Y0002.
3. CONTRACTOR SHALL USE THIS DRAWING TO PREPARE SHOP DRAWINGS. CONTRACTOR SHOP DRAWINGS SHALL GIVE LIST OF SUPPLIER COMPONENTS WITH PART NUMBERS. COMPONENT DRAWINGS SHALL ACCOMPANY SHOP DRAWINGS.
4. SHOP DRAWINGS SHALL CARRY THE SAME TITLES AS THESE CONTRACT DRAWINGS. THE EXAMPLE MATERIAL LIST BELOW GIVES TYPICAL COMPONENT NAMES.
5. COMPONENT DRAWINGS SHALL ACCOMPANY SHOP DRAWINGS.
6. CONTRACTOR DESIGNS SHALL CONFORM TO FIT AND FUNCTION OF THE CONTRACT DOCUMENTS.
7. FOR CONDUCTOR MAXIMUM TENSIONS SEE Y7003.
8. IF BACK TO BACK CANTILEVERS ARE POSSIBLE ON A POLE, ASSEMBLY BC-02 CAN BE SUBSTITUTED FOR TWO BC-01.
9. DIMENSION XX SHALL BE DETERMINED BY THE CONTRACTOR.



HINGE TYPE POLE BAND BRACKET ASSEMBLY FOR CANTILEVERS
(NOTE 5)

APPLICATION RULE

BC TYPE POLE BANDS ARE ALLOCATED IN PAIRS IN THE ASSEMBLY REFERENCES SHOWN IN THE WIRING LAYOUTS AND ALLOCATION SCHEDULE.



TWO PIECE POLE BRACKET ASSEMBLY FOR BACKBONE, CROSSPAN, AND CONDUCTOR TERMINATIONS

EXAMPLE MATERIALS LIST

ITEM	DESCRIPTION	REMARKS
1	BAND SECTION WITH FILLET PLATES	
2	HEXAGON NUTS	
3	THREADED STUD	
4	HINGE BRACKET	
5	CLEVIS ATTACHMENT	
6	BOLT WITH SELF LOCKING NUT AND WASHER	
7	CLAMP HALF - BOLT HEAD SIDE	
8	CLAMP HALF - NUT SIDE	
9	POLE BAND STRAP	

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Designed By:
B.DEMERS

Drawn By:
N.WU

Checked By:
Y.LIU

Approved By:
B.DEMERS

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS

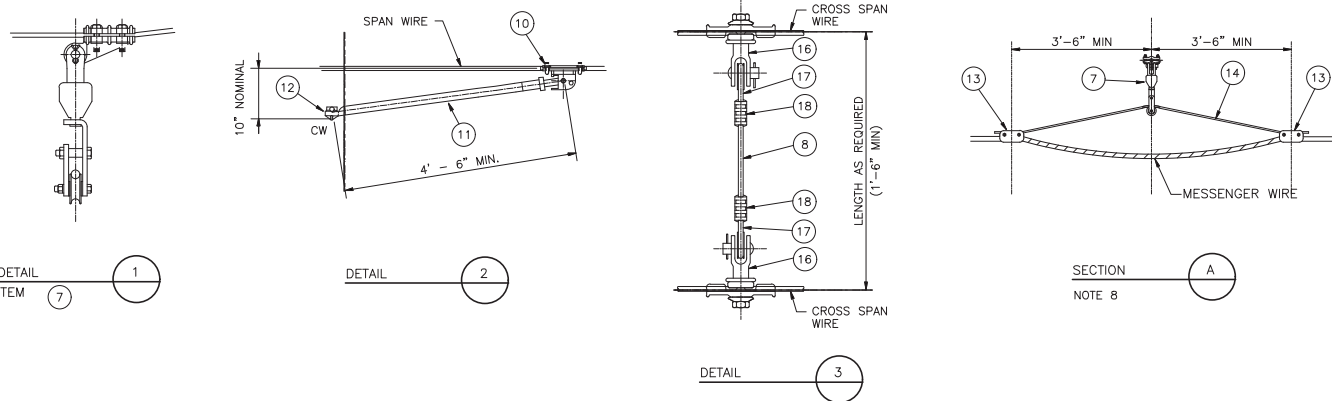
OCS POLE BRACKET ASSEMBLIES FOR TUBULAR POLES TYPES BC-XX AND TB-02-XX

State	NTS
CADD Filename	SL-C-Y-7-207.dwg
Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y7207
Sheet No.	

Submitted By: _____ Approved By: _____

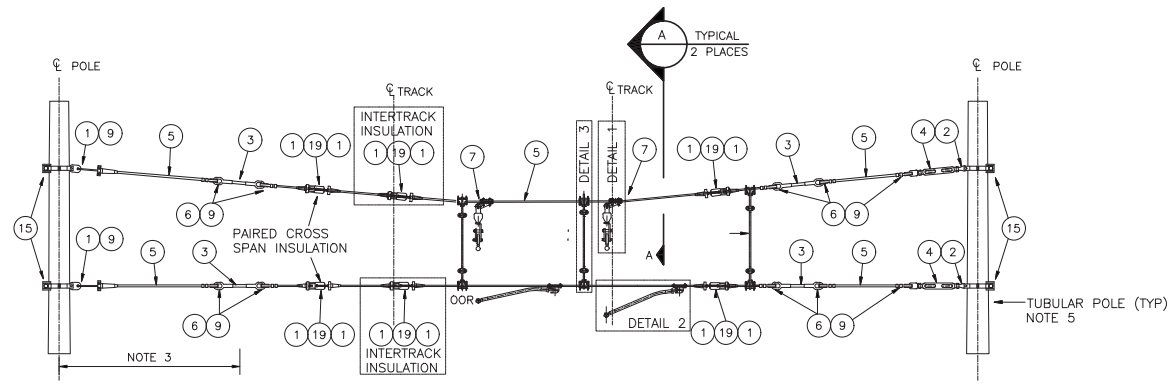
NOTES:

1. FOR ABBREVIATIONS AND GENERAL NOTES, SEE DRAWING Y0001.
2. FOR STRUCTURAL NOTES SEE DRAWING Y0002.
3. DISTANCE FROM FACE OF POLE TO FIRST INSULATOR IS NORMALLY 6'-0" TO 9'-0", USE 1'-3" MIN IF DISTANCE "A" IS LESS THAN 7'-0".
4. PREFERRED METHOD OF SPAN WIRE ATTACHMENT IS WITH PREFORMED GUY GRIPS, USE WIRE ROPE GRIPS (TWO FOR TERMINATION) ONLY WHEN LENGTH WILL NOT PERMIT USE OF PREFORMED GUY GRIPS.
5. FOR TUBULAR POLE DIMENSIONS SEE DRAWING Y7201.
6. BRACKET ASSEMBLIES FOR TUBULAR POLES CALLED OFF SEPARATELY, SEE DRAWING Y7207.
7. THIS DIMENSION TO BE AS SHORT AS PRACTICAL.
8. TENSION ON BRIDLE WIRE SHALL NOT BE LESS THAN 2400LB.



NUMBER OF CATENARIES	ASSEMBLY REFERENCE	
	INTERTRACK INSULATION	
	WITHOUT	WITH
ONE	HS-1	HS-1A
TWO	HS-2	HS-2A

EXAMPLE MATERIAL LIST		
No PART	DESCRIPTION	REMARKS
1	STRAND VISE	
2	SHACKLE	
3	EYE-EYE STRAIN INSULATOR 10" MIN INSUL	
4	CLEVIS-EYE TURNBUCKLE	
5	3/8" 7 STRAND GALVANIZED STEEL WIRE	
6	GUY CLIPS	NOTE 4
7	PULLEY SUPPORT ASSEMBLY (INSULATED)	
8	HEADSPAN HANGER WIRE	
9	THIMBLE (OPEN)	
10	LINE HANGER	
11	INSULATED STEADY ARM	
12	CONTACT WIRE CLAMP ASSEMBLY	
13	WIRE CLAMP	
14	5/16" 7 STRAND STAINLESS STEEL WIRE	
15	POLE BRACKET ASSEMBLY HTB-02	NOTE 6
16	SPANWIRE SUPPORT CLAMP	
17	1/4" THIMBLE (CLOSED)	
18	COMPRESSION SLEEVE	
19	JB STRAIN INSULATOR	



HEADSPAN ASSEMBLY HS-2A AS SHOWN AS AN EXAMPLE ONE IN RUNNING AND ONE OUT OF RUNNING WITH INTERTRACK INSULATION

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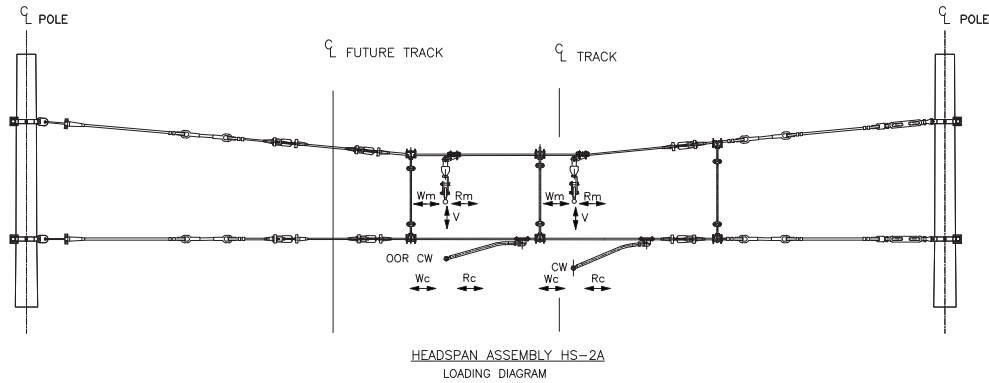


Designed By:
B.DEMERS
Drawn By:
N.WU
Checked By:
Y.LIU
Approved By:
B.DEMERS

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
HEADSPAN ASSEMBLIES HS-1, HS-1A,
HS-2, AND HS-2AX

State	NTS
CADD Filename:	SL-C-Y-7-209.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y7209
Sheet No.	

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NOTES:

1. FOR SITE SPECIFIC APPLICATION OF THESE HEADSPAN ASSEMBLIES REFER TO WIRING LAYOUT AND ALLOCATION SCHEDULE.
2. WIRE HEIGHTS, STAGGERS AND POLE OFFSETS ARE INDICATED ON OCS LAYOUT PLAN. STAGGERS ARE RELATIVE TO THE SUPERELEVATED TRACK CENTERLINE AT CONTACT WIRE LEVEL.
3. THE CONTRACTOR'S SUPPLIER SHALL PREPARE SHOP DRAWINGS FOR THE ASSEMBLIES LISTED, INCLUDING BRACKET DIMENSIONS RELATIVE TO IN-RUNNING CONTACT WIRE HEIGHT.
4. EACH SHOP DRAWING TITLE BLOCK SHALL SHOW THE SPECIFIC ASSEMBLY REFERENCES ILLUSTRATED.
5. THE SHOP DRAWINGS SHALL SHOW A LIST OF MATERIAL AND COMPONENTS. QUANTITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE PARTS SUPPLIER.
6. FOR VEHICLE AND PANTOGRAPH CLEARANCE ENVELOPE SEE DWG. Y7005.
7. EACH CANTILEVER ASSEMBLY SHALL BE USED IN CONJUNCTION WITH A POLE BRACKET ASSEMBLY CALLED OUT SEPARATELY.
8. MAXIMUM LOADS ARE REQUIRED CAPACITIES OF EACH HEADSPAN ASSEMBLY. MAXIMUM LOADS ARE BASED ON THE WIRE TENSION CHARTS FOUND ON DWG. Y7015.
9. HEADSPAN SELF-WEIGHT IS NOT INCLUDED.
10. FOR HEADSPAN ASSEMBLY, SEE DWG. Y7209.

LOADING TABLE - v = VERTICAL, R = RADIAL, W = WIND, m = MESSENGER, AND c = CONTACT								
HEADSPAN ASSEMBLY	APPLICATION	CW DEVIATION	HEEL SETTING	MAXIMUM LOADS (LB) (NOTES 8 & 9)				
				v	Rc	Rm	Wc	Wm
HS-01	ONE CATENARY HEADSPAN	UP TO 3.5"	3" TO 5"	1,000	295	430	235	305
HS-02	TWO CATENARY HEADSPAN	UP TO 3.5"	3" TO 5"	2,000*	590*	860*	470*	610*

* DENOTES THAT THE TOTAL VALUE IS THE SUM OF THE LOADS APPLIED DUE TO SUPPORTING TWO CATENARIES

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Submitted By: _____ Approved By: _____

Designed By:
B. DEMERS
Drawn By:
N.W.U.
Checked By:
Y. LIU
Approved By:
B. DEMERS

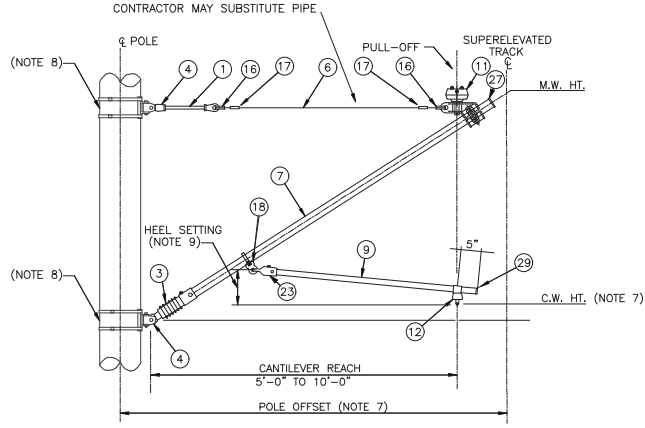
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
CONFIGURATION AND LOADING DIAGRAM
TYPE HS-1 AND HS-2

State: NTS
CADD Filename: SL-C-Y-7-210.dwg
Submit Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Y7210
Sheet No.:

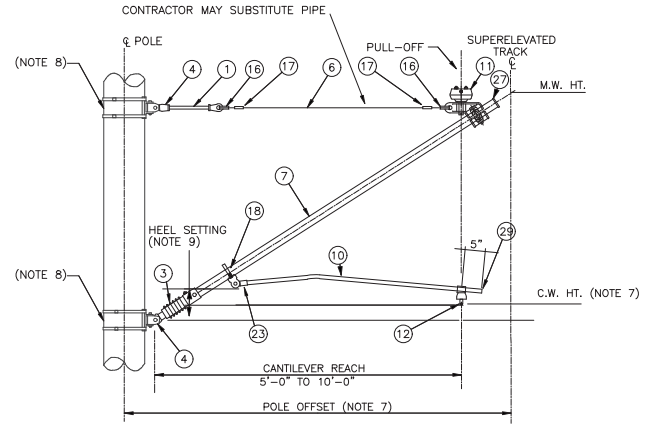
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NOTES:

1. FOR ABBREVIATIONS AND GENERAL NOTES SEE DWG. Y0001.
2. FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG. Y0002.
3. FOR CANTILEVER TYPE AND ALLOCATION REFER TO OCS WIRING LAYOUT PLAN.
4. CONTRACTOR SHALL USE THIS DRAWING TO PREPARE SHOP DRAWINGS. CONTRACTOR SHOP DRAWINGS SHALL GIVE LIST OF SUPPLIER COMPONENTS WITH PART NUMBERS. COMPONENT DRAWINGS SHALL ACCOMPANY SHOP DRAWINGS.
5. SHOP DRAWINGS SHALL CARRY THE SAME TITLES AS THESE CONTRACT DRAWINGS. THE EXAMPLE MATERIAL LIST BELOW GIVES TYPICAL COMPONENT NAMES.
6. COMPONENT DRAWINGS SHALL ACCOMPANY SUBMITTED SHOP DRAWINGS.
7. WIRE HEIGHTS, STAGGERS AND POLE OFFSETS ARE INDICATED ON OCS LAYOUT PLAN AND MATERIAL ALLOCATION DRAWINGS. STAGGERS ARE RELATIVE TO THE SUPERELEVATED TRACK CENTERLINE AT CONTACT WIRE LEVEL.
8. POLE BRACKET ASSEMBLIES CALLED OFF SEPARATELY. FOR WF POLES SEE DWG Y7208 FOR TUBULAR POLES SEE DWG Y7207.
9. CONTRACTOR DESIGNS SHALL CONFORM TO FIT AND FUNCTION OF THE CONTRACT DOCUMENTS.
10. FOR UNIVERSAL PANTOGRAPH CLEARANCE ENVELOPE SEE DWG. Y7005.

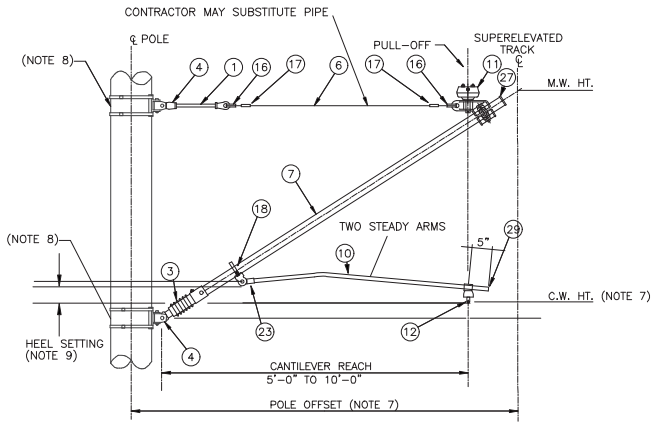


CANTILEVER TYPE CA-01L (LIGHT LOAD)
PULL-OFF APPLICATION

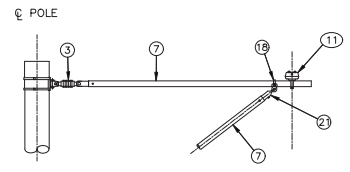


CANTILEVER TYPE CA-01M (MEDIUM LOAD)
PULL-OFF APPLICATION

APPLICATION RULE
FOR LIGHT, MEDIUM AND HEAVY
LOAD VALUES SEE DWG. Y7212



CANTILEVER TYPE CA-01H (HEAVY LOAD)
PULL-OFF APPLICATION



ALTERNATIVE MESSENGER
SUPPORT DETAIL
FOR CA-01X CANTILEVERS

EXAMPLE MATERIAL LIST		
ITEM	DESCRIPTION	REMARKS
1	FIBERGLASS STRAIN INSULATOR EYE/EYE	
3	INSULATOR EYE/PIPE ENDS FOR STRUT PIPE	
4	SWIVEL HINGE	
6	WIRE ROPE (LENGTH AS REQ'D)	
7	STRUT PIPE (LENGTH AS REQ'D)	
9	STEADY ARM PIPE (LENGTH AS REQ'D)	
10	STEADY ARM PIPE W/ 10" BEND (LENGTH AS REQ'D)	
11	INSULATED MESSENGER WIRE SADDLE 35'	
12	INSULATED CONTACT WIRE SWIVEL CLAMP	
16	THIMBLE	
17	CRIMP SLEEVE	
18	CLEVIS CLAMP W/ U-BOLT	
21	EYE END FITTING FOR STRUT PIPE	
23	EYE END FITTING FOR STEADY ARM	
27	END CAP FOR STRUT PIPE	
29	END CAP FOR STEADY ARM PIPE	

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REV	DATE	Description	

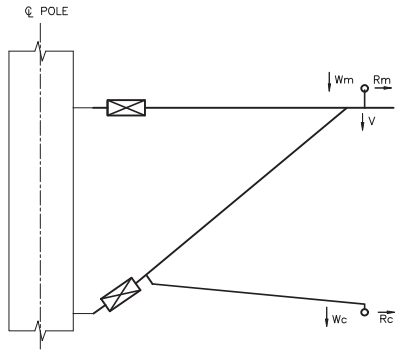
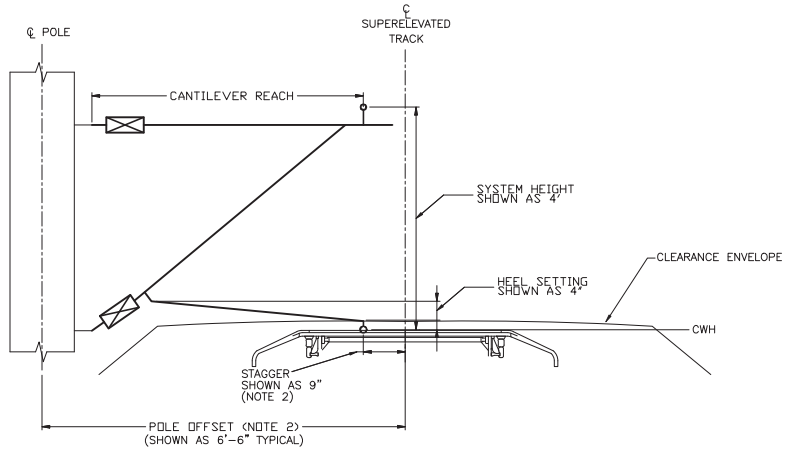


Designed By: B. DEMERS
 Drawn By: N.WU
 Checked By: Y. LIU
 Approved By: B. DEMERS

S-LINE EXTENSION PROJECT
 STANDARD DRAWINGS
 OVERHEAD CONTACT SYSTEM
 CANTILEVER ASSEMBLY PULL-OFF
 TYPES CA-01L, CA-01M AND CA-01H

State	NTS
CADD Filename	SL-C-Y-7-211.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y7211

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NOTES:

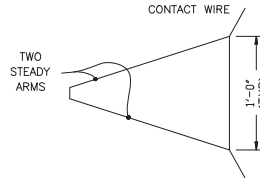
- FOR SITE SPECIFIC APPLICATION OF THESE CANTILEVER ASSEMBLIES REFER TO LAYOUT PLANS AND MATERIAL ALLOCATION DRAWINGS.
- WIRE HEIGHTS, STAGGERS AND POLE OFFSETS ARE INDICATED ON OCS WIRING LAYOUT PLAN. STAGGERS ARE RELATIVE TO THE SUPERELEVATED TRACK CENTERLINE AT CONTACT WIRE LEVEL.
- THE CONTRACTOR'S SUPPLIER SHALL PREPARE SHOP DRAWINGS FOR THE ASSEMBLIES LISTED, INCLUDING BRACKET DIMENSIONS RELATIVE TO IN-RUNNING CONTACT WIRE HEIGHT.
- EACH SHOP DRAWING TITLE BLOCK SHALL SHOW THE SPECIFIC ASSEMBLY REFERENCES ILLUSTRATED.
- THE SHOP DRAWINGS SHALL SHOW A LIST OF MATERIAL AND COMPONENTS. QUANTITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE PARTS SUPPLIER.
- FOR VEHICLE AND PANTOGRAPH CLEARANCE ENVELOPE SEE DWG. Y7005.
- EACH CANTILEVER ASSEMBLY SHALL BE USED IN CONJUNCTION WITH A POLE BRACKET ASSEMBLY CALLED OUT SEPARATELY.
- MAXIMUM LOADS ARE REQUIRED CAPACITIES OF EACH CANTILEVER ASSEMBLY. MAXIMUM LOADS ARE BASED ON THE WIRE TENSION CHARTS FOUND ON DWG. Y7015.
- CANTILEVER SELF-WEIGHT IS NOT INCLUDED.
- VERTICAL LOAD AT MESSENGER ONLY.

CANTILEVER ASSEMBLY CA-01 (SCALED)

LOADING DIAGRAM
(NOTE 9)

LOADING TABLE - V = VERTICAL (NOTE 10), R = RADIAL, W = WIND, m = MESSENGER, AND c = CONTACT

CANTILEVER ASSEMBLY	APPLICATION	CW DEVIATION	HEEL SETTING	MAXIMUM LOADS (LB) (NOTES 8 & 9)				
				V	Rc	Rm	Wc	Wm
CA-01L	LIGHT PUSH-OFF	UP TO 3.5'	3" TO 5"	1000	295	430	235	305
CA-01M	MEDIUM PUSH-OFF	UP TO 7"	1" TO 3"	1000	585	855	235	305
CA-01H	HEAVY PUSH-OFF	UP TO 14'	1"	1000	1160	1700	235	305



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REV	DATE	Description	

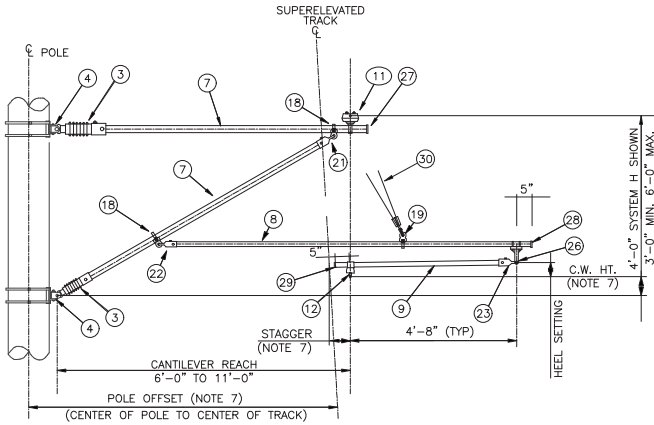


Designed By B.DEMERS
Drawn By N.WU
Checked By Y.LIU
Approved By B.DEMERS

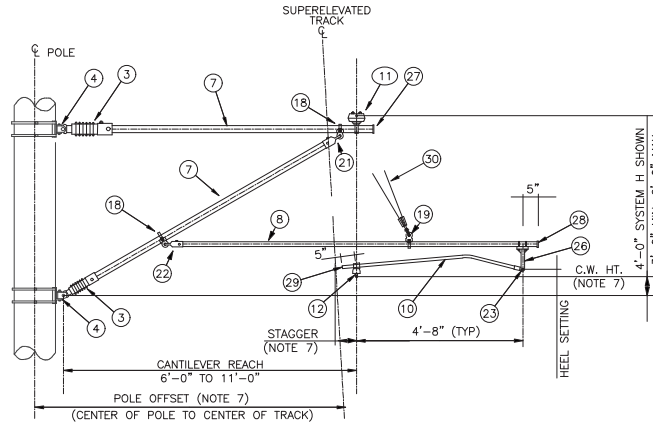
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
CONFIGURATION AND LOADING DIAGRAM
TYPES CA-01L, CA-01M, AND CA-01H

State NTS
CADD Filename SL-C-Y-7-212.dwg
Submit Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7212
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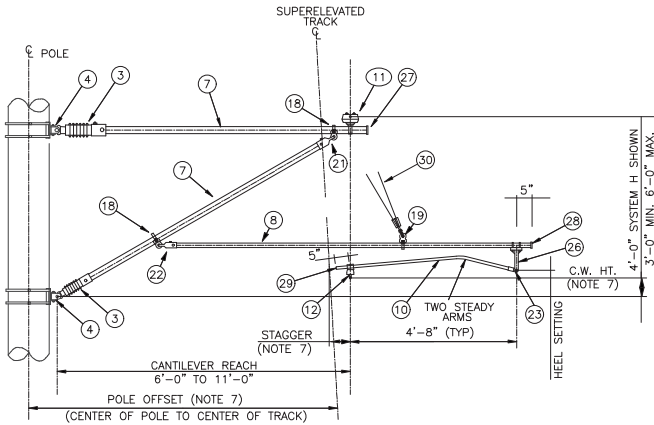
Submitted By: _____ Approved By: _____



CANTILEVER TYPE: CA-03L (LIGHT LOAD)
PUSH-OFF APPLICATION



CANTILEVER TYPE: CA-03M (MEDIUM LOAD)
PUSH-OFF APPLICATION



CANTILEVER TYPE: CA-03H (HEAVY LOAD)
PUSH-OFF APPLICATION

APPLICATION RULE
FOR LIGHT, MEDIUM, AND HEAVY LOAD
VALUES SEE DWG 7214.

NOTES:

1. FOR ABBREVIATIONS AND GENERAL NOTES SEE DWG. Y0001.
2. FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG. Y0002.
3. FOR CANTILEVER TYPE AND ALLOCATION REFER TO OCS WIRING LAYOUT PLAN AND ALLOCATION SCHEDULES.
4. CONTRACTOR SHALL USE THIS DRAWING TO PREPARE SHOP DRAWINGS. CONTRACTOR SHOP DRAWINGS SHALL GIVE LIST OF SUPPLIER COMPONENTS WITH PART NUMBERS. COMPONENT DRAWINGS SHALL ACCOMPANY SHOP DRAWINGS.
5. SHOP DRAWINGS SHALL CARRY THE SAME TITLES AS THESE CONTRACT DRAWINGS. THE EXAMPLE MATERIAL LIST BELOW GIVES TYPICAL COMPONENT NAMES.
6. COMPONENT DRAWINGS SHALL ACCOMPANY SUBMITTED SHOP DRAWINGS.
7. WIRE HEIGHTS, STAGGERS AND POLE OFFSETS ARE INDICATED ON OCS LAYOUT PLAN AND MATERIAL ALLOCATION DRAWINGS. STAGGERS ARE RELATIVE TO THE SUPERELEVATED TRACK CENTERLINE AT CONTACT WIRE LEVEL.
8. POLE BRACKET ASSEMBLIES CALLED OFF SEPARATELY. FOR WF POLES SEE DWG Y7208 FOR TUBULAR POLES SEE DWG Y7207.
9. CONTRACTOR DESIGNS SHALL CONFORM TO FIT AND FUNCTION OF THE CONTRACT DOCUMENTS.
10. FOR VEHICLE AND PANTOGRAPH CLEARANCE ENVELOPE SEE DWG. Y7015.

EXAMPLE MATERIAL LIST

ITEM	DESCRIPTION	REMARKS
3	INSULATOR EYE/PIPE ENDS	
4	SWIVEL HINGE	
7	STRUT PIPE (LENGTH AS REQ'D)	
8	REGISTRATION PIPE (LENGTH AS REQ'D)	
9	STEADY ARM PIPE (LENGTH AS REQ'D)	
10	STEADY ARM W/ 10' BEND (LENGTH AS REQ'D)	
11	INSULATED MESSENGER WIRE SADDLE	
12	INSULATED CONTACT WIRE SWIVEL CLAMP	
18	CLEVIS CLAMP W/U-BOLT FOR STRUT PIPE	
19	CLEVIS CLAMP W/U-BOLT FOR REGISTRATION PIPE	
21	EYE END FITTING FOR STRUT PIPE	
22	EYE END FITTING FOR REGISTRATION PIPE	
23	EYE END FOR FITTING STEADY ARM	
26	DROP BRACKET W/U-BOLTS FOR REGISTRATION PIPE	
27	END CAP FOR STRUT PIPE	
28	END CAP FOR REGISTRATION PIPE	
29	END CAP FOR STEADY ARM	
30	V-HANGER ASSEMBLY	

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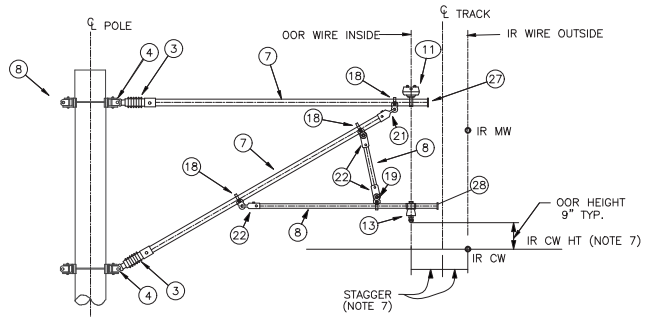
Designed By:	B.DEMERS
Drawn By:	N.WU
Checked By:	Y.LIU
Approved By:	B.DEMERS

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
CANTILEVER ASSEMBLY PUSH-OFF
CA-03L, CA-03M, AND CA-03H

State:	NTS
CADD Filename:	SL-C-Y7-213.dwg
Submit Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Y7213
Sheet No.:	

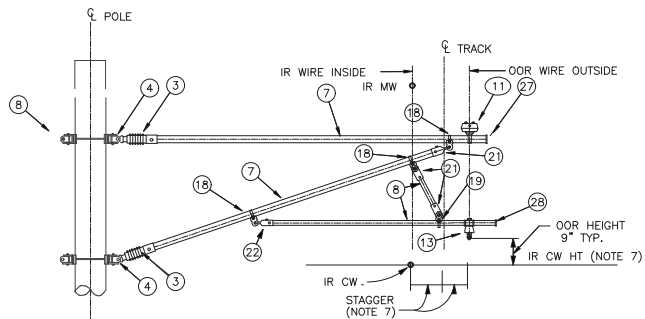
Submitted By: _____

Approved By: _____



CANTILEVER TYPE: CA-05AM (MEDIUM LOAD) CA-05AH (HEAVY LOAD)
OUT OF RUNNING APPLICATION (CLOSER TO POLE)

APPLICATION RULE
FOR MEDIUM AND HEAVY LOAD VALUES SEE DWG 7216



CANTILEVER TYPE: CA-05BM (MEDIUM LOAD) CA-05BH (HEAVY LOAD)
OUT OF RUNNING APPLICATION (FURTHER FROM POLE)

NOTES:

- FOR ABBREVIATIONS AND GENERAL NOTES SEE DWG. Y0001.
- FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG. Y0002.
- FOR CANTILEVER TYPE AND ALLOCATION REFER TO OCS WIRING LAYOUT PLAN AND ALLOCATION SCHEDULE.
- CONTRACTOR SHALL USE THIS DRAWING TO PREPARE SHOP DRAWINGS. CONTRACTOR SHOP DRAWINGS SHALL GIVE LIST OF SUPPLIER COMPONENTS WITH PART NUMBERS. COMPONENT DRAWINGS SHALL ACCOMPANY SHOP DRAWINGS.
- SHOP DRAWINGS SHALL CARRY THE SAME TITLES AS THESE CONTRACT DRAWINGS. THE EXAMPLE MATERIAL LIST BELOW GIVES TYPICAL COMPONENT NAMES.
- COMPONENT DRAWINGS SHALL ACCOMPANY SUBMITTED SHOP DRAWINGS.
- WIRE HEIGHTS, STAGGERS AND POLE OFFSETS ARE INDICATED ON OCS LAYOUT PLAN AND MATERIAL ALLOCATION DRAWINGS. STAGGERS ARE RELATIVE TO THE SUPERELEVATED TRACK CENTERLINE AT CONTACT WIRE LEVEL.
- POLE BRACKET ASSEMBLIES CALLED OFF SEPARATELY, FOR WF POLES SEE DWG Y7208 FOR TUBULAR POLES SEE DWG Y7207.
- CONTRACTOR DESIGNS SHALL CONFORM TO FIT AND FUNCTION OF THE CONTRACT DOCUMENTS.
- FOR VEHICLE AND PANTOGRAPH CLEARANCE ENVELOPE SEE DWG. Y7005.

EXAMPLE MATERIAL LIST		
ITEM	DESCRIPTION	REMARKS
3	INSULATOR EYE/PIPE ENDS FOR STRUT PIPE	
4	SWIVEL HINGE	
7	STRUT PIPE (LENGTH AS REQ'D)	
8	REGISTRATION PIPE (LENGTH AS REQ'D)	
11	INSULATED MESSENGER WIRE SADDLE	
13	INSULATED CONTACT WIRE SWIVEL CLAMP FOR REGISTRATION PIPE	
18	CLEVIS CLAMP W/U-BOLT FOR STRUT PIPE	
19	CLEVIS CLAMP W/U-BOLT FOR REGISTRATION PIPE	
21	EYE END FITTING FOR STRUT PIPE	
22	EYE END FITTING FOR REGISTRATION PIPE	
27	END CAP FOR STRUT PIPE	
28	END CAP FOR REGISTRATION PIPE	

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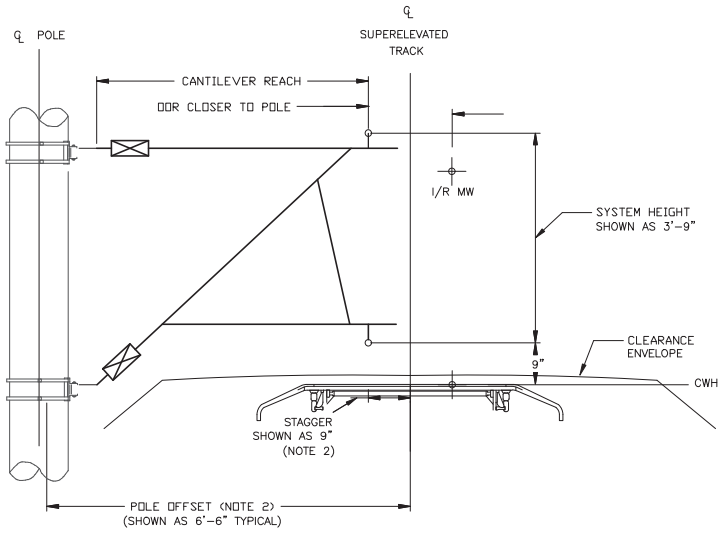


Designed By: B.DEMERS
Drawn By: N.WU
Checked By: Y.LIU
Approved By: B.DEMERS

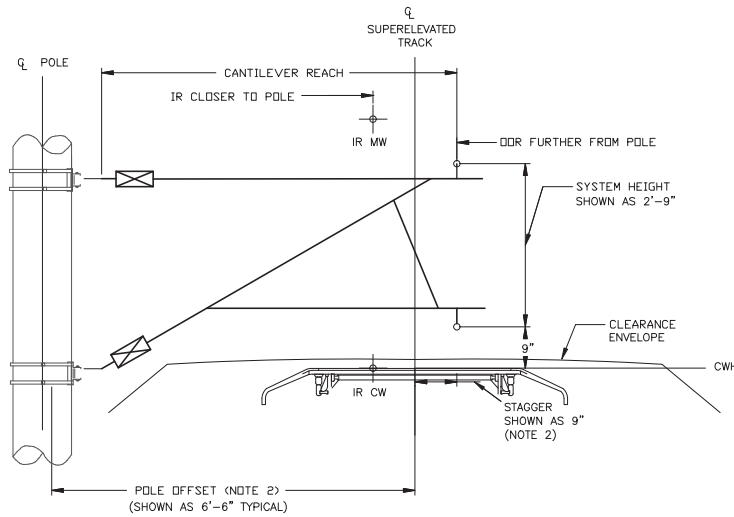
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
CANTILEVER ASSEMBLY OUT-OF-RUNNING
TYPES CA-05AM, AH AND CA-05BM, BH

State: NTS
CADD Filename: SL-C-Y-7-215.dwg
Submit Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Y7215
Sheet No.:

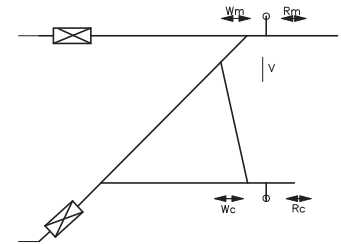
Submitted By: _____ Approved By: _____



CANTILEVER ASSEMBLY CA-05A (SCALED)



CANTILEVER ASSEMBLY CA-05B (SCALED)



LOADING DIAGRAM (NOTE 9)

NOTES:

- FOR SITE SPECIFIC APPLICATION OF THESE CANTILEVER ASSEMBLIES REFER TO LAYOUT PLANS AND MATERIAL ALLOCATION DRAWINGS.
- WIRE HEIGHTS, STAGGERS AND POLE OFFSETS ARE INDICATED ON OCS LAYOUT PLAN AND MATERIAL ALLOCATION DRAWINGS. STAGGERS ARE RELATIVE TO THE SUPERELEVATED TRACK CENTERLINE AT CONTACT WIRE LEVEL.
- THE CONTRACTOR'S SUPPLIER SHALL PREPARE SHOP DRAWINGS FOR THE ASSEMBLIES LISTED, INCLUDING BRACKET DIMENSIONS RELATIVE TO IN-RUNNING CONTACT WIRE HEIGHT.
- EACH SHOP DRAWING TITLE BLOCK SHALL SHOW THE SPECIFIC ASSEMBLY REFERENCES ILLUSTRATED.
- THE SHOP DRAWINGS SHALL SHOW A LIST OF MATERIAL AND COMPONENTS. QUANTITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE PARTS SUPPLIER.
- FOR VEHICLE AND PANTOGRAPH CLEARANCE ENVELOPE SEE DWG. Y7005.
- EACH CANTILEVER ASSEMBLY SHALL BE USED IN CONJUNCTION WITH A POLE BRACKET ASSEMBLY CALLED OUT SEPARATELY.
- MAXIMUM LOADS ARE REQUIRED CAPACITIES OF EACH CANTILEVER ASSEMBLY. MAXIMUM LOADS ARE BASED ON THE WIRE TENSION CHARTS FOUND ON DWG. Y7015.
- CANTILEVER SELF-WEIGHT IS NOT INCLUDED.
- VERTICAL LOAD AT MESSENGER ONLY.

LOADING TABLE - V = VERTICAL (NOTE 10), R = RADIAL, W = WIND, m = MESSENGER, AND c = CONTACT

CANTILEVER ASSEMBLY	CONTACT WIRE DEVIATION	HEEL SETTING	MAXIMUM LOADS (LB) (NOTES 8 & 9)				
			V	Rc	Rm	Wc	Wm
CA-05AM	UP TO 7 DEGREES	N/A	1000	585	855	235	305
CA-05AH	7 DEGREES TO 14 DEGREES	N/A	1000	1160	1700	235	305
CA-05BM	UP TO 7 DEGREES	N/A	1000	585	855	235	305
CA-05BH	7 DEGREES TO 14 DEGREES	N/A	1000	1160	1700	235	305

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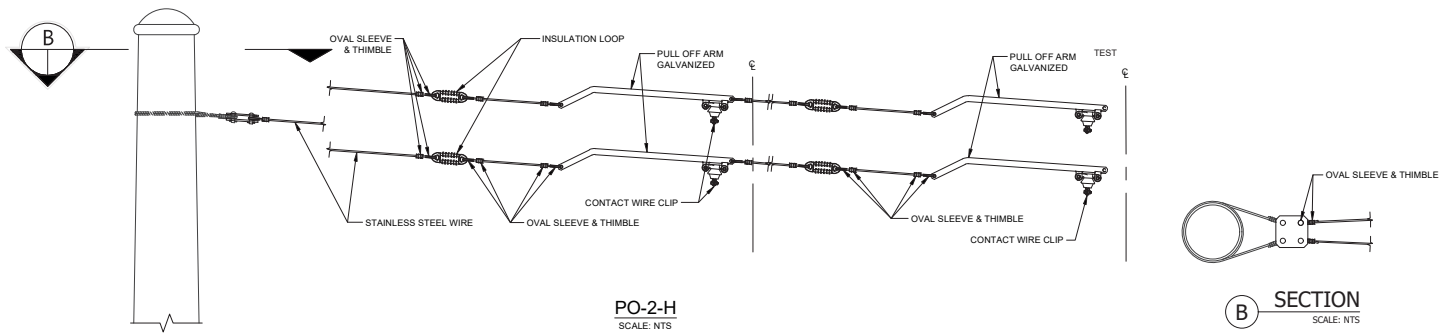
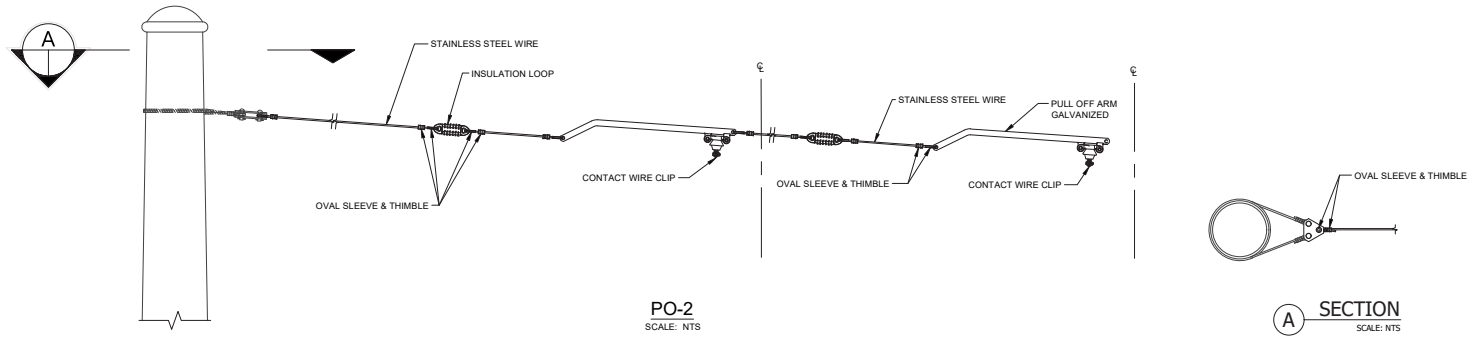


Designed By	B.DEMERS
Drawn By	N.WU
Checked By	Y.LIU
Approved By	B.DEMERS

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
CONFIGURATION AND LOADING DIAGRAM
TYPES CA-05AM, AH AND CA-05BM, BH

State	NTS
CADD Filename	SL-C-Y7-216.dwg
Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y7216
Sheet No.	

Submitted By: _____ Approved By: _____



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REV	DATE	Description	

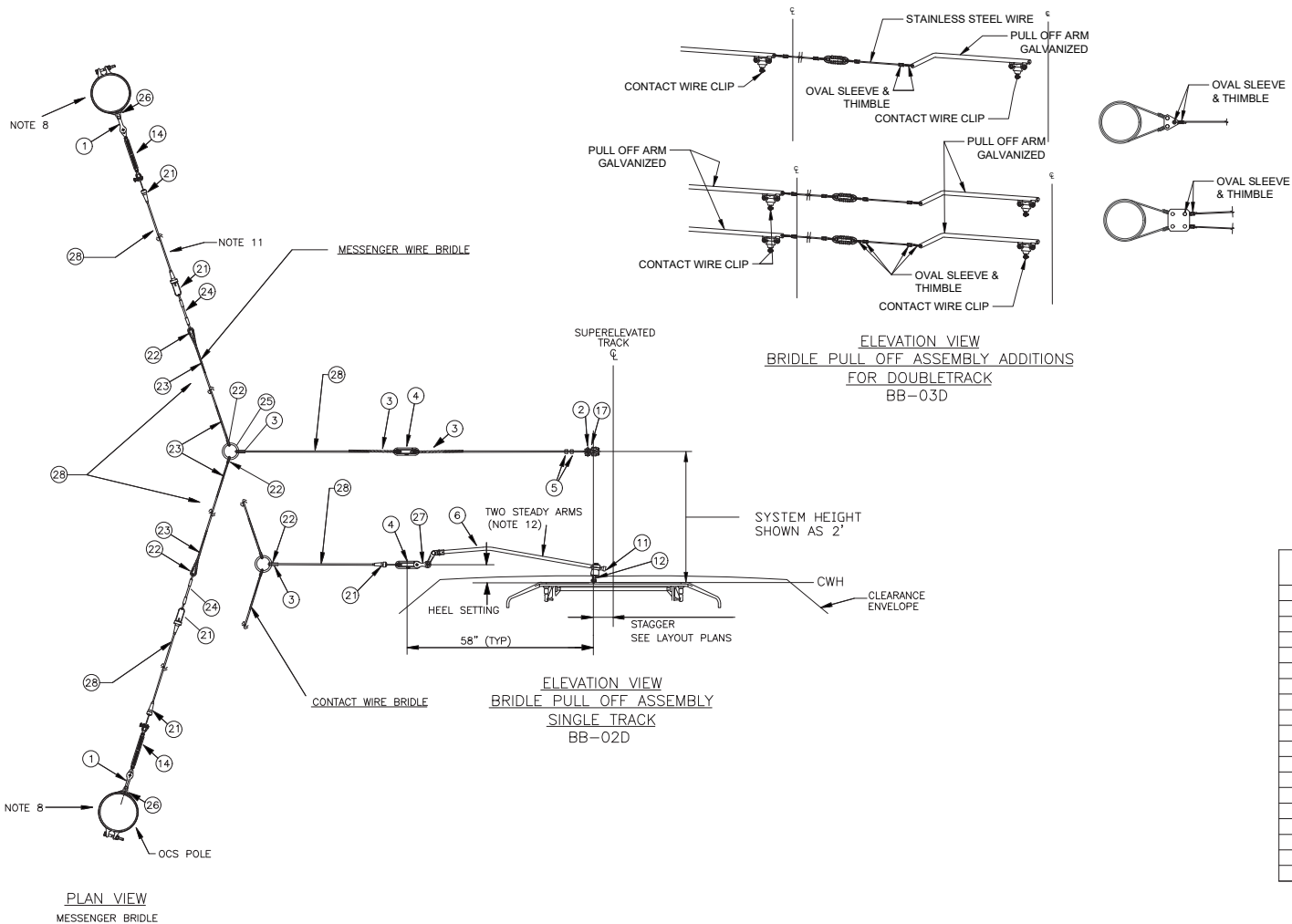


Designed By: B. DEMERS
Drawn By: S. KHAYYAT
Checked By: Y. LIU
Approved By: B. DEMERS

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
TWO TRACK PULL-OFF PO-2 AND PO-2A

State:	NTS
CADD Filename:	SL-C-Y-7-220.dwg
Submital Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Y7220
Sheet No.:	

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NOTES:

1. FOR ABBREVIATIONS AND GENERAL NOTES SEE DWG. Y0001.
2. FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG. Y0002.
3. FOR CATENARY SUPPORT TYPE AND ALLOCATION REFER TO CONTRACT LAYOUT DRAWINGS.
4. CONTRACTOR SHALL USE THIS DRAWING TO PREPARE SHOP DRAWINGS. CONTRACTOR SHOP DRAWINGS SHALL GIVE LIST OF SUPPLIER COMPONENTS WITH PART NUMBERS. COMPONENT DRAWINGS SHALL ACCOMPANY SHOP DRAWINGS.
5. SHOP DRAWINGS SHALL CARRY THE SAME TITLES AS THESE CONTRACT DRAWINGS. THE EXAMPLE MATERIAL LIST BELOW GIVES TYPICAL COMPONENT NAMES.
6. COMPONENT DRAWINGS SHALL ACCOMPANY SHOP DRAWINGS.
7. WIRE HEIGHTS, STAGGERS AND POLE OFFSETS ARE INDICATED ON OCS LAYOUT DRAWINGS. STAGGERS ARE RELATIVE TO THE SUPERELEVATED TRACK CENTERLINE AT CONTACT WIRE LEVEL.
8. ANCHOR BRACKET ASSEMBLIES CALLED OFF SEPARATELY. SEE DWG Y7207 AND Y7208 FOR POLES BRACKET ASSEMBLIES.
9. CONTRACTOR DESIGNS SHALL CONFORM TO FIT AND FUNCTION OF THE CONTRACT DOCUMENTS.
10. FOR VEHICLE AND PANTOGRAPH CLEARANCE ENVELOPE SEE DWG. Y7005.
11. THERE ARE TWO BRIDLE GUY ANCHOR ASSEMBLIES IN EACH BB-02D ASSEMBLY. ONE WILL BE AT MESSENGER WIRE LEVEL AND THE OTHER AT CONTACT WIRE LEVEL.
12. STEADY ARMS MINIMUM LENGTH 4'6".

EXAMPLE MATERIAL LIST		
ITEM	DESCRIPTION	REMARKS
1	SHACKLE	
2	THIMBLE	
3	GRIP - SPIRAL GUY	
4	INSULATOR - LOOP, 2 THIMBLES	
5	CLIP - GUY	
6	STEADY ARM W/ 10' BEND (LENGTH AS REQ'D)	
11	STEADY ARM CAP	
12	CLAMP - INSULATED SWIVEL FOR CONTACT WIRE	
14	TURNBUCKLE - CLEVIS / EYE	
17	CLAMP - SUSPENSION MW	
21	STRANDWISE	
22	THIMBLE	
23	GRIP - SPIRAL GUY	
24	INSULATOR EYE/EYE	
25	BULL RING	
26	SWIVEL HINGE	
27	LINK - CLEVIS/CLEVIS WITH PINS	
28	WIRE ROPE	

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REVISIONS		
REV	DATE	Description

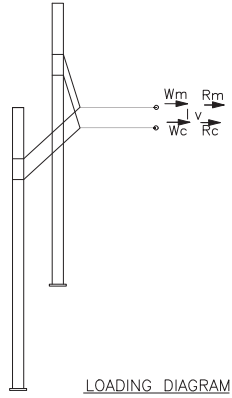


Designed By:	B. DEMERS
Drawn By:	N.WU
Checked By:	Y. LIU
Approved By:	B. DEMERS

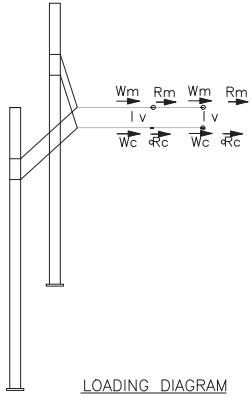
S-LINE EXTENSION PROJECT STANDARD DRAWINGS OVERHEAD CONTACT SYSTEM CATENARY BRIDLE ASSEMBLY PULL-OFF TYPE BB-02D	
Submitted By:	B. DEMERS

State:	NTS
CADD Filename:	SL-C-Y-7-221.dwg
Submission Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Y7221
Sheet No.:	

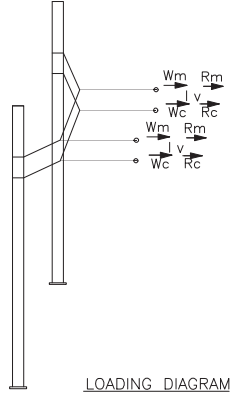
Submitted By: _____ Approved By: _____



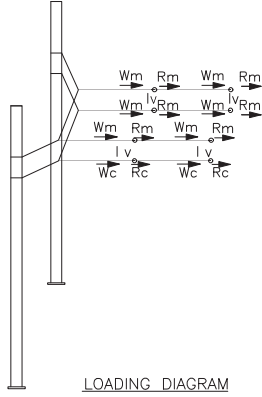
LOADING DIAGRAM



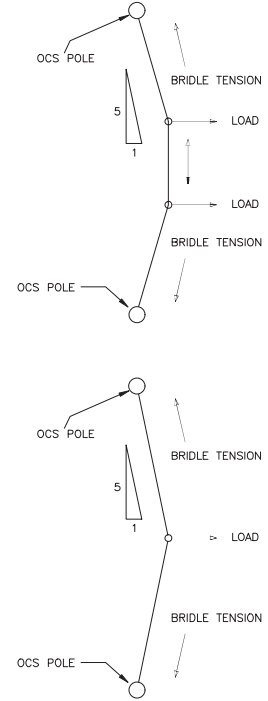
LOADING DIAGRAM



LOADING DIAGRAM



LOADING DIAGRAM



LOAD RATIO (LR) = 5 ESTIMATED
 LOAD (MW) = 1727 LB
 LOAD (CW) = 1180 LB
 BRIDLE TENSION (MW OR CW) = $LR \cdot LOAD/2$

LOAD RATIO (LR) = 5 ESTIMATED
 LOAD (MW) = 1727 LB
 LOAD (CW) = 1180 LB
 BRIDLE TENSION (MW OR CW) = $LR \cdot LOAD/2$

BRIDLE ASSEMBLY – TYPICAL LOADINGS (NOTES 4 AND 5)

TWO BRIDLES – ONE FOR MESSENGER WIRE, AND ONE FOR CONTACT WIRE. FORM ASSEMBLY BB-02D, SEE DWG. Y7221

- NOTES:**
- FOR ABBREVIATIONS AND GENERAL NOTES SEE DWG. Y7001.
 - FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG. Y7002.
 - WIRE HEIGHTS, STAGGERS AND POLE OFFSETS ARE INDICATED ON OCS LAYOUT PLAN AND MATERIAL ALLOCATION DRAWINGS. STAGGERS ARE RELATIVE TO THE SUPERELEVATED TRACK CENTERLINE AT CONTACT WIRE LEVEL.
 - LOADINGS WILL BE DEPENDENT UPON CONTRACTOR BRIDLE DESIGN AND CALCULATIONS SHALL BE SUBMITTED WITH SHOP DRAWINGS.
 - MAXIMUM MESSENGER WIRE AND CONTACT WIRE TENSIONS FOR DESIGN ARE GIVEN IN DWG. Y7003.

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REV	DATE	Description



Submitted By: _____

Approved By: _____

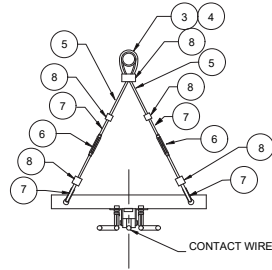
Designed By: B.DEMERS
Drawn By: N.WU
Checked By: Y.LIU
Approved By: B.DEMERS

S-LINE EXTENSION PROJECT
 STANDARD DRAWINGS
 OVERHEAD CONTACT SYSTEM
 CONFIGURATION AND LOADING DIAGRAM
 TYPE BB-02D

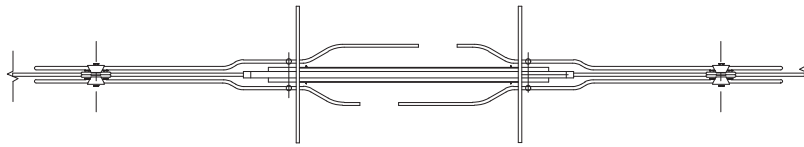
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UTA Contract No.:	24-03849
Drawing No.:	Y7222
Sheet No.:	

NOTES:

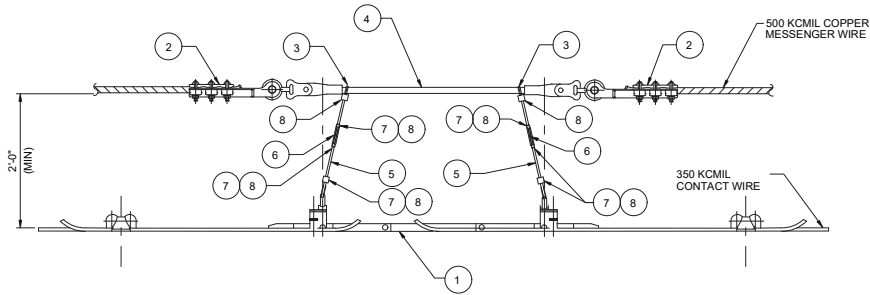
1. CONTACT WIRE TO BE INSTALLED TO MANUFACTURER INSTRUCTIONS.
2. CONTRACTOR SHOP DRAWINGS SHALL GIVE WEIGHT OF ASSEMBLY AS SHOWN TO NEAREST LB. WT.



END VIEW



PLAN AT CONTACT WIRE LEVEL



ELEVATION

SECTION INSULATOR ASSEMBLY FOR CATENARY MLSI-01

EXAMPLE MATERIALS LIST		
ITEM	DESCRIPTION	REMARKS
1	SECTION INSULATOR	
2	MESSENGER DEAD END	
3	INSULATOR SADDLE	
4	STRAIN INSULATOR	
5	SUPPORT WIRE	
6	TURNBUCKLE	
7	OPEN THIMBLE	
8	COMPRESSION SLEEVE	

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REV	DATE	Description	



Designed By:
B.DEMERS
Drawn By:
N.WU
Checked By:
Y.LIU
Approved By:
B.DEMERS

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
SECTION INSULATOR ASSEMBLY
TYPE MLSI-01

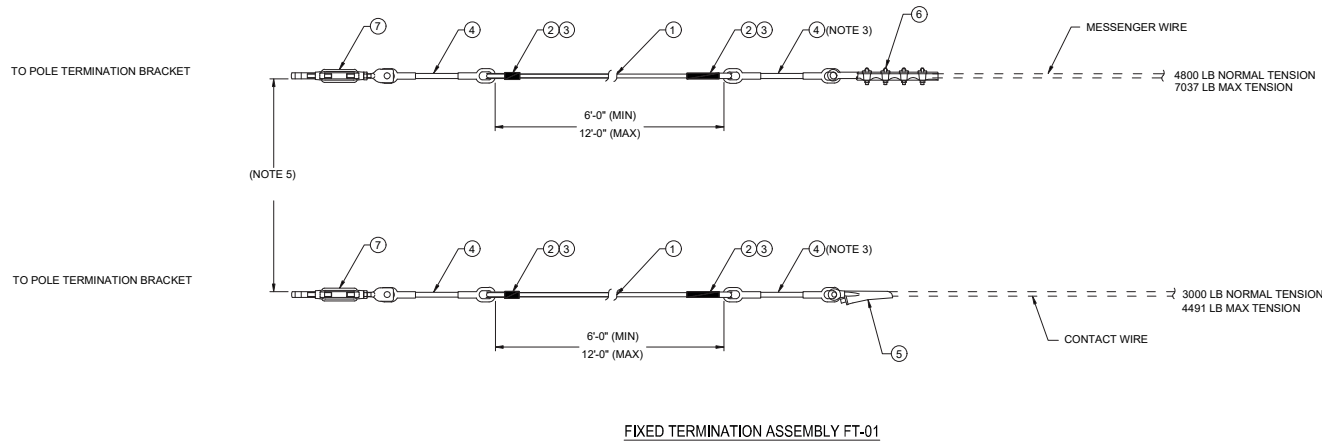
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Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y7223
Sheet No.	

Submitted By: _____ Approved By: _____

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NOTES:

1. POLE BRACKETS CALLED OFF SEPARATELY.
2. FOR FINISHED WORK: TURNBUCKLES SHALL HAVE AT LEAST 6 INCHES OF TAKE-UP ADJUSTMENT REMAINING.
3. INSULATION SHALL BE INSTALLED IN TOUT-OF-RUNNING WIRES AT A POINT, MINIMUM 4 FEET MAXIMUM 5 FEET HORIZONTALLY FROM THE SUPERELEVATED CENTERLINE OF THE TRACK.
4. IN ALL CASES, INSULATORS IN MESSENGER AN CONTACT WIRES SHALL LINE UP VERTICALLY.
5. FOR TERMINATION HEIGHTS, SEE OCS WIRING LAYOUTS.



FIXED TERMINATION ASSEMBLY FT-01

EXAMPLE MATERIAL LIST		
ITEM	DESCRIPTION	REMARKS
1	TAIL WIRE - NON TWIST STEEL STRAND	
2	OPEN THIMBLE	
3	DEADEND FOR TAIL WIRE	
4	STRAIN INSULATOR	
5	CONTACT WIRE DEAD END	
6	MESSENGER DEAD END	
7	TURNBUCKLE	
8	ANTI-TORSION ROD ASSEMBLY - HA-4	

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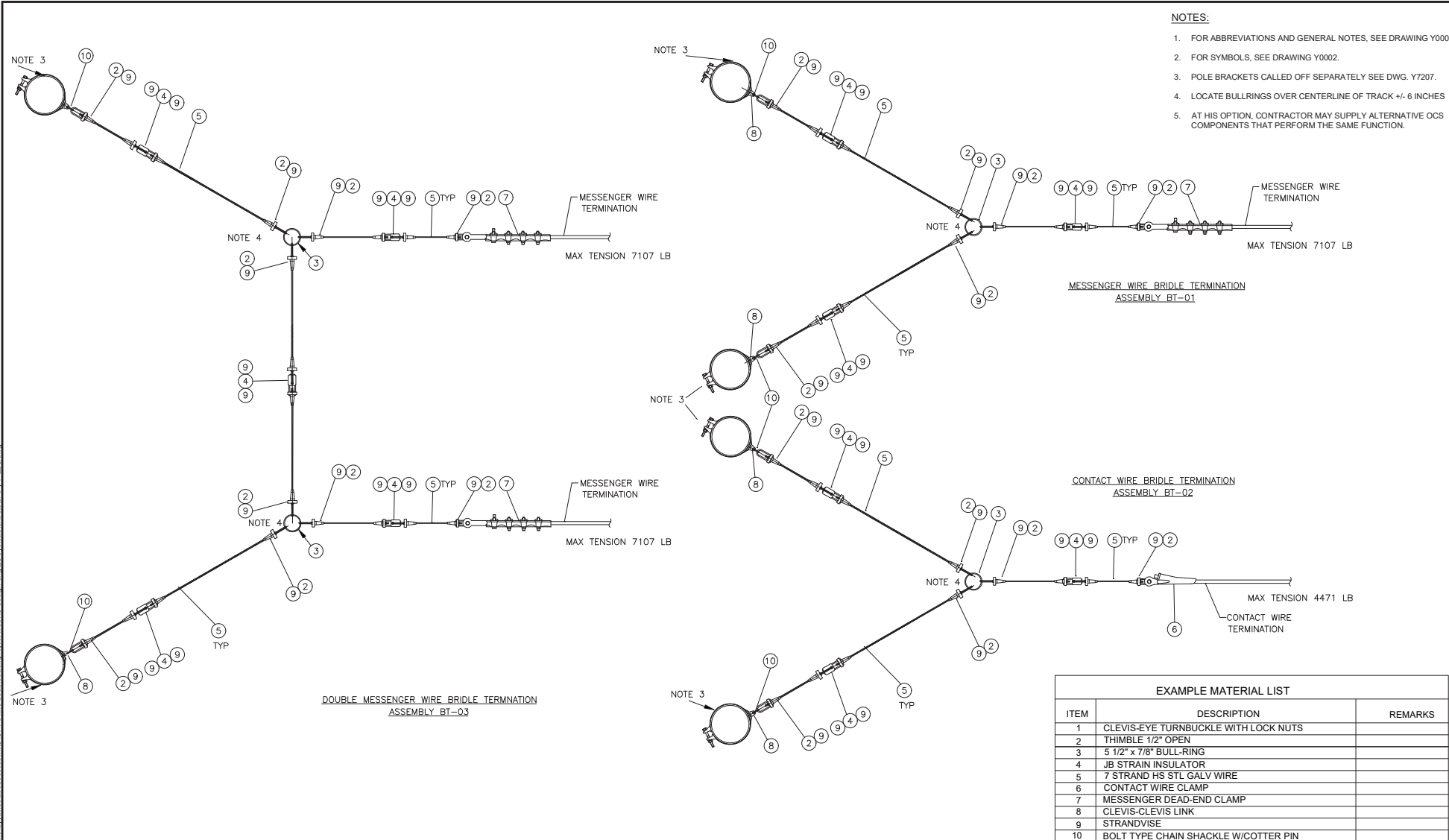


Designed By: B. DEMERS
Drawn By: N.WU
Checked By: Y. LIU
Approved By: B. DEMERS

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
FIXED TERMINATION ASSEMBLY
TYPE FT-01

State:	NTS
CADD Filename:	SL-C-Y-7-224.dwg
Submital Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Y7224
Sheet No.:	

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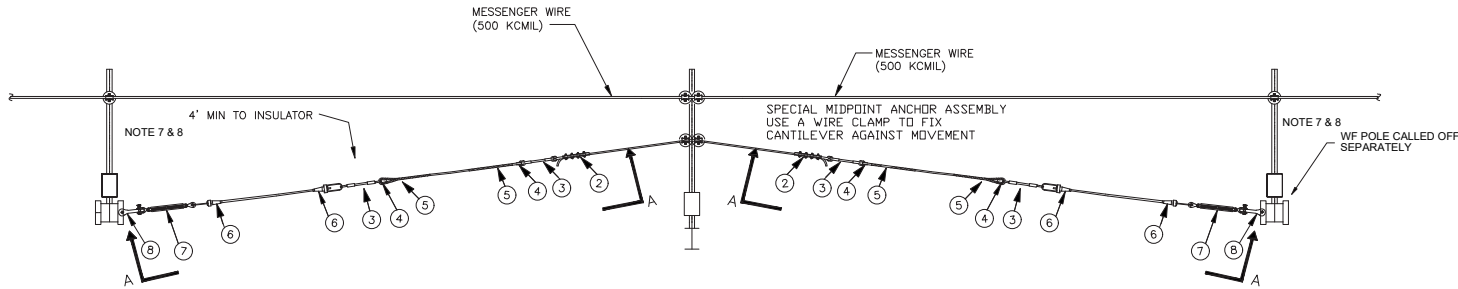
- NOTES:**
1. FOR ABBREVIATIONS AND GENERAL NOTES, SEE DRAWING Y0001.
 2. FOR SYMBOLS, SEE DRAWING Y0002.
 3. POLE BRACKETS CALLED OFF SEPARATELY SEE DWG. Y7207.
 4. LOCATE BULLRINGS OVER CENTERLINE OF TRACK +/- 6 INCHES
 5. AT HIS OPTION, CONTRACTOR MAY SUPPLY ALTERNATIVE OCS COMPONENTS THAT PERFORM THE SAME FUNCTION.

EXAMPLE MATERIAL LIST		
ITEM	DESCRIPTION	REMARKS
1	CLEVIS-EYE TURNBUCKLE WITH LOCK NUTS	
2	THIMBLE 1/2" OPEN	
3	5 1/2" x 7/8" BULL-RING	
4	JB STRAIN INSULATOR	
5	7 STRAND HS STL GALV WIRE	
6	CONTACT WIRE CLAMP	
7	MESSENGER DEAD-END CLAMP	
8	CLEVIS-CLEVIS LINK	
9	STRANDWISE	
10	BOLT TYPE CHAIN SHACKLE W/COTTER PIN	

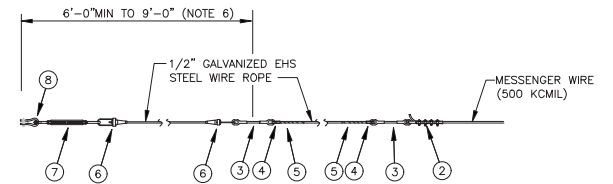
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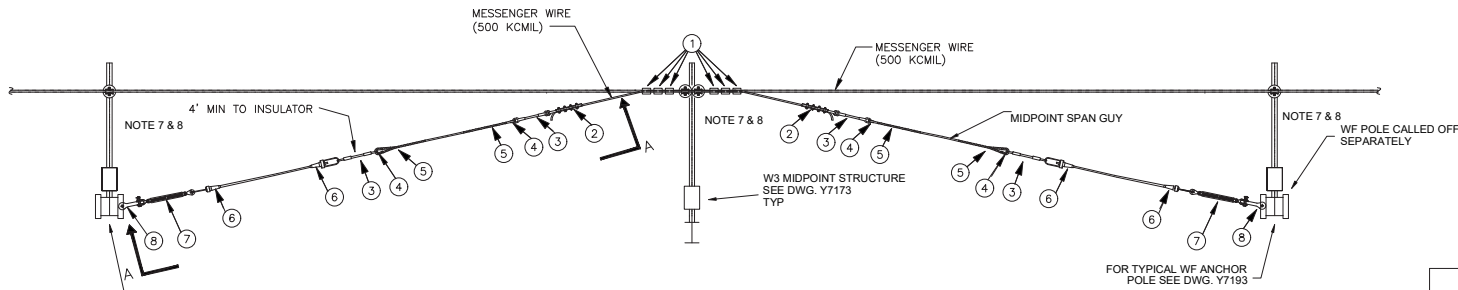
			Designed By: B. DEMERS Drawn By: N.WU Checked By: Y. LIU Approved By: B. DEMERS	S-LINE EXTENSION PROJECT STANDARD DRAWINGS OVERHEAD CONTACT SYSTEM CATENARY BRIDLE TERMINATION ASSEMBLIES BT-01, BT-02 & BT-03	Title: NTS CADD Filename: SL-C-Y-7-225.dwg Submitted Date: 01-16-26 UTA Contract No.: 24-03849 Drawing No.: Y7225
Submitted By: _____			Approved By: _____		



MIDPOINT ASSEMBLY MP-02



VIEW A-A



MIDPOINT ASSEMBLY MP-01

NOTES:

1. FOR ABBREVIATIONS AND GENERAL NOTES SEE DWG. Y0001.
2. FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG. Y0002.
3. FOR MIDPOINT ANCHOR ARRANGEMENT SEE DWG. Y7173.
4. THE CONTRACTOR SHALL PREPARE SHOP DRAWINGS FOR THIS ASSEMBLY INCLUDING DIMENSIONS.
5. NOT USED
6. WHEN TWO MIDPOINT ANCHOR ASSEMBLIES ARE INSTALLED BACK TO BACK THE FIRST LEVEL INSULATION MUST ALLOW 4 FT MINIMUM SPACING BETWEEN THE INSULATORS.
7. CANTILEVER BRACKETS CALLED OFF SEPARATELY.
8. CANTILEVERS CALLED OFF SEPARATELY.

EXAMPLE MATERIAL LIST		
ITEM	DESCRIPTION	REMARKS
1	PARALLEL CONDUCTOR CLAMP	
2	MESSENGER DEAD END	
3	STRAIN INSULATOR -- EYE/EYE	
4	THIMBLE -- OPEN	
5	GRIP -- SPIRAL GUY	
6	STRANDWISE OR SPIRAL GUY GRIP	
7	TURNBUCKLE -- CLEVIS/EYE	
8	SHACKLE -- ANCHOR	

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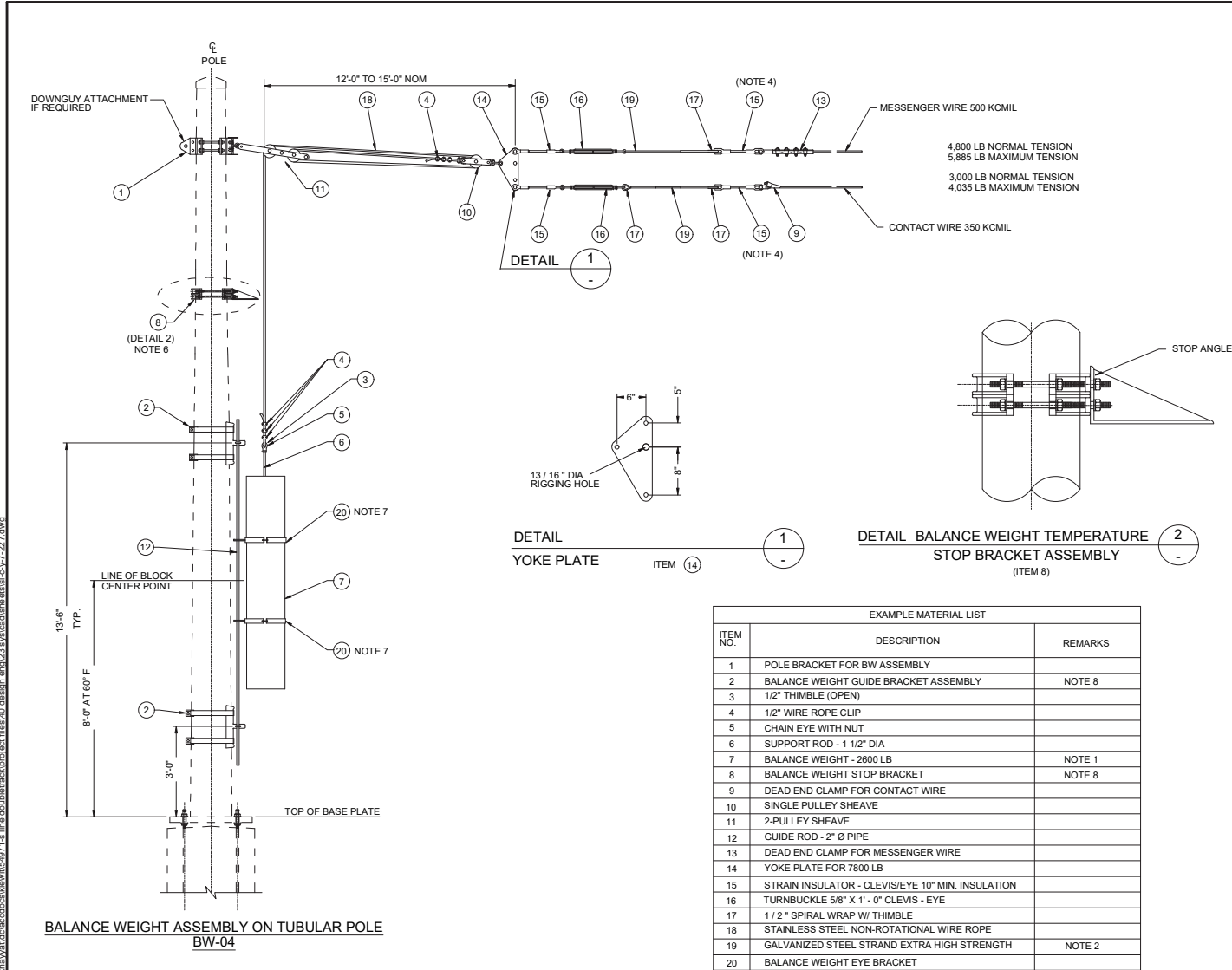
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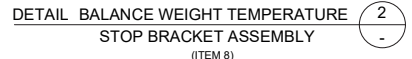
Designed By: B. DEMERS
 Drawn By: N.WU
 Checked By: Y. LIU
 Approved By: B. DEMERS

S-LINE EXTENSION PROJECT
 STANDARD DRAWINGS
 OVERHEAD CONTACT SYSTEM
 MIDPOINT ANCHOR ASSEMBLY
 TYPE MP-01

Scale: NTS
CADD Filename: SL-C-Y7-226.dwg
Submission Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Y7226



- NOTES:**
- BALANCE WEIGHT SHALL BE SOLID STEEL OR C.I. WEIGHTS NOT TO EXCEED 8'-6" LONG AND WEIGH 2600 LB, AND FINISH PAINTED WITH APPROVED GRAY TWO PART EPOXY PAINT.
 - GALVANIZED STEEL STRAND SHALL BE WELDLESS EXTRA HIGH STRENGTH.
 - WEIGHT MOVEMENT TABLE BASED UPON CONTACT WIRE HAVING A COEFFICIENT OF LINEAR EXPANSION OF 9.4×10^{-6} .
 - INSULATOR TO BE INSTALLED 4 FEET MINIMUM AND 5 FEET MAXIMUM DIMENSION HORIZONTAL TO SUPERELEVATED CENTERLINE OF TRACK.
 - A TOLERANCE OF PLUS 6" -ZERO" ON THIS DIMENSION IS PERMITTED
 - WEIGHTS SHALL IMPACT THE LOW TEMPERATURE STOP AT 0° F.
 - INSTALL EYE BRACKETS RIGIDLY ON BALANCE WEIGHT AT THE ONE THIRD POINTS.
 - INSTALLATION HEIGHT OF WEIGHT YOKES AND WEIGHT STOPS ARE DEPENDANT UPON WIRE RUN LENGTH. SEE ALONG TRACK MOVEMENT CHART ON DWG. Y7014.



EXAMPLE MATERIAL LIST		
ITEM NO.	DESCRIPTION	REMARKS
1	POLE BRACKET FOR BW ASSEMBLY	
2	BALANCE WEIGHT GUIDE BRACKET ASSEMBLY	NOTE 8
3	1/2" THIMBLE (OPEN)	
4	1/2" WIRE ROPE CLIP	
5	CHAIN EYE WITH NUT	
6	SUPPORT ROD - 1 1/2" DIA	
7	BALANCE WEIGHT - 2600 LB	NOTE 1
8	BALANCE WEIGHT STOP BRACKET	NOTE 8
9	DEAD END CLAMP FOR CONTACT WIRE	
10	SINGLE PULLEY SHEAVE	
11	2-PULLEY SHEAVE	
12	GUIDE ROD - 2" Ø PIPE	
13	DEAD END CLAMP FOR MESSENGER WIRE	
14	YOKE PLATE FOR 7800 LB	
15	STRAIN INSULATOR - CLEVIS/EYE 10" MIN. INSULATION	
16	TURNBUCKLE 5/8" X 1'-0" CLEVIS - EYE	
17	1/2" SPIRAL WRAP W/ THIMBLE	
18	STAINLESS STEEL NON-ROTATIONAL WIRE ROPE	
19	GALVANIZED STEEL STRAND EXTRA HIGH STRENGTH	NOTE 2
20	BALANCE WEIGHT EYE BRACKET	

1	REV	DATE	Description

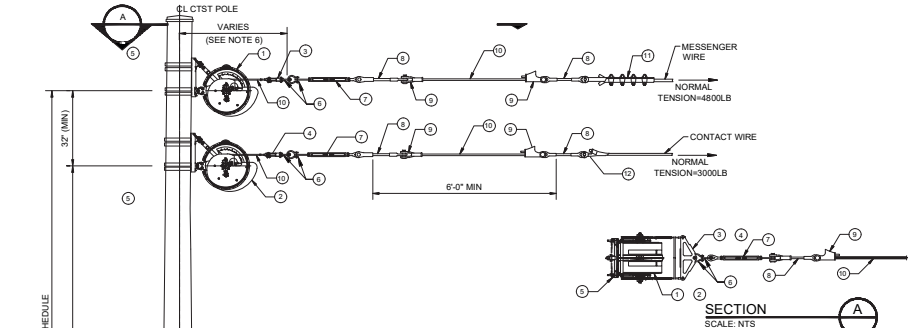


Designed By: B. DEMERS
Drawn By: N.WU
Checked By: Y. LIU
Approved By: B. DEMERS

S-LINE EXTENSION PROJECT
 STANDARD DRAWINGS
 OVERHEAD CONTACT SYSTEM
 BALANCE WEIGHT FOR TUBULAR POLE
 TYPE BW-04

State:	NTS
CADD Filename:	SL-C-Y-7-227.dwg
Submital Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Y7227
Sheet No.:	

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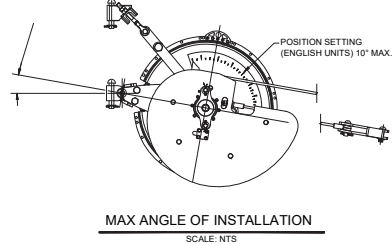
TEMP °F	CONSTANT-TENSION SPRING ASSEMBLY WIRE MOVEMENT															
	DISTANCE FROM MID-POINT ANCHOR / FIXED TERMINATION (FT)															
	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800		
5	-1.2	-2.5	-3.7	-5.0	-6.2	-7.4	-8.7	-9.9	-11.2	-12.4	-13.6	-14.9	-16.1	-17.4		
10	-1.1	-2.3	-3.4	-4.5	-5.6	-6.8	-7.9	-9.0	-10.2	-11.3	-12.4	-13.5	-14.7	-15.8		
20	-0.9	-1.8	-2.7	-3.6	-4.5	-5.4	-6.3	-7.2	-8.1	-9.0	-9.9	-10.8	-11.7	-12.6		
30	-0.7	-1.4	-2.0	-2.7	-3.4	-4.1	-4.7	-5.4	-6.1	-6.8	-7.4	-8.1	-8.8	-9.5		
40	-0.5	-0.9	-1.4	-1.8	-2.3	-2.7	-3.2	-3.6	-4.1	-4.5	-5.0	-5.4	-5.9	-6.3		
50	-0.2	-0.5	-0.7	-0.9	-1.1	-1.4	-1.6	-1.8	-2.0	-2.3	-2.5	-2.7	-2.9	-3.2		
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
70	0.2	0.5	0.7	0.9	1.1	1.4	1.6	1.8	2.0	2.3	2.5	2.7	2.9	3.2		
80	0.5	0.9	1.4	1.8	2.3	2.7	3.2	3.6	4.1	4.5	5.0	5.4	5.9	6.3		
90	0.7	1.4	2.0	2.7	3.4	4.1	4.7	5.4	6.1	6.8	7.4	8.1	8.8	9.5		
100	0.9	1.8	2.7	3.6	4.5	5.4	6.3	7.2	8.1	9.0	9.9	10.8	11.7	12.6		
110	1.1	2.3	3.4	4.5	5.6	6.8	7.9	9.0	10.2	11.3	12.4	13.5	14.7	15.8		
120	1.4	2.7	4.1	5.4	6.8	8.1	9.5	10.8	12.2	13.5	14.9	16.2	17.6	19.0		
130	1.6	3.2	4.7	6.3	7.9	9.5	11.1	12.6	14.2	15.8	17.4	19.0	20.5	22.1		

DIMENSION GIVEN IN INCHES (SEE NOTE 1)
WIRE MOVEMENT: ** MOVES AWAY FROM SPRING ASSEMBLY; *-* MOVES TOWARD SPRING ASSEMBLY

CTST TERMINATION HEIGHTS SHOWN ON OCS LAYOUT SCHEDULE
CTST TERMINATION HEIGHTS SHOWN ON OCS LAYOUT SCHEDULE

CONSTANT-TENSION SPRING TERMINATION
ST-1-MW AND ST-1-CW = 1 ST-01
SCALE: NTS (SEE NOTE 10)

ITEM NO.	DESCRIPTION	UNITS	QUANTITIES		PART NO./REMARKS
			CTST-1-MW-XXXX	CTST-1-CW-XXXX	
1	TENSIONING SPRING ASSEMBLY - MESSENGER WIRE	EA	1	-	NOTE 12
2	TENSIONING SPRING ASSEMBLY - CONTACT WIRE	EA	-	1	NOTE 12
3	YOKE PLATE - MESSENGER WIRE	EA	1	-	
4	YOKE PLATE - CONTACT WIRE	EA	-	1	
5	MOUNTING BRACKETS	EA	4	4	NOTE 3, 10
6	SHACKLE	EA	2	2	
7	TURNBUCKLE	EA	1	1	NOTE 2
8	STRAIN INSULATOR	EA	2	2	
9	WIRE END FITTING	EA	2	2	
10	STAINLESS STEEL WIRE ROPE	LF	AS REQ'D	AS REQ'D	
11	MESSENGER WIRE DEAD END CLAMP	EA	1	-	
12	CONTACT WIRE DEAD END CLAMP	EA	-	1	



- NOTES:**
1. THE WIRE MOVEMENT VALUES SHOWN IN THE TABLE PROVIDED ARE BASED ON A 1:1 RATIO OF SPRING SYSTEM TO WIRE MOVEMENT. CONTRACTOR SHALL SUBMIT POSITION SETTING TABLES BASED ON WIRE MOVEMENT FOR EACH CONSTANT-TENSION SPRING TERMINATION ASSEMBLY.
 2. AFTER FINAL ADJUSTMENT OF WRING, TURNBUCKLES SHALL BE EXTENDED 6" MINIMUM FROM MINIMUM LENGTH.
 3. MOUNTING BRACKET SHALL BE FURNISHED TO PERMIT ALONG TRACK AND ACROSS TRACK ADJUSTMENTS OF SPRING TENSIONING ASSEMBLY.
 4. FOR SYMBOLS, LEGEND, AND ABBREVIATIONS SEE DRAWINGS L05-JON001 AND L05-JON002.
 5. OCS HARDWARE SUPPLIER SHALL PROVIDE THIS DIMENSION RANGE, BASED ON PHYSICAL AND MECHANICAL PROPERTIES OF THE AUTOMATIC-TENSIONING ASSEMBLY AND THE ALONG TRACK MOVEMENT OF THE CATERINARY.
 6. THE MOUNTING ARRANGEMENT OF THE SPRING TENSIONING ASSEMBLY AS SHOWN IS TYPICAL. THE CONTRACTOR SHALL DEVELOP THE ACTUAL CONFIGURATION BASED ON THE EQUIPMENT USED AND THE MANUFACTURER'S RECOMMENDATIONS.
 7. THE CONTRACTOR SHALL ENSURE THAT NO INTERFERENCE OCCURS BETWEEN ALL POLE CLAMPS, BRACKETS, AND OTHER MOUNTED EQUIPMENT IN THE VICINITY AND THE WIRE MOVEMENT OF THE SPRING TENSIONING ASSEMBLY.
 8. THE BILL OF MATERIALS DETAILS ARE TYPICAL FOR THE ASSEMBLY STYLES SHOWN. THE CONTRACTOR SHALL ITEMIZE THE TABLE WITH DESCRIPTIONS AND PART NUMBERS OF COMPONENTS REQUIRED TO COMPLETE EACH ASSEMBLY.
 9. CTST-1-MW-XXXX AND CTST-1-CW-XXXX DESIGNATION INCLUDES UNITS FOR THE MESSENGER WIRE AND CONTACT WIRE TENSIONING ASSEMBLIES RESPECTIVELY. "XXXX" IN THE DESIGNATION DENOTES THE MAXIMUM TENSION LENGTH IN FEET.
 10. BRACKETS SHALL BE DESIGNED AND FABRICATED FOR USE WITH THE DOWN GUY ASSEMBLIES.
 11. CTST UNITS SHALL INCLUDE WEEP HOLES TO ENSURE PROPER DRAINAGE BASED ON MOUNTING ORIENTATION.

1	REV	DATE	Description



Designed By:
B. DEMERS

Drawn By:
N.W.U.

Checked By:
Y. LIU

Approved By:
B. DEMERS

S-LINE EXTENSION PROJECT

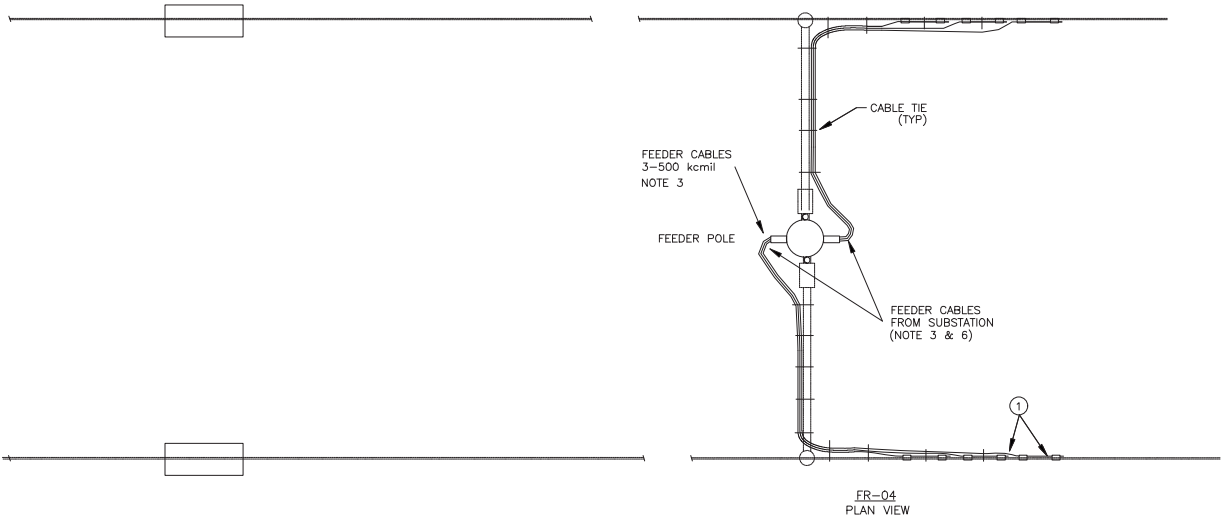
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OVERHEAD CONTACT SYSTEM

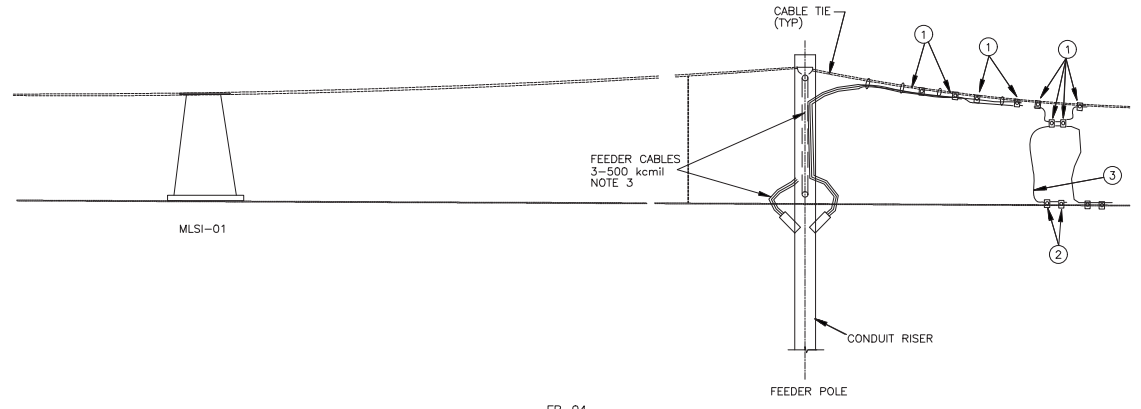
SPRING TENSIONER

State	NTS
CADD Filename	SL-C-Y-7-228.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y7228
Sheet No.	

1/16/2026



FR-04
PLAN VIEW



FR-04
FEEDER CONNECTION ASSEMBLY

* LIGHTNING ARRESTER ASSEMBLIES OMITTED FOR CLARITY (NOTE 7)

- NOTES:**
1. FOR ABBREVIATIONS AND GENERAL NOTES, SEE DWG. Y0001.
 2. FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG. Y0002.
 3. FOR FEEDER CABLES FROM SUBSTATION, SEE TRACTION POWER DRAWINGS.
 4. LIST OF MATERIAL & COMPONENTS SHOWN AND QUANTITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE OCS SUPPLIER.
 5. TYPICAL FEEDER CABLES FROM TPSS ARE 3-500 kcmil.
 6. LIGHTNING ARRESTERS, INCLUDING INSULATED JUMPER CABLE CALLED OFF SEPARATELY.
 7. CANTILEVERS CALLED OFF SEPARATELY.
 8. CABLE SHALL NOT BE TIED TO INSULATORS.
 9. FEEDER CABLES SHALL NOT RESTRICT CANTILEVER ARM MOVEMENT.

EXAMPLE MATERIAL LIST		
ITEM	DESCRIPTION	REMARKS
1	CLAMP - FEEDER 500 - 500	
2	CLAMP - 500-350 GROOVED	
3	JUMPER CABLE - 500 KCMIL SUPERFLEX CLASS G	

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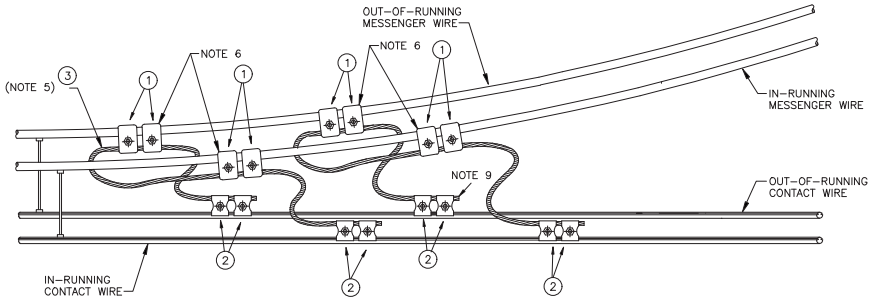
Designed By: B.DEMERS
Drawn By: N.WU
Checked By: Y.LIU
Approved By: B.DEMERS

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
FEEDER CONNECTION ASSEMBLY
TYPE FR-04

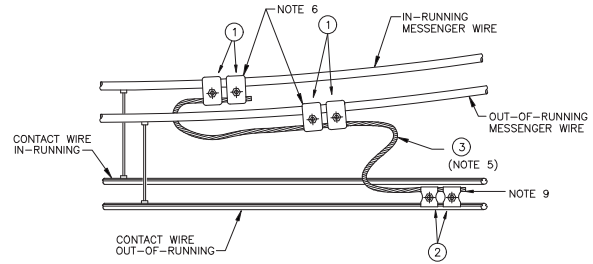
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Submitted By: _____ Approved By: _____

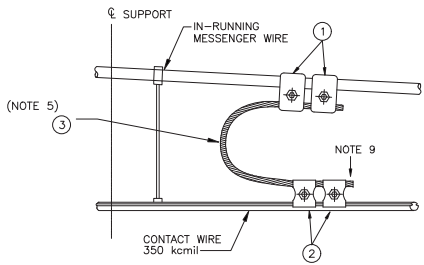
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FULL FEEDING JUMPER FOR CATENARY
JF-1



POTENTIAL EQUALIZING JUMPER FOR CATENARY
JP-1



IN SPAN JUMPER FOR CATENARY
JS-1

APPLICATION RULE	
LOCATE JUMPER BETWEEN 1ST AND 2ND HANGER TO REDUCE MASS NEAR STEADY ARM.	

NOTES:

1. FOR ABBREVIATIONS AND GENERAL NOTES, SEE DWG. Y0001.
2. FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG. Y0002.
3. ALL JUMPERS SHALL BE INSTALLED WITH CABLE ENDS POINTING IN THE NORMAL DIRECTION OF TRAVEL.
4. MINIMUM RADIUS FOR ALL JUMPER CABLE BENDS SHALL BE 12 INCHES.
5. SUFFICIENT SLACK SHALL BE ALLOWED IN THE JUMPER DRAPE BETWEEN MESSAGERS TO ACCOMMODATE DIFFERENTIAL ALONG-TRACK MOVEMENT BETWEEN THE MESSAGERS, YET NOT PULL TIGHT. JUMPERS SHALL HAVE ENOUGH WIRE LENGTH TO ALLOW FULL MOVEMENT OF CATENARY IN EACH DIRECTION DUE TO TEMPERATURE VARIATIONS AND SHALL BE ARRANGED TO AVOID FOULING THE PANTOGRAPH OVER FULL TEMPERATURE RANGE.
6. EACH PAIR OF MESSENGER CLAMPS ON ONE MESSENGER SHALL BE INSTALLED SIDE-BY-SIDE TO THE MESSENGER CLAMPS ON THE PARALLEL MESSENGER.
7. LIST OF MATERIAL & COMPONENTS SHOWN AND QUANTITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE OCS SUPPLIER.
8. CONTRACTOR SHALL SHOW EACH TYPE OF ASSEMBLY ON A SEPARATE SHOP DRAWING WITH TITLE TO MATCH ASSEMBLY REFERENCE GIVEN IN TITLE BLOCK OF THIS DRAWING.
9. SECURE ENDS OF JUMPER, CABLE SHALL BE WRAPPED TO PREVENT CABLE FRAYING.

EXAMPLE MATERIALS LIST		
ITEM	DESCRIPTION	REMARKS
1	CLAMP - FEEDER 500	
2	CLAMP - 500-350 GROOVED	
3	WIRE - 500 KCMIL BARE, CLASS G	

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REV	DATE	Description



Designed By: B. DEMERS
Drawn By: N.WU
Checked By: Y. LIU
Approved By: B. DEMERS

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
JUMPER ASSEMBLIES
TYPES JF-1, JP-1 AND JS-1

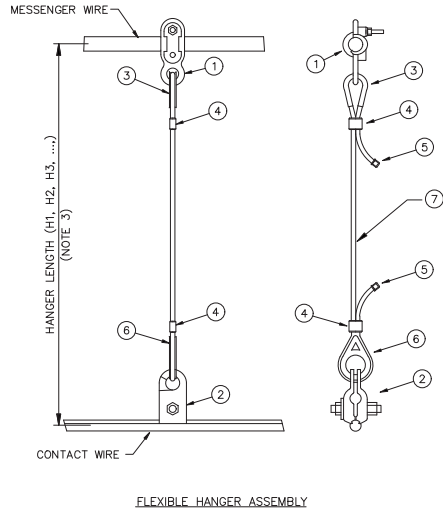
State: NTS
CADD Filename: SL-C-Y7-233.dwg
Submital Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Y7233

Submitted By: _____

Approved By: _____

NOTES:

- FOR ABBREVIATIONS AND GENERAL NOTES SEE DWG. Y0001.
- FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG. Y0002.
- FOR DEFINITION OF H1, H2, H3, ... AND FOR THEORETICAL QUANTITIES AND LENGTHS OF HANGERS IN HANGER SET, SEE DWG. Y7012.



SPAN LENGTH FEET	NUMBER OF HANGERS	HANGER ASSEMBLY REFERENCE
210	7	HA-7
205	7	
200	7	
195	7	
190	7	
185	7	
180	6	HA-6
175	6	
170	6	
165	6	
160	6	
155	6	
150	5	HA-5
145	5	
140	5	
135	5	
130	5	
125	5	
120	4	HA-4
115	4	
110	4	
105	4	
100	4	
95	4	
90	3	HA-3
85	3	
80	3	
75	3	
70	3	
65	3	
60	2	HA-2
55	2	
50	2	
45	2	
40	2	
35	2	
30	2	HA-1
25	1	
20	1	

ITEM	DESCRIPTION	REMARKS
1	CLAMP – MESSENGER HANGER 500 kcmil	
2	CLAMP – CONTACT HANGER 350 kcmil GROOVED	
3	THIMBLE – 1/8"	
4	SLEEVE – 1/8" COMPRESISON	
5	CAP – CRIMP 1/8"	
6	THIMBLE – 1/8" INSULATED, WEATHER RESISTANT	
7	WIRE ROPE, 1/8" STAINLESS STEEL	

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Designed By: B.DEMERS
Drawn By: N.WU
Checked By: Y.LIU
Approved By: B.DEMERS

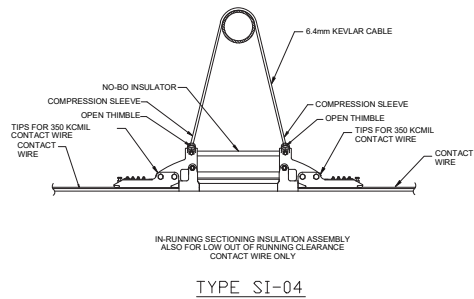
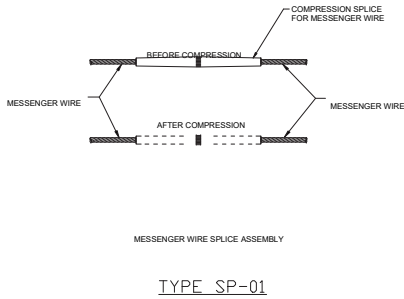
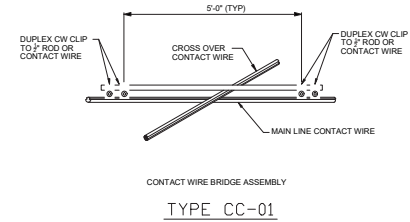
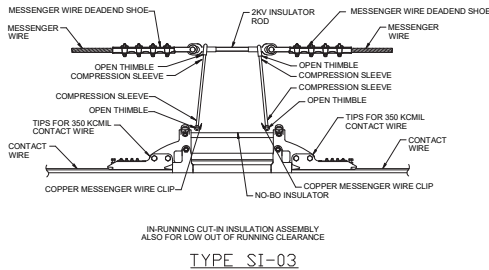
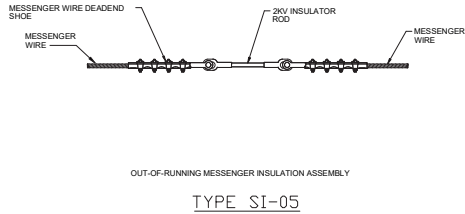
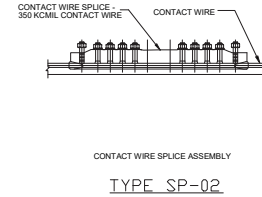
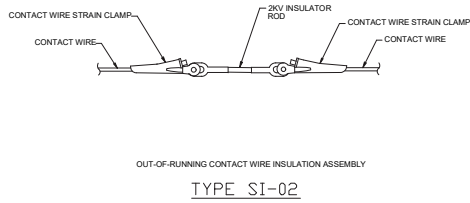
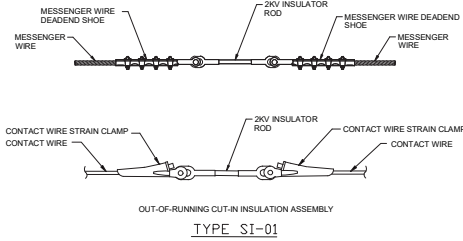
S-LINE EXTENSION PROJECT

STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
HANGER ASSEMBLIES
TYPES HA-1 THROUGH HA-7

State: NTS
CADD Filename: SL-C-Y7-235.dwg
Submital Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Y7235
Sheet No.:

Submitted By: _____ Approved By: _____

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NOTES:

1. FOR ABBREVIATIONS AND GENERAL NOTES SEE DWG. Y0001.
2. FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG. Y0002.
3. LENGTH OF PIPE SHALL BE INCREASED AS NECESSARY WHEN CROSSING ANGLE IS LESS THAN 1 IN 5.
4. LIST OF MATERIAL AND COMPONENTS SHOWN AND QUANTITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE OCS SUPPLIER.
5. CONTRACTOR SHALL SHOW EACH TYPE OF ASSEMBLY ON A SEPARATE SHOP DRAWING WITH TITLE TO MATCH ASSEMBLY REFERENCE GIVEN IN TITLE BLOCK OF THIS DRAWING.
6. ADJACENT HANGERS TO BE ADJUSTED SUCH THAT CROSSOVER CONTACT WIRE DOES NOT REST ON THE MAINLINE CONTACT WIRE OR BRIDGE ASSEMBLY.

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REV	DATE	Description	



Submitted By: _____ Approved By: _____

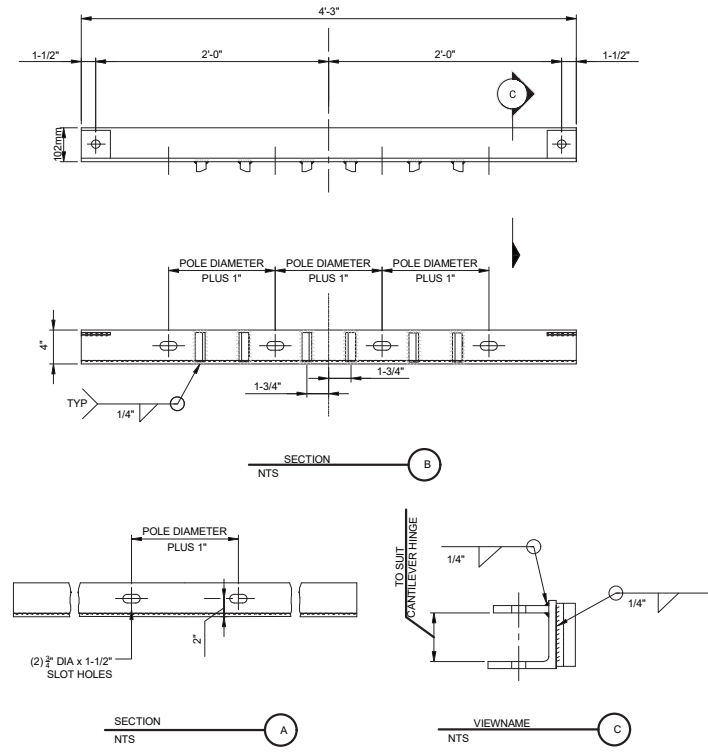
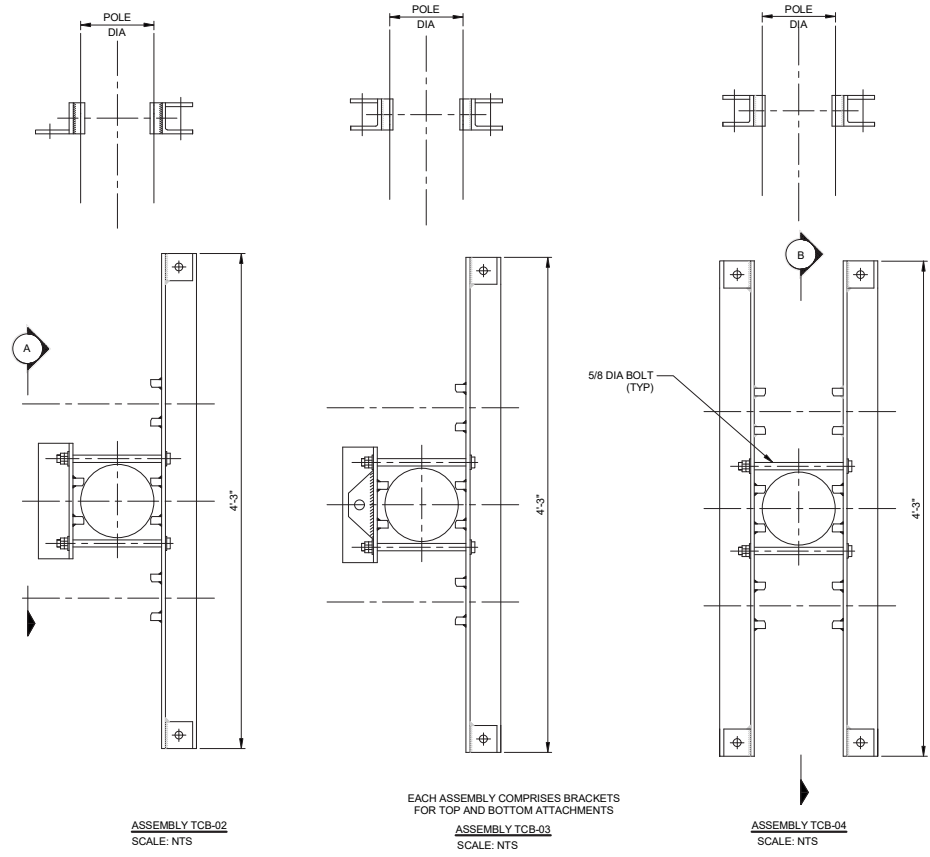
Designed By:	B. DEMERS
Drawn By:	N.WU
Checked By:	Y. LIU
Approved By:	B. DEMERS

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS

OCS CUT-IN INSULATOR AND
CONTACT BRIDGE ASSEMBLIES
TYPE CI-01, CI-02, CC-01

State:	NTS
CADD Filename:	SL-C-Y-7-236.dwg
Submital Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Y7236
Sheet No.:	



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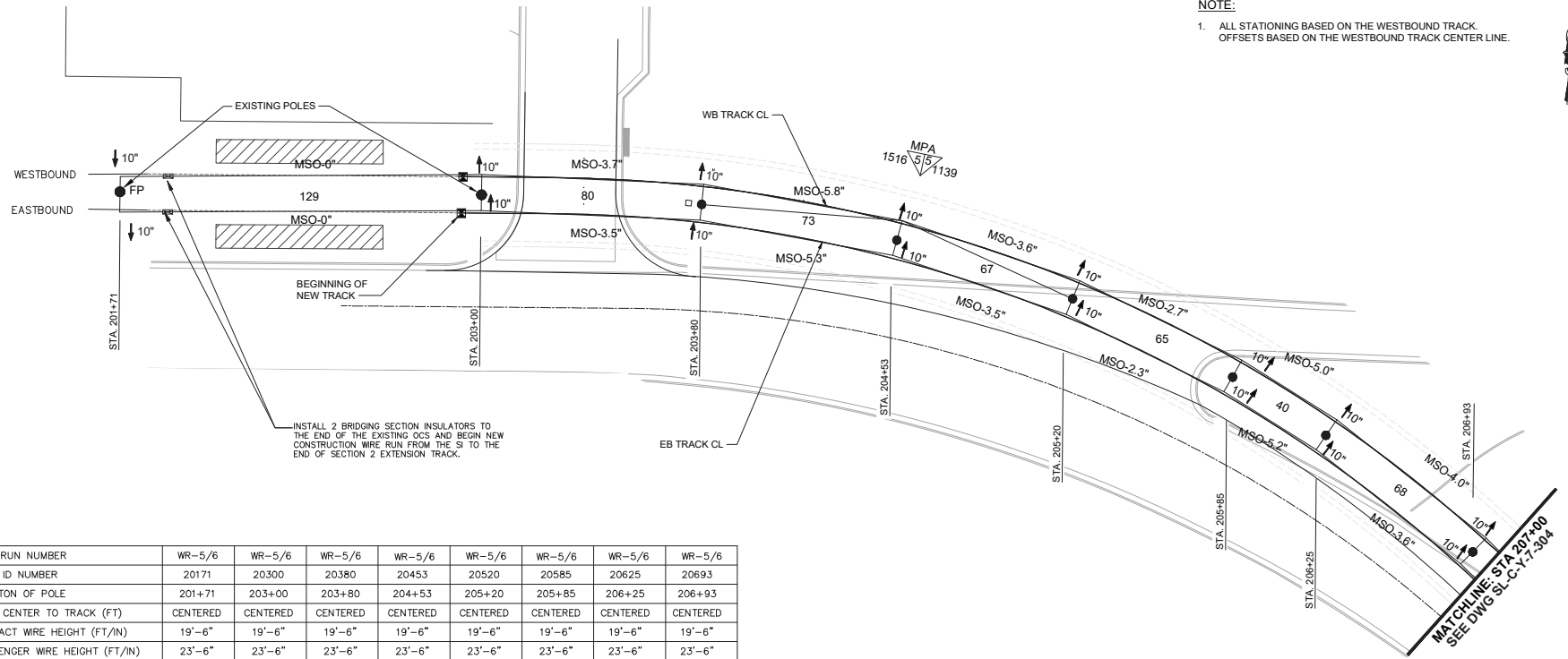
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REV	DATE	Description



Designed By B. DEMERS
Drawn By N.WU
Checked By Y. LIU
Approved By B. DEMERS

S-LINE EXTENSION PROJECT STANDARD DRAWINGS OVERHEAD CONTACT SYSTEM MULTI-CANTILEVER BRACKETS	State NTS
	CADD Filename SL-C-Y-7-237.dwg
	Submital Date 01-16-26
	UTA Contract No. 24-03849
Drawing No. Y7237	Sheet No.

Submitted By: _____ Approved By: _____



INSTALL 2 BRIDGING SECTION INSULATORS TO THE END OF THE EXISTING OCS AND BEGIN NEW CONSTRUCTION WIRE RUN FROM THE S1 TO THE END OF SECTION 2 EXTENSION TRACK.

WIRE RUN NUMBER	WR-5/6	WR-5/6	WR-5/6	WR-5/6	WR-5/6	WR-5/6	WR-5/6	WR-5/6
POLE ID NUMBER	20171	20300	20380	20453	20520	20585	20625	20693
LOCATON OF POLE	201+71	203+00	203+80	204+53	205+20	205+85	206+25	206+93
POLE CENTER TO TRACK (FT)	CENTERED	CENTERED	CENTERED	CENTERED	CENTERED	CENTERED	CENTERED	CENTERED
CONTACT WIRE HEIGHT (FT/IN)	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"
MESSENGER WIRE HEIGHT (FT/IN)	23'-6"	23'-6"	23'-6"	23'-6"	23'-6"	23'-6"	23'-6"	23'-6"
ANCHOR HEIGHT (FT/IN)								
POLE TYPE	EXISTING	EXISTING	PE-25	PE-25	PE-25	PE-25	PE-25	PE-25
SUPPPORT/CANTILEVER INBOUND	CA-03L	CA-03M	CA-03H	CA-03H	CA-03H	CA-03H	CA-03M	CA-03M
SUPPPORT/CANTILEVER OUTBOUND	CA-01L	CA-01M	CA-01H	CA-01H	CA-01H	CA-01H	CA-01M	CA-01M
HANGERS	2-HA-5	2-HA-3	2-HA-3	2-HA-3	2-HA-3	2-HA-2	2-HA-3	2-HA-3
JUMPERS	(2)JS-1	JS-1	JS-1	JS-1	JS-1	JS-1	JS-1	JS-1
	(2)JF-1							
BRACKETS AND MISC. ASSEMBLIES	SA-01-2	BC-02	BC-02	BC-02	BC-02	BC-02	BC-02	BC-02
MISC. ASSEMBLIES AND FEEDERS	2-MLSI-01			MP-01				
	(2)FR-4**	JS-1	JS-1	JS-1	JS-1	JS-1	JS-1	JS-1
	(2)DS-01**							
FOUNDATION TYPE	EXISTING*	EXISTING	FPE-16	FPE-16	FPE-16	FPE-16	FPE-16	FPE-16
FOUNDATION DEPTH (FROM GRADE)			18'	18'	18'	16'	16'	16'

* FOR FEEDER POLE CONDUIT DETAILS SEE Y3002
 ** 1ea existing, UTA approved to reuse



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REV	DATE	Description



Designed By: B.DEMERS
 Drawn By: N.WU
 Checked By: Y.LIU
 Approved By: B.DEMERS

S-LINE EXTENSION PROJECT
 OVERHEAD CONTACT SYSTEM
 WIRING LAYOUT & ALLOCATION SCHEDULE
 WB STA 201+00 TO WB STA 207+00

Scale: 1"=20'
 CADD Filename: SL-C-Y-7-303.dwg
 Submittal Date: 01-16-26
 UTA Contract No.: 24-03849
 Drawing No.: Y7303
 Sheet No.:

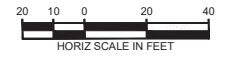
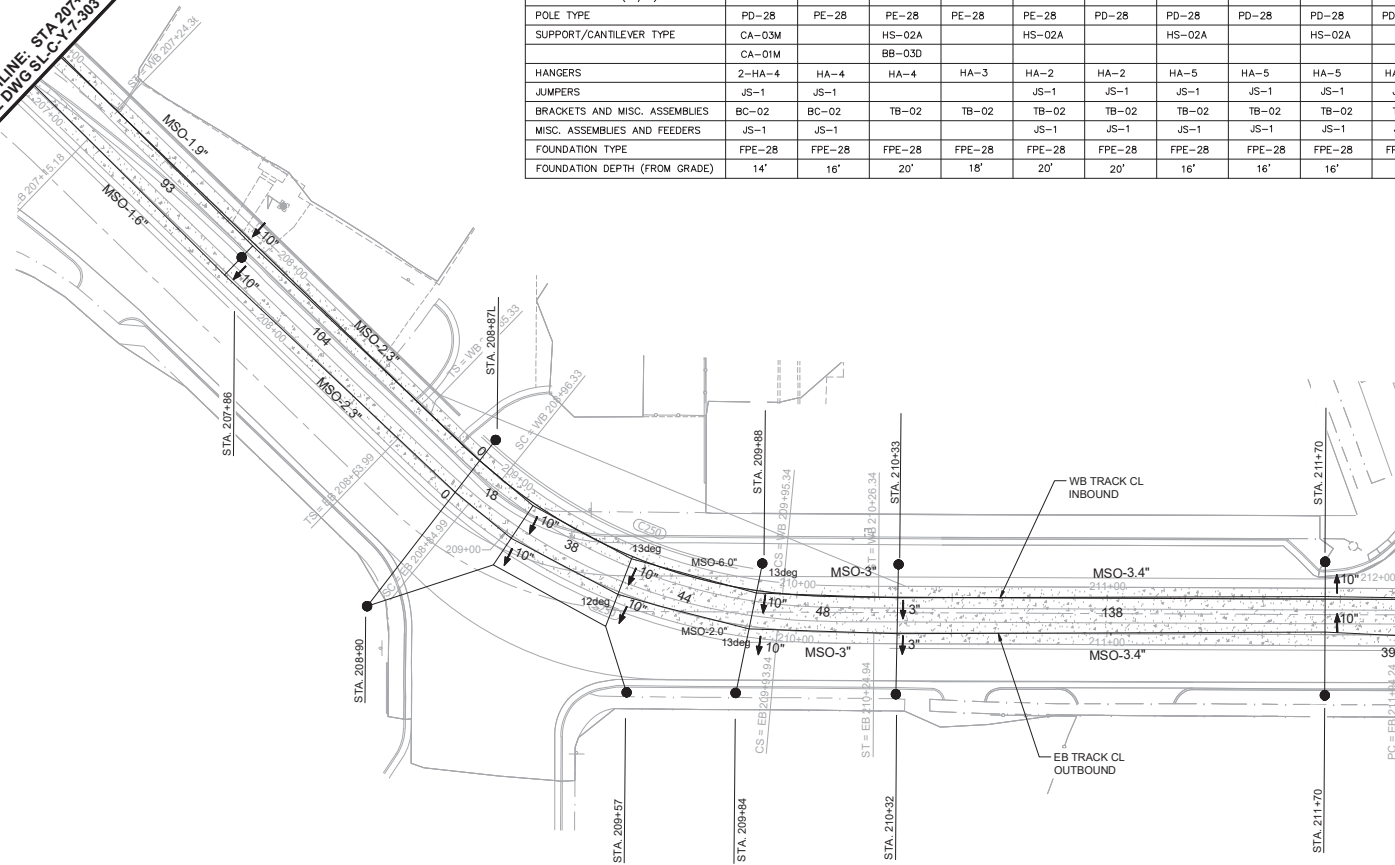
NOTE:

1. ALL STATIONING BASED ON THE WESTBOUND TRACK. OFFSETS BASED ON THE WESTBOUND TRACK CENTER LINE.

WIRE RUN NUMBER	WR-5/6	WR-5	WR-6	WR-6	WR-6	WR-5	WR-6	WR-5	WR-6	WR-5
POLE ID NUMBER	20786	20887	20890	20957	20984R	20988L	21032R	21033L	21170R	21170L
LOCATION OF POLE	207+86.38	208+87	208+90	209+57	209+84	209+88	210+32	210+33	211+70	211+70
POLE CENTER TO TRACK (FT)	CENTERED	8.26L	59.74'R	49.16'R	33.55R	8.6'L	31.32'R	10.56'L	31.13'R	11.99'L
CONTACT WIRE HEIGHT (FT/IN)	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"
MESSENGER WIRE HEIGHT (FT/IN)	23'-6"	23'-6"	23'-6"	23'-6"	23'-6"	23'-6"	23'-6"	23'-6"	23'-6"	23'-6"
ANCHOR HEIGHT (FT/IN)										
POLE TYPE	PD-28	PE-28	PE-28	PE-28	PE-28	PD-28	PD-28	PD-28	PD-28	PD-28
SUPPORT/CANTILEVER TYPE	CA-03M		HS-02A		HS-02A		HS-02A		HS-02A	
	CA-01M		BB-03D							
HANGERS	2-HA-4	HA-4	HA-4	HA-3	HA-2	HA-2	HA-5	HA-5	HA-5	HA-5
JUMPERS	JS-1	JS-1			JS-1	JS-1	JS-1	JS-1	JS-1	JS-1
BRACKETS AND MISC. ASSEMBLIES	BC-02	BC-02	TB-02	TB-02	TB-02	TB-02	TB-02	TB-02	TB-02	TB-02
MISC. ASSEMBLIES AND FEEDERS	JS-1	JS-1			JS-1	JS-1	JS-1	JS-1	JS-1	JS-1
FOUNDATION TYPE	FPE-28	FPE-28	FPE-28	FPE-28	FPE-28	FPE-28	FPE-28	FPE-28	FPE-28	FPE-28
FOUNDATION DEPTH (FROM GRADE)	14'	16'	20'	18'	20'	20'	16'	16'	16'	16'

MATCHLINE: STA 207+00
SEE DWG SL-C-Y-7-303

MATCHLINE: STA 212+00
SEE DWG SL-C-Y-7-305



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REV	DATE	Description	



Designed By:
B. DEMERS
Drawn By:
N.WU
Checked By:
Y. LIU
Approved By:
B. DEMERS

S-LINE EXTENSION PROJECT

OVERHEAD CONTACT SYSTEM
WIRING LAYOUT & ALLOCATION SCHEDULE
WB STA 207+00 TO WB STA 211+17

Scale: 1"=20'
CADD Filename: SL-C-Y-7-304.dwg
Submit Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Y7304
Sheet No.:

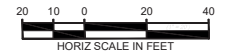
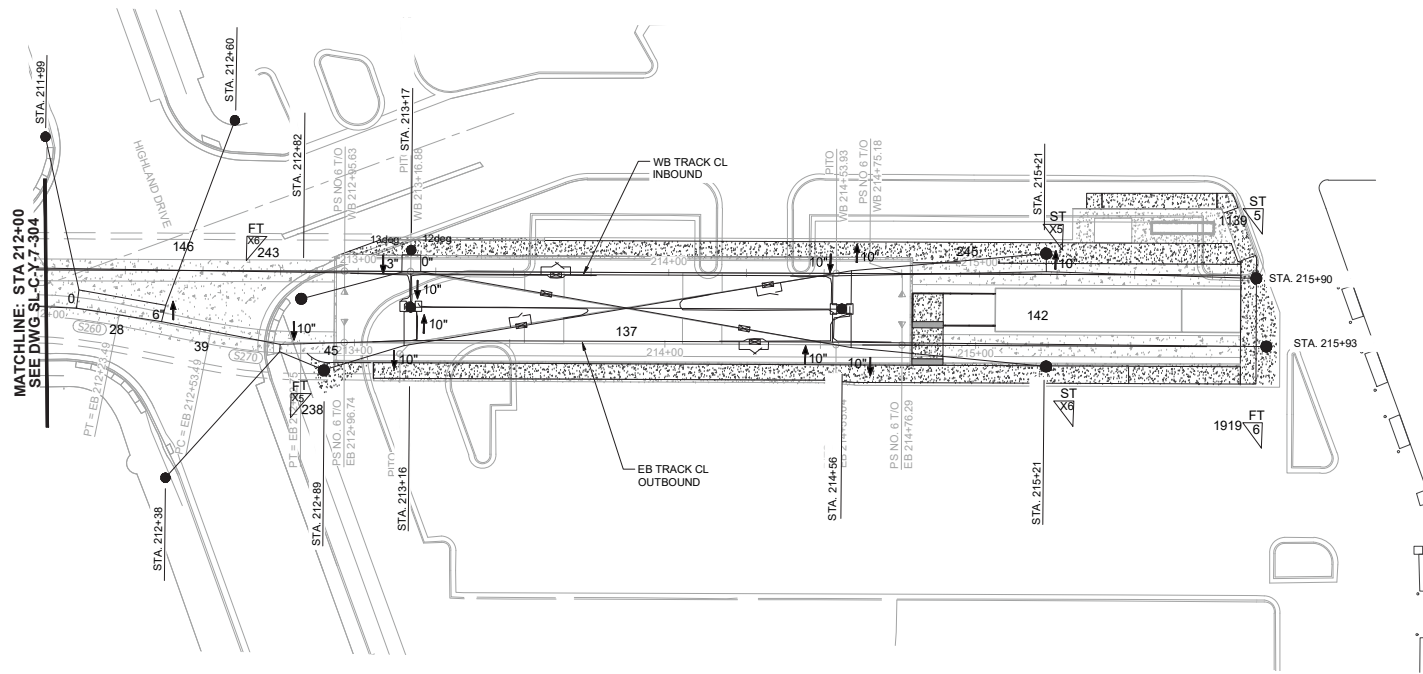
Submitted By: _____

Approved By: _____

WIRE RUN NUMBER	WR-6	WR-6	WR-6	WR-5	WR-6	WR-5	WR-5/6		WR-5/6		WR-5	WR-6	WR-5	WR-6
POLE ID NUMBER	21199	21238	21260	21282	21289	21317	21316	21316(CONT'D)	21456	21456(CONT'D)	21521 R	21521 L	215+90	21593
LOCATION OF POLE	211+99	212+38	212+60	212+82	212+89	213+17	213+16		214+56		215+21	215+21	215+90	215+93
POLE CENTER TO TRACK (FT)	42.89'L	66.86'R	48.39'L	9.00'R	32.04'R	6.71'L	CENTERED		CENTERED		30.08'R	6.71'L	CENTERED	CENTERED
CONTACT WIRE HEIGHT (FT/IN)	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"	20'-3"	19'-7"	23'-10"	19'-7"	23'-10"				
MESSENGER WIRE HEIGHT (FT/IN)	23'-6"	23'-6"	23'-6"	23'-6"	23'-6"	24'-6"	19'-10"	23'-10"	19'-6"	23'-6"				
ANCHOR HEIGHT (FT/IN)				21'-6"/24'-6"	21'-6"/24'-6"				19'-7"	23'-10"	21'-6"/24'-6"	21'-6"/24'-6"	21'-6"/24'-6"	21'-6"/24'-6"
POLE TYPE	PE-28	PE-30	PE-30	PE-28	PE-28	PE-28	PE-28		PE-28		PE-28	PE-28	PE-28	PE-28
SUPPORT/CANTILEVER TYPE	BB-02D	BB-02D		CC-01	CC-01	(2)CA-01H	(3)CA-01H		(3)CA-01H	(2)CC-01	CA-01M			
SUPPORT/CANTILEVER TYPE							CC-01 (CROSSOVER CENTER)		CA-03M		SEE DETAILS ON Y 7182			
HANGERS						HA-5	HA-5		HA-5		TERMINATION SPANS			
MISC. ASSEMBLIES AND FEEDERS				FT-01	FT-01	JP-1	2-JP-1	JS-1	2-JP-1	JS-1	ST-01	ST-01	ST-01	FT-01
BRACKETS AND MISC. ASSEMBLIES	TB-02	TB-02	TB-02	TB-02	TB-02	TB-02	(3)MLSI-02	(2)DS-01	(3)MLSI-02	(2)DS-01				
						SA-01	2-JP-1	SA-01	2-JP-1	SA-01	JS-1	JS-1	FPE-20	FPE-20
FOUNDATION TYPE	FPE-18	FPE-18	FPE-18	FPE-20	FPE-20	FPE-18	FPE-18		FPE-18		FPE-20	FPE-20	FPE-20	FPE-20
FOUNDATION DEPTH (FROM GRADE)	18'	20'	18'	20'	20'	18'	18'		18'		20'	20'	20'	20'

NOTE:

- ALL STATIONING BASED ON THE WESTBOUND TRACK. OFFSETS BASED ON THE WESTBOUND TRACK CENTER LINE.



14/15/2023			
REV	DATE	Description	







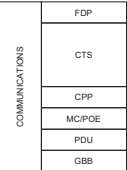












Designed By: B.DEMERS
 Drawn By: N.WU
 Checked By: Y.LIU
 Approved By: B.DEMERS

S-LINE EXTENSION PROJECT
OVERHEAD CONTACT SYSTEM
WIRING LAYOUT & ALLOCATION SCHEDULE
WB STA 212+00 TO WB STA 215+96.33

Scale:	1"=20'
CADD Filename:	SL-C-Y-7-305.dwg
Submit Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Y7305
Sheet No.:	

STANDARD COMMUNICATION SYMBOLS

	COMMUNICATION HOUSE
	PULL BOX / HANDHOLE / MANHOLE
	COMMUNICATIONS CABLE / CAT 6A
	UNDERGROUND CONDUIT / DUCTBANK
	PULL BOX / HANDHOLE / MANHOLE WITH UNDERGROUND RACEWAYS OR CONDUITS
	SINGLE-MODE FIBER CABLE WITH NUMBER OF STRAND
	POWER CONTROL CABINET (PCC)
	CLOSED-CIRCUIT TELEVISION SYSTEM
	EMERGENCY TELEPHONE
	PUBLIC ADDRESS / PUBLIC INFORMATION SIGNS
	SMART CARD READER
	TICKET VENDING MACHINE
	FIBER DISTRIBUTION PANEL
	COPPER PATCH PANEL
	PLATFORM
	MEDIA CONVERTERS
	SIGNAL EQUIPMENT HOUSE

ABBREVIATION

DESCRIPTION

ABBREVIATION

DESCRIPTION

CAT 6A	CATEGORY 6 NETWORK CABLE	POE	POWER OVER ETHERNET
CCTV	CLOSED-CIRCUIT TELEVISION	PSTN	PUBLIC SWITCHED TELEPHONE NETWORK
CPP	COPPER PATCH PANEL	RTU	REMOTE TERMINAL UNIT
CTS	COMMUNICATION TRANSMISSION SYSTEM	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
ETEL	EMERGENCY TELEPHONE	SCR	SMART CARD READER
F/O	FIBER OPTIC	SEH	SIGNAL EQUIPMENT HOUSE
FDP	FIBER OPTIC DISTRIBUTION PANEL	SM	SINGLE-MODE
FST	FIBER SPLICE THROUGH	STP	SHIELDED TWISTED PAIR CABLE
GBB	GROUNDING BUS BAR	TVM	TICKET VENDING MACHINE
GBPS	GIGABIT PER SECOND	TX / RX	TRANSMIT / RECEIVE
GIG-E	GIGABIT ETHERNET	UPS	UNINTERRUPTIBLE POWER SUPPLY
I/O	INPUT / OUTPUT	VAC	VOLTAGE ALTERNATING CURRENT
IP	INTERNET PROTOCOL	VOIP	VOICE OVER INTERNET PROTOCOL
IT	INFORMATION TECHNOLOGY		
MC	MEDIA CONVERTERS		
NVR	NETWORK VIDEO RECORDER		
OMF	OPERATION / MAINTENANCE FACILITY		
PA	PUBLIC ADDRESS		
PCC	POWER CONTROL CABINET		
PDU	POWER DISTRIBUTION UNIT		
PLC	PROGRAMMABLE LOGIC CONTROLLER		

NOTES:

- LABELING AS SHOWN IN DETAILS SHALL BE TYPICAL FOR UTA.
- REFER TO SYSTEMWIDE ELECTRICAL DRAWINGS FOR SIGNAL CONDUIT PLAN.
- REFER TO SYSTEMWIDE ELECTRICAL DUCTBANK PLANS FOR UNDERGROUND RACEWAY AND CABLE PLANS.
- SIGNALING COMMUNICATION DETAILS INCLUDING ELECTROLOGIX'S OFFICE COMMUNICATIONS TO BE DETAILED ON SIGNAL CIRCUIT PLANS. EXPECTED PROTOCOL TO BE 9600 BAUD GENISYS. PRELIMINARY SIGNAL CIRCUIT PLANS WILL SHOW CONTROL AND INDICATION CHARTS, LOCATION ID AND GENISYS CONFIGURATION SETTINGS.
- FINAL SIGNAL COMMUNICATION DETAILS SHALL BE CONFIRMED WITH UTA AND PROVIDED FOR UPDATING NMS AND TDX SYSTEMS FOR CONTROL AT THE OMF.

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REV	DATE	Description



Designed By:	M.WESTERGARD
Drawn By:	K.EFFERTZ
Checked By:	M.NEALE
Approved By:	Y.LIU

S-LINE EXTENSION PROJECT

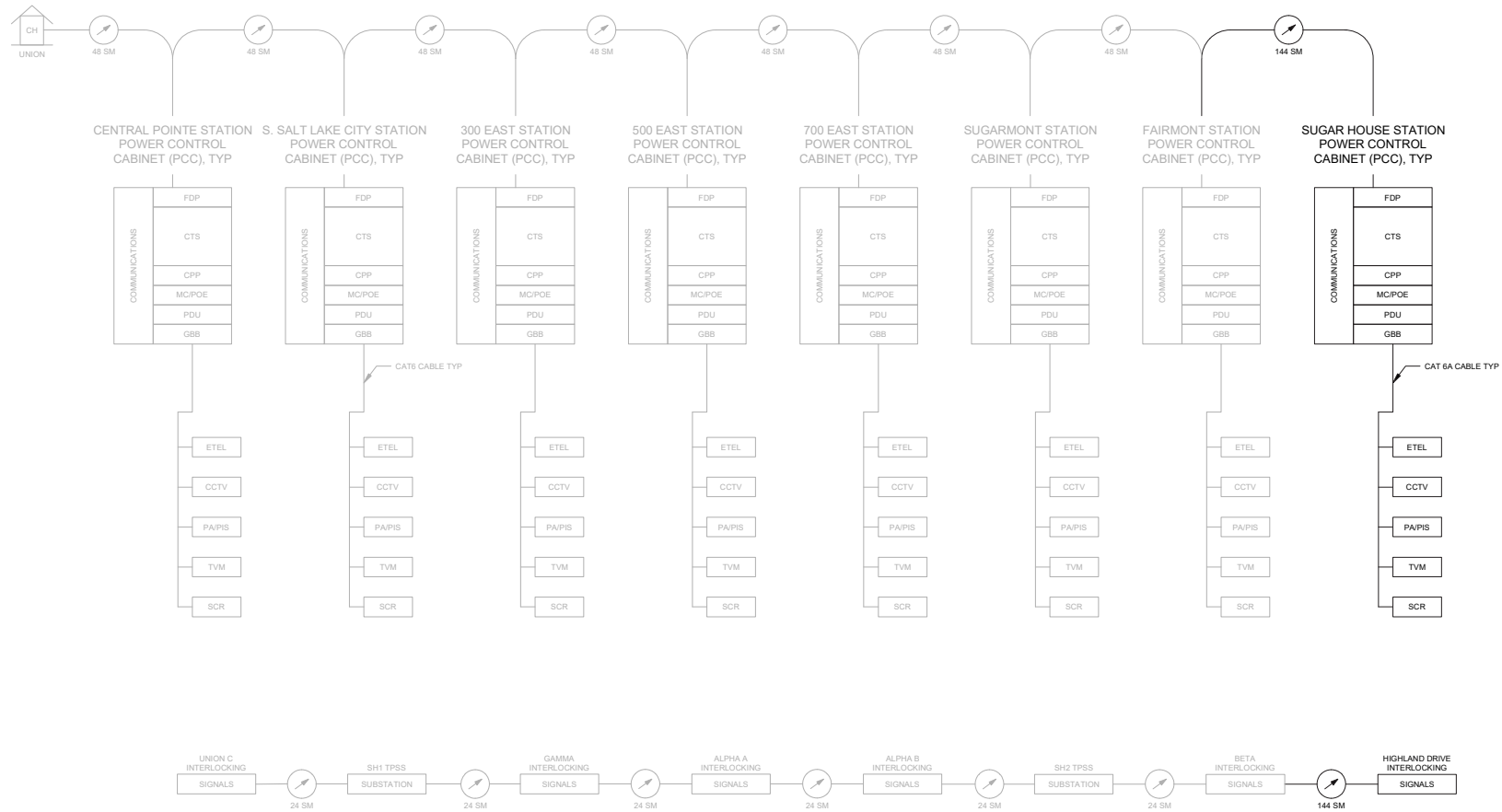
COMMUNICATIONS SYMBOLS, ABBREVIATIONS AND GENERAL NOTES

State:	NTS
CADD Filename:	SL-C-Y-0-800.dwg
Submital Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Y0800
Sheet No.:	

Submitted By: _____ Approved By: _____

NOTES:

1. GRAY ITEMS INDICATE EXISTING.
2. BOTH SIGNAL AND IT F/O CABLES CONNECT BACK TO OMF VIA EXISTING CONNECTION ON OTHER F/O CABLES AT THE UNION COMMUNICATIONS HOUSE OR UNION C INTERLOCKING.
3. SCOPE INCLUDES CABLING TO END DEVICES AND PIS INSTALLATION. END DEVICES INCLUDING CCTV, TVM, SCR & ETEL SHALL BE PROVIDED AND INSTALLED BY UTA OR OTHERS.

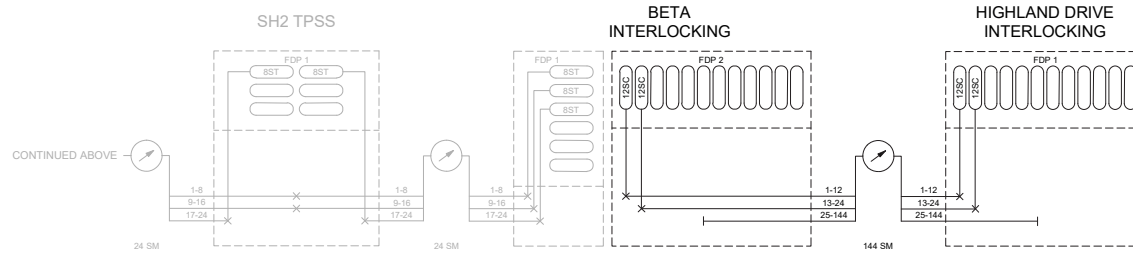
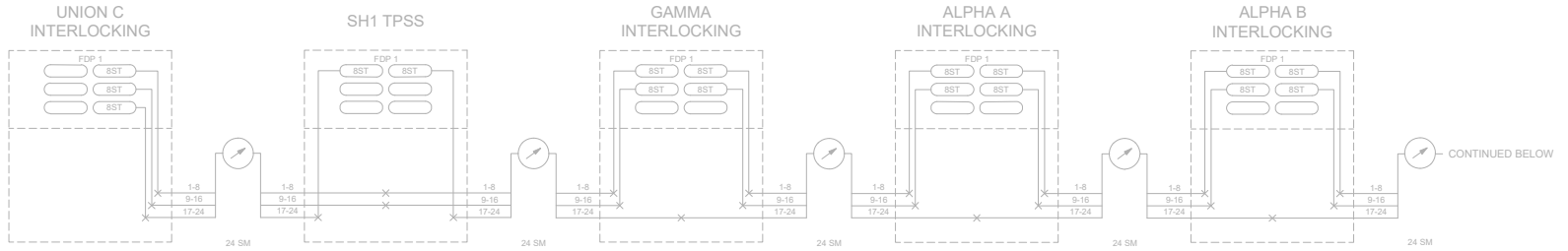


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REV	DATE	Description	

	 UTAH TRANSIT AUTHORITY	Designed By: M.WESTERGARD	S-LINE EXTENSION PROJECT COMMUNICATIONS SYSTEMWIDE SINGLE LINE DIAGRAM	State: NTS
		Drawn By: K.EFFERTZ		CADD Filename: SL-C-Y-1-801.dwg
Submitted By: _____		Approved By: Y.LIU	UTA Contract No.: 24-03849	Submit Date: 01-16-26
			Drawing No.: Y1801	Sheet No.:

SIGNAL / SCADA / TPSS
FIBER OPTIC CABLE



- LEGEND:**
- SINGLE-MODE FIBER OPTIC CABLE
 - FIBER OPTIC DISTRIBUTION PANEL
 - FIBER OPTIC SPLICE ENCLOSURE
 - 8-PORT ST-TYPE PIGTAIL MODULE TO BE USED IN FIBER OPTIC DISTRIBUTION PANEL
 - 12-PORT SC-TYPE PIGTAIL TO BE USED IN FIBER OPTIC DISTRIBUTION PANEL
 - FUSION SPLICE
 - FIBER END COILED IN PANEL

- NOTES:**
1. SEE FIBER ALLOCATION TABLES ON SHEET Y3803 & Y3804 FOR FIBER DISTRIBUTION PANEL TERMINATION DETAILS.
 2. GRAY ITEMS INDICATE EXISTING.
 3. EXISTING FDP FOR 24 SM CABLES ARE 6 PANEL WALL MOUNT STYLE.
 4. NEW FDP FOR 144 SM CABLES ARE 12 PANEL RACK MOUNT STYLE.
 5. F/O JUMPERS ARE REQUIRED BETWEEN THE NEW AND EXISTING FDP FOR REQUIRED CONNECTIONS.

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	 UTAH TRANSIT AUTHORITY	S-LINE EXTENSION PROJECT COMMUNICATIONS SIGNAL FIBER OPTIC CABLE PLAN	Title: NTS
			CADD Filename: SL-C-Y-1-802.dwg
Submitted By: _____		Approved By: _____	
Designed By: M.WESTERGARD		UTA Contract No.: 24-03849	
Drawn By: K.EFFERTZ		Sheet No.: Y1802	
Checked By: M.NEALE		Submit Date: 01-16-26	
Approved By: Y.LIU		Drawing No.: 24-03849	

HIGHLAND DRIVE INTERLOCKING - RACK MOUNT FDP											
CABLE					FIBER DISTRIBUTION PANEL			CONNECTION			
ORIGINATION	TYPE	BUFFER	COLOR	STRAND	PANEL	POSITION	CONNECTION TYPE	LOCAL CONNECTION	FAR END CONNECTION	FAR END LOCATION	
WEST TO BETA INTERLOCKING	144 SINGLE-MODE	BLUE	BLUE	1	A	1	SC	RS 400PORT 1	RS 400PORT 2	BETA INTERLOCKING	
			ORANGE	2		2	SC				
			GREEN	3		3	SC				
			BROWN	4		4	SC	RS 400PORT 2	RS 400PORT 2	ALPHA B INTERLOCKING	
			SLATE	5		5	SC				
			WHITE	6		6	SC				
			RED	7		7	SC	ELECTROLOGIX'S SERIAL PORT SLOT 1	VHLC PORT D	BETA INTERLOCKING	
			BLACK	8		8	SC				
			YELLOW	9		9	SC				
			VIOLET	10		10	SC				
			ROSE	11		11	SC				
			AQUA	12		12	SC				
		BLUE	13	13	SC	B					
		ORANGE	14	14	SC						
		GREEN	15	15	SC						
		BROWN	16	16	SC						
		SLATE	17	17	SC						
		WHITE	18	18	SC						
		RED	19	19	SC						
		BLACK	20	20	SC						
		YELLOW	21	21	SC						
		VIOLET	22	22	SC						
		ROSE	23	23	SC						
		AQUA	24	24	SC						
GREEN	ALL	25-36		UNTERMINATED & COILED IN PANEL							
BROWN	ALL	37-48									
SLATE	ALL	49-60									
WHITE	ALL	61-72									
RED	ALL	73-84									
BLACK	ALL	85-96									
YELLOW	ALL	97-108									
VIOLET	ALL	109-120									
ROSE	ALL	121-132									
AQUA	ALL	133-144									

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Submitted By: _____ Approved By: _____

Designed By: M.WESTERGARD
Drawn By: K.EFFERTZ
Checked By: M.NEALE
Approved By: Y.LIU

S-LINE EXTENSION PROJECT

COMMUNICATIONS
SIGNAL HIGHLAND DRIVE
FIBER ALLOCATION TABLE

State	NTS
CADD Filename:	SL-C-Y-3-804.dwg
Submital Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y3804
Sheet No.	

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NOTES:

- 1. FST DENOTES FIBER BEING FUSION SPLICED THROUGH WITH NO TERMINATIONS INSIDE PANEL.
- 2. GRAY ITEMS INDICATE EXISTING.

FAIRMONT (MCLELLAND ST.) PCC FDP								FAIRMONT (MCLELLAND ST.) PCC FDP									
CABLE				FIBER DISTRIBUTION PANEL				CABLE				FIBER DISTRIBUTION PANEL					
ORIGNATION	TYPE	BUFFER	COLOR	STRAND	PANEL	POSITION	CONNECTION TYPE	ORIGNATION	TYPE	BUFFER	COLOR	STRAND	PANEL	POSITION	CONNECTION TYPE		
WEST TO SUGARBLOOM (800) B PCC	48 STRAND SINGLE-MODE	BLUE	BLUE	1	A	1	SC	EAST TO HIGHLAND DR PCC	144 STRAND SINGLE-MODE	BLUE	BLUE	1	B	13	SC		
			ORANGE	2		2	SC				ORANGE	2		14	SC		
			GREEN	3		3	SC				GREEN	3		15	SC		
			BROWN	4		4	SC				BROWN	4		16	SC		
			SLATE	5		5	SC				SLATE	5		17	SC		
			WHITE	6		6	SC				WHITE	6		18	SC		
			RED	7		7	SC				RED	7		19	SC		
			BLACK	8		8	SC				BLACK	8		20	SC		
			YELLOW	9		9	SC				YELLOW	9		21	SC		
			VIOLET	10		10	SC				VIOLET	10		22	SC		
			ROSE	11		11	SC				ROSE	11		23	SC		
			AQUA	12		12	SC				AQUA	12		24	SC		
			BLUE	13		FST TO F44SM-MCL-1 STRANDS 13-48					BLUE	13		BLUE	13	FST TO F44SM-900-1 STRANDS 13-48	
		ORANGE	14	ORANGE	14												
		GREEN	15	GREEN	15												
		BROWN	16	BROWN	16												
		SLATE	17	SLATE	17												
		WHITE	18	WHITE	18												
		RED	19	RED	19												
		BLACK	20	BLACK	20												
		YELLOW	21	YELLOW	21												
		VIOLET	22	VIOLET	22												
		ROSE	23	ROSE	23												
		AQUA	24	AQUA	24												
		BLUE	25	BLUE	25												
		ORANGE	26	ORANGE	26												
		GREEN	27	GREEN	27												
		BROWN	28	BROWN	28												
		SLATE	29	SLATE	29												
		WHITE	30	WHITE	30												
		RED	31	RED	31												
		BLACK	32	BLACK	32												
		YELLOW	33	YELLOW	33												
		VIOLET	34	VIOLET	34												
		ROSE	35	ROSE	35												
		AQUA	36	AQUA	36												
		BLUE	37	BLUE	37												
		ORANGE	38	ORANGE	38												
		GREEN	39	GREEN	39												
		BROWN	40	BROWN	40												
		SLATE	41	SLATE	41												
		WHITE	42	WHITE	42												
		RED	43	RED	43												
		BLACK	44	BLACK	44												
		YELLOW	45	YELLOW	45												
		VIOLET	46	VIOLET	46												
		ROSE	47	ROSE	47												
		AQUA	48	AQUA	48												
SLATE	ALL	49-60	UNTERMINATED & COILED IN PANEL														
WHITE	ALL	61-72															
RED	ALL	73-84															
BLACK	ALL	85-96															
YELLOW	ALL	97-108															
VIOLET	ALL	109-120															
ROSE	ALL	121-132															
AQUA	ALL	133-144															

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	<p>UTAH TRANSIT AUTHORITY</p>	Designed By M.WESTERGARD Drawn By K.EFFERTZ Checked By M.NEALE Approved By Y.LIU	S-LINE EXTENSION PROJECT COMMUNICATIONS FAIRMONT PCC IT FIBER ALLOCATION TABLE	Issue NTS CADD Filename SL-C-Y-3-811.dwg Submit Date 01-16-26 UTA Contract No. 24-03849 Drawing No. Y3811
Submitted By: _____	Approved By: _____			

SUGAR HOUSE PCC FDP							
CABLE					FIBER DISTRIBUTION PANEL		
ORIGINATION	TYPE	BUFFER	COLOR	STRAND	PANEL	POSITION	CONNECTION TYPE
WEST TO FAIRMONT (MCLELLAND ST.) PCC	144 STRAND SINGLE-MODE	BLUE	BLUE	1	A	1	SC
			ORANGE	2		2	SC
			GREEN	3		3	SC
			BROWN	4		4	SC
			SLATE	5		5	SC
			WHITE	6		6	SC
			RED	7		7	SC
			BLACK	8		8	SC
			YELLOW	9		9	SC
			VIOLET	10		10	SC
			ROSE	11		11	SC
			AQUA	12		12	SC
		ORANGE	BLUE	13	B	13	SC
			ORANGE	14		14	SC
			GREEN	15		15	SC
			BROWN	16		16	SC
			SLATE	17		17	SC
			WHITE	18		18	SC
			RED	19		19	SC
			BLACK	20		20	SC
			YELLOW	21		21	SC
			VIOLET	22		22	SC
			ROSE	23		23	SC
			AQUA	24		24	SC
		GREEN	BLUE	25	C	25	SC
			ORANGE	26		26	SC
			GREEN	27		27	SC
			BROWN	28		28	SC
			SLATE	29		29	SC
			WHITE	30		30	SC
			RED	31		31	SC
			BLACK	32		32	SC
			YELLOW	33		33	SC
			VIOLET	34		34	SC
			ROSE	35		35	SC
			AQUA	36		36	SC
		BROWN	BLUE	37	D	37	SC
			ORANGE	38		38	SC
			GREEN	39		39	SC
			BROWN	40		40	SC
			SLATE	41		41	SC
			WHITE	42		42	SC
			RED	43		43	SC
			BLACK	44		44	SC
			YELLOW	45		45	SC
			VIOLET	46		46	SC
			ROSE	47		47	SC
			AQUA	48		48	SC
SLATE	ALL	49-60	UNTERMINATED & COILED IN PANEL				
WHITE	ALL	61-72					
RED	ALL	73-84					
BLACK	ALL	85-96					
YELLOW	ALL	97-108					
VIOLET	ALL	109-120					
ROSE	ALL	121-132					
AQUA	ALL	133-144					

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Submitted By: _____

Approved By: _____

Designed By: M.WESTERGARD
Drawn By: K.EFFERTZ
Checked By: M.NEALE
Approved By: Y.LIU

S-LINE EXTENSION PROJECT

COMMUNICATIONS
SUGAR HOUSE PCC
IT FIBER ALLOCATION TABLE

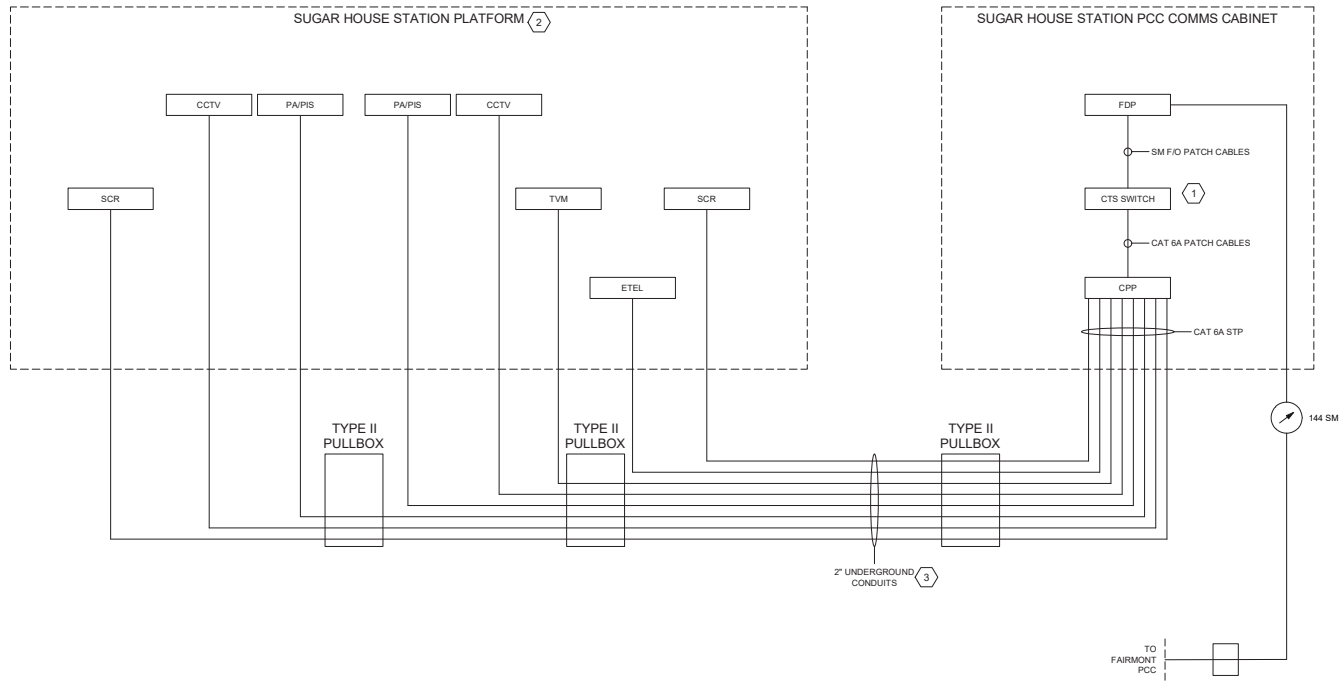
State	NTS
CADD Filename	SL-C-Y-3-812.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y3812
Sheet No.	

NOTES:

1. SEE SHEET P1201 AND P3203 FOR LOCATIONS OF DEVICES ON PLATFORM.
2. SEE ELECTRICAL SHEET E0208 FOR TYPE II PULLBOX INFORMATION.

KEY NOTES:

1. CTS DEVICE & CONNECTIVITY BY OWNER.
2. SCOPE INCLUDES CABLING TO END DEVICES AND PIS INSTALLATION. END DEVICES INCLUDING CCTV, TVM, SCR & ETEL SHALL BE PROVIDED AND INSTALLED BY UTA OR OTHERS.
3. SEE ELECTRICAL SHEET E1205 FOR CONDUIT ROUTING AND DETAILS FROM PCC TO PLATFORM AND END DEVICES.



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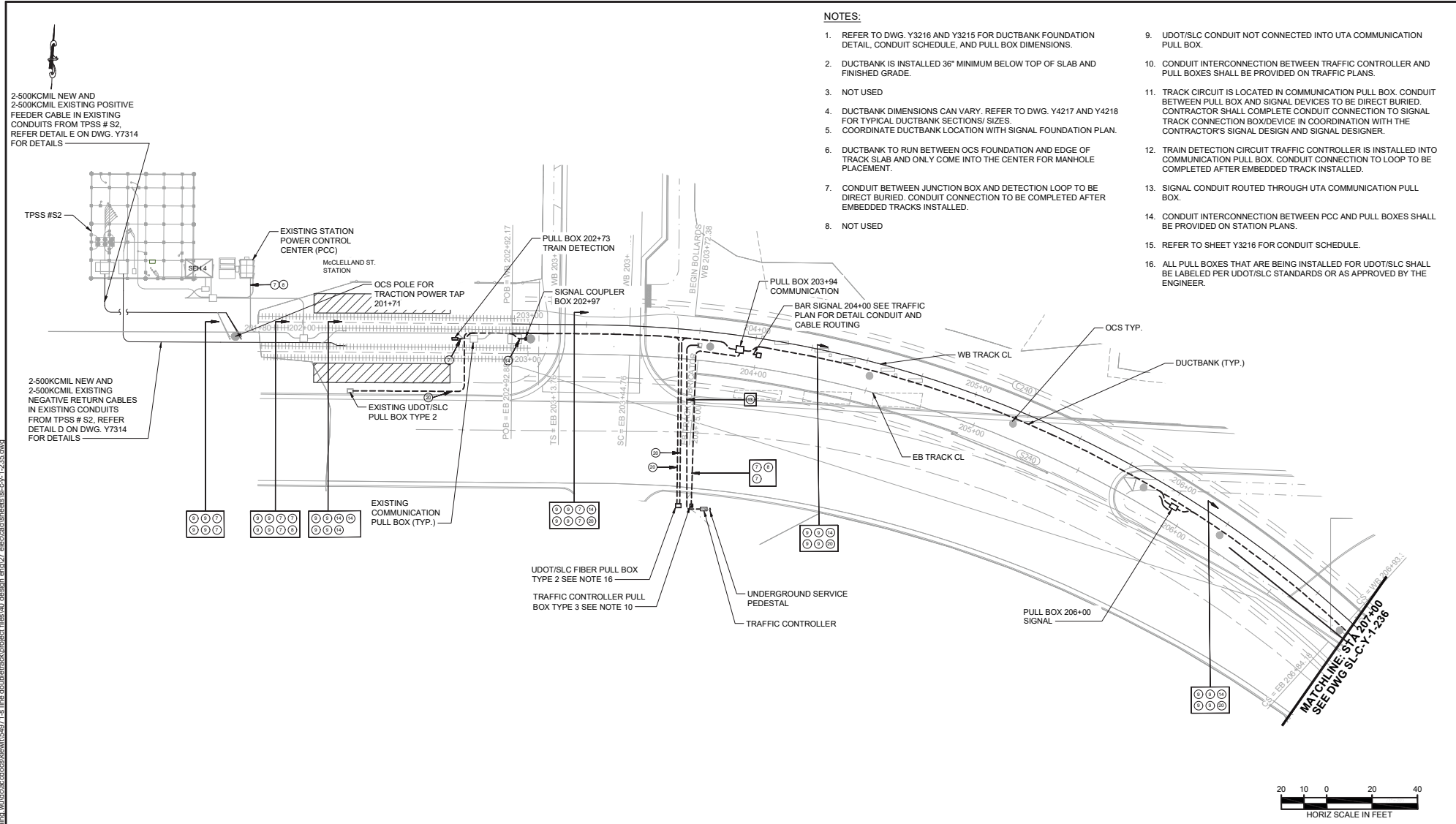
Designed By:
M.WESTERGARD
Drawn By:
K.EFFERTZ
Checked By:
M.NEALE
Approved By:
Y.LIU

S-LINE EXTENSION PROJECT

COMMUNICATIONS
SUGAR HOUSE STATION
RISER DIAGRAM

Scale	NTS
CADD Filename	SL-C-Y-8-813.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y8813
Sheet No.	

Submitted By: _____ Approved By: _____



- NOTES:**
- REFER TO DWG. Y3216 AND Y3215 FOR DUCTBANK FOUNDATION DETAIL, CONDUIT SCHEDULE, AND PULL BOX DIMENSIONS.
 - DUCTBANK IS INSTALLED 36" MINIMUM BELOW TOP OF SLAB AND FINISHED GRADE.
 - NOT USED
 - DUCTBANK DIMENSIONS CAN VARY. REFER TO DWG. Y4217 AND Y4218 FOR TYPICAL DUCTBANK SECTIONS/ SIZES.
 - COORDINATE DUCTBANK LOCATION WITH SIGNAL FOUNDATION PLAN.
 - DUCTBANK TO RUN BETWEEN OCS FOUNDATION AND EDGE OF TRACK SLAB AND ONLY COME INTO THE CENTER FOR MANHOLE PLACEMENT.
 - CONDUIT BETWEEN JUNCTION BOX AND DETECTION LOOP TO BE DIRECT BURIED. CONDUIT CONNECTION TO BE COMPLETED AFTER EMBEDDED TRACKS INSTALLED.
 - NOT USED
 - UDOT/SLC CONDUIT NOT CONNECTED INTO UTA COMMUNICATION PULL BOX.
 - CONDUIT INTERCONNECTION BETWEEN TRAFFIC CONTROLLER AND PULL BOXES SHALL BE PROVIDED ON TRAFFIC PLANS.
 - TRACK CIRCUIT IS LOCATED IN COMMUNICATION PULL BOX. CONDUIT BETWEEN PULL BOX AND SIGNAL DEVICES TO BE DIRECT BURIED. CONTRACTOR SHALL COMPLETE CONDUIT CONNECTION TO SIGNAL TRACK CONNECTION BOX/DEVICE IN COORDINATION WITH THE CONTRACTOR'S SIGNAL DESIGN AND SIGNAL DESIGNER.
 - TRAIN DETECTION CIRCUIT TRAFFIC CONTROLLER IS INSTALLED INTO COMMUNICATION PULL BOX. CONDUIT CONNECTION TO LOOP TO BE COMPLETED AFTER EMBEDDED TRACK INSTALLED.
 - SIGNAL CONDUIT ROUTED THROUGH UTA COMMUNICATION PULL BOX.
 - CONDUIT INTERCONNECTION BETWEEN PCC AND PULL BOXES SHALL BE PROVIDED ON STATION PLANS.
 - REFER TO SHEET Y3216 FOR CONDUIT SCHEDULE.
 - ALL PULL BOXES THAT ARE BEING INSTALLED FOR UDOT/SLC STANDARDS OR AS APPROVED BY THE ENGINEER.

2-500KCMIL NEW AND 2-500KCMIL EXISTING POSITIVE FEEDER CABLE IN EXISTING CONDUITS FROM TPSS # S2. REFER DETAIL E ON DWG. Y7314 FOR DETAILS

TPSS #S2

2-500KCMIL NEW AND 2-500KCMIL EXISTING NEGATIVE RETURN CABLES IN EXISTING CONDUITS FROM TPSS # S2. REFER DETAIL D ON DWG. Y7314 FOR DETAILS

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Designed By	A.JAIN
Drawn By	A.JAIN
Checked By	D.Duzan
Approved By	Y.LU

S-LINE EXTENSION PROJECT

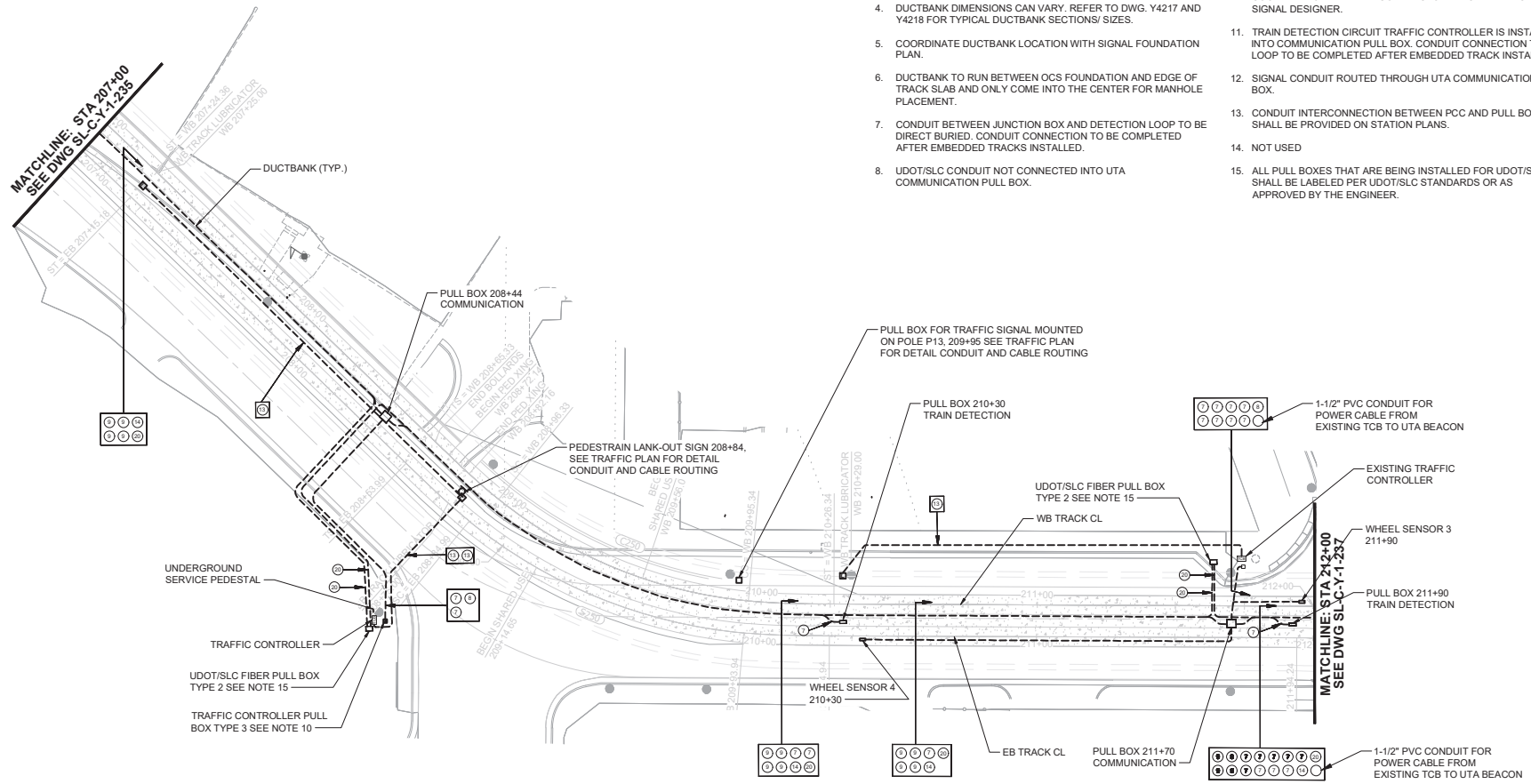
DUCTBANK PLAN
WB STA 201+00 TO WB STA 207+00

Scale	1"=20'
CADD Filename	SL-C-Y-1-235.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y1235
Sheet No.	

Submitted By: _____

Approved By: _____

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- NOTES:**
- REFER TO DWG. Y3216 AND Y3215 FOR DUCTBANK FOUNDATION DETAIL, CONDUIT SCHEDULE, AND PULL BOX DIMENSIONS.
 - DUCTBANK IS INSTALLED 36" MINIMUM BELOW TOP OF SLAB AND FINISHED GRADE.
 - NOT USED.
 - DUCTBANK DIMENSIONS CAN VARY. REFER TO DWG. Y4217 AND Y4218 FOR TYPICAL DUCTBANK SECTIONS/ SIZES.
 - COORDINATE DUCTBANK LOCATION WITH SIGNAL FOUNDATION PLAN.
 - DUCTBANK TO RUN BETWEEN OCS FOUNDATION AND EDGE OF TRACK SLAB AND ONLY COME INTO THE CENTER FOR MANHOLE PLACEMENT.
 - CONDUIT BETWEEN JUNCTION BOX AND DETECTION LOOP TO BE DIRECT BURIED. CONDUIT CONNECTION TO BE COMPLETED AFTER EMBEDDED TRACKS INSTALLED.
 - UDOT/SLC CONDUIT NOT CONNECTED INTO UTA COMMUNICATION PULL BOX.
 - CONDUIT INTERCONNECTION BETWEEN TRAFFIC CONTROLLER AND PULL BOXES SHALL BE PROVIDED ON TRAFFIC PLANS.
 - TRACK CIRCUIT IS LOCATED IN COMMUNICATION PULL BOX. CONDUIT BETWEEN PULL BOX AND SIGNAL DEVICES TO BE DIRECT BURIED. CONTRACTOR SHALL COMPLETE CONDUIT CONNECTION TO SIGNAL TRACK CONNECTION BOX/DEVICE IN COORDINATION WITH THE CONTRACTOR'S SIGNAL DESIGN AND SIGNAL DESIGNER.
 - TRAIN DETECTION CIRCUIT TRAFFIC CONTROLLER IS INSTALLED INTO COMMUNICATION PULL BOX. CONDUIT CONNECTION TO LOOP TO BE COMPLETED AFTER EMBEDDED TRACK INSTALLED.
 - SIGNAL CONDUIT ROUTED THROUGH UTA COMMUNICATION PULL BOX.
 - CONDUIT INTERCONNECTION BETWEEN PCC AND PULL BOXES SHALL BE PROVIDED ON STATION PLANS.
 - NOT USED
 - ALL PULL BOXES THAT ARE BEING INSTALLED FOR UDOT/SLC SHALL BE LABELED PER UDOT/SLC STANDARDS OR AS APPROVED BY THE ENGINEER.



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Designed By: A.JAIN
 Drawn By: Y.LIU
 Checked By: Y.LIU
 Approved By: B.DEMERS

S-LINE EXTENSION PROJECT
 DUCTBANK PLAN
 WB STA 207+00 TO WB STA 212+00

Scale	1"=20'
CADD Filename	SL-C-Y-1-236.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y1236
Sheet No.	

Submitted By: _____

Approved By: _____

NOTES:

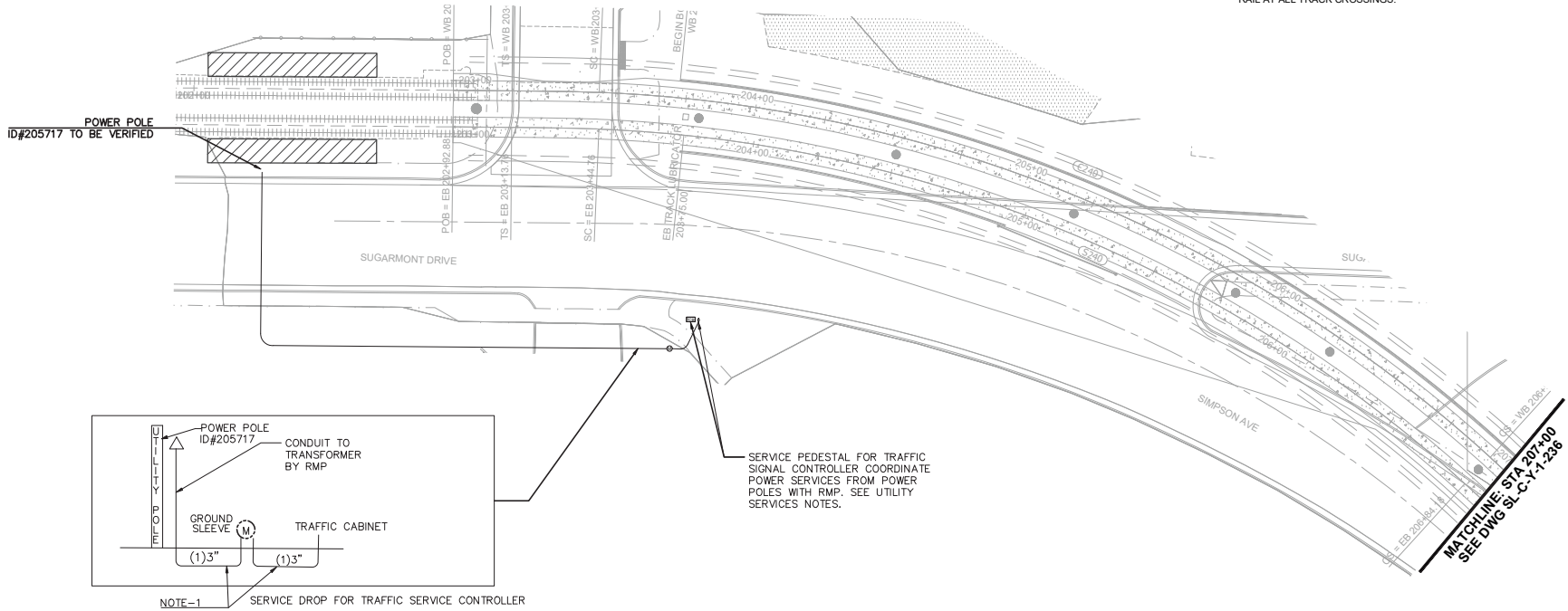
- ONE (1) 3" PVC CONDUIT PROVIDED BY CONTRACTOR. RMP SHALL INSTALL CONDUCTORS.
- CONTRACTOR SHALL EXTEND AND/OR MODIFY EXISTING ELECTRICAL SERVICE AS REQUIRED FOR THE RELOCATION OF EXISTING EQUIPMENT. ALL WORK SHALL BE PER ALL NEC CODES.
- REFER TO TRAFFIC PLANS SHEET SL-C-T-1-1201 FOR DETAILS.
- SALT LAKE CITY WILL OWN DUCTBANK AND CONDUITS UPON COMPLETION

UTILITY SERVICE NOTES:

- CONTRACTOR TO PROVIDE ELEMENTS (CONCRETE PADS, CONDUIT, ETC) REQUIRED TO MAKE CONNECTION TO RMP. ASSUMED TO BE LOCATED WITHIN 100' OF SERVICE PEDESTAL. CONTRACTOR SHALL COORDINATE WITH RMP.
- CONTRACTOR INSTALLS RISER AND CONDUITS FROM RMP POLE TO IDENTIFIED LOCATIONS.
- CONTRACTOR EXCAVATES AS NEEDED FOR GROUND SLEEVE AND SPLICE CABINET INSTALLATION.
- RMP FURNISHES AND INSTALLS GROUND SLEEVE AND SPLICE CABINET. 10' OF CLEARANCE IS REQUIRED IN FRONT OF GROUND SLEEVE.
- CONTRACTOR INSTALLS CONDUITS TO TRANSFORMER LOCATION.
- RMP FURNISHES AND INSTALLS TRANSFORMER. CONTRACTOR INSTALLS CONDUIT TO METERED LOCATIONS.
- RMP INSTALLS CONDUCTORS AND MAKES CONNECTIONS TO LINE SIDE OF METER.

TRENCH NOTES:

- TRENCH BACKFILL SHALL BE PER SPECIFICATION 02221 AND APWA PLAN NO. 381, UNLESS OTHERWISE NOTED.
- PIPE ZONE CONSIDERED TO EXTEND 12" ABOVE CONDUITS. SAND FILL SHALL EXTEND 12" ABOVE CONDUITS.
- NATIVE COMPACTABLE BACKFILL OR 3/4" MINUS BASE ROCK. PEA GRAVEL SHALL NOT BE PLACED IN ANY PART OF THE TRENCH.
- WHERE SUBJECT TO VEHICULAR TRAFFIC 8" MINIMUM 3/4" MINUS ROAD BASE SHALL BE USED. WHERE NOT SUBJECT TO VEHICULAR TRAFFIC 4" MINIMUM 3/4" MINUS ROAD BASE SHALL BE USED.
- COMPACT ALL BACKFILL TO A MODIFIED PROCTOR DENSITY OF 95 PERCENT OR GREATER.
- CONTRACTOR SHALL PROVIDE DEEPER TRENCH AS NECESSARY TO CROSS EXISTING LATERALS. ALTERNATIVELY, CONTRACTOR MAY LOOP WATER SERVICE PER APWA PLAN NO. 542.
- TOP OF THE SAND FILL SHALL BE 5" MINIMUM BELOW TOP OF RAIL AT ALL TRACK CROSSINGS.



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Designed By:	A.JAIN
Drawn By:	A.JAIN
Checked By:	D.DUZAN
Approved By:	Y.LIU

S-LINE EXTENSION PROJECT

ELECTRICAL PLAN
STA 201+00 TO STA 207+00

Scale:	SCALE OF DWG
CADD Filename:	SL-C-Y-1-238.dwg
Submit Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Y1238
Sheet No.:	

Submitted By: _____

Approved By: _____

NOTES :

- ONE (1) 4" PVC CONDUIT PROVIDED BY CONTRACTOR. RMP SHALL INSTALL CONDUCTORS.
- REFER TO TRAFFIC PLANS SHEETS SL-C-T-1-1202 AND SL-C-T-1-1203 FOR DETAILS.
- REFER TO DRAWING Y1241 FOR RMP UTILITY RELOCATED RACEWAY DESIGN FOR DUCTBANK AND CONDUIT ROUTING DETAIL.

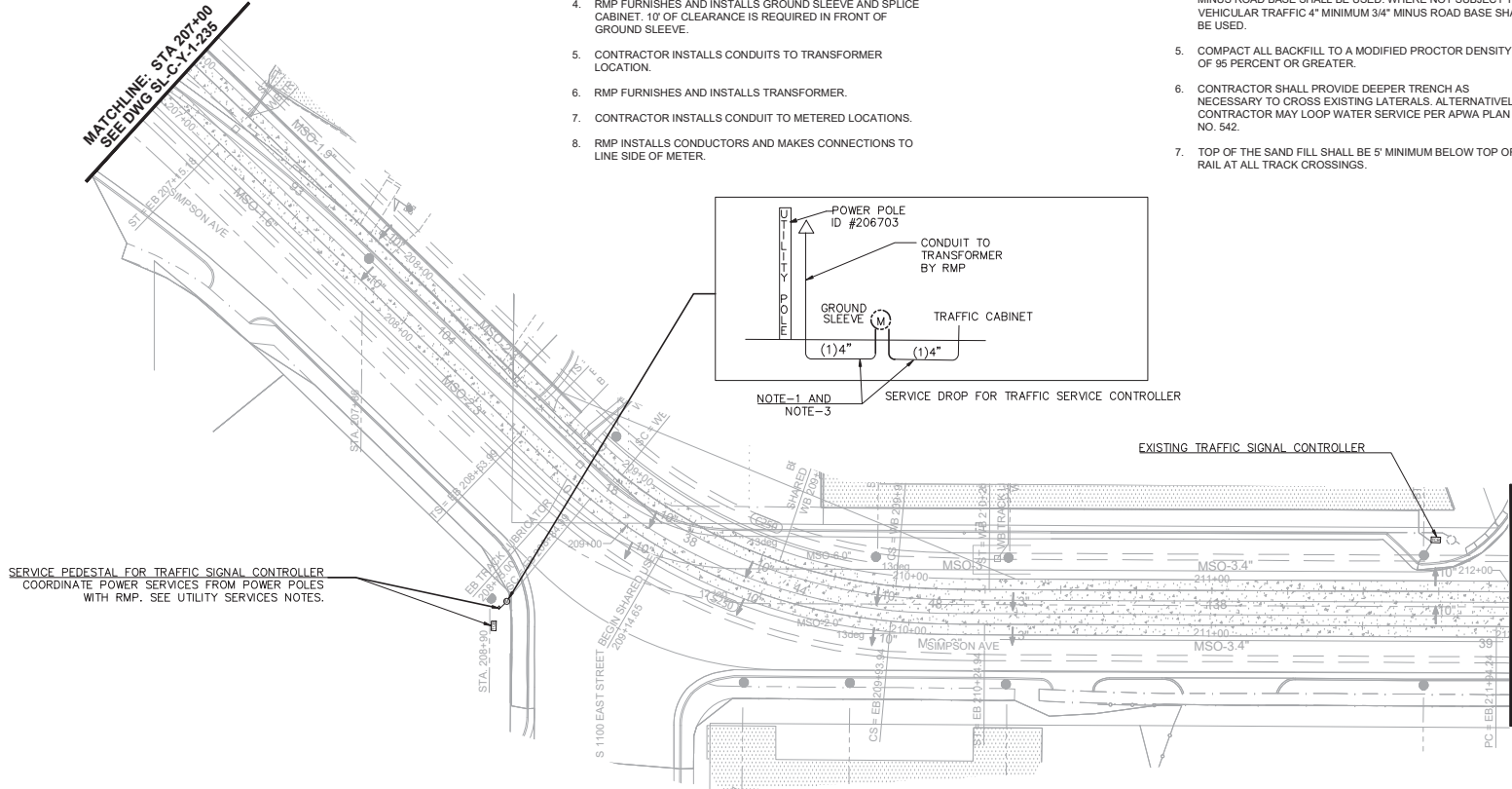
UTILITY SERVICE NOTES:

- CONTRACTOR TO PROVIDE ELEMENTS (CONCRETE PADS, CONDUIT, ETC.) REQUIRED TO MAKE CONNECTION TO RMP. ASSUMED TO BE LOCATED WITHIN 100' OF SERVICE PEDAESTAL. CONTRACTOR SHALL COORDINATE WITH RMP.
- CONTRACTOR INSTALLS RISER AND CONDUITS FROM RMP POLE TO IDENTIFIED LOCATIONS.
- CONTRACTOR EXCAVATES AS NEEDED FOR GROUND SLEEVE AND SPLICE CABINET INSTALLATION.
- RMP FURNISHES AND INSTALLS GROUND SLEEVE AND SPLICE CABINET. 10' OF CLEARANCE IS REQUIRED IN FRONT OF GROUND SLEEVE.
- CONTRACTOR INSTALLS CONDUITS TO TRANSFORMER LOCATION.
- RMP FURNISHES AND INSTALLS TRANSFORMER.
- CONTRACTOR INSTALLS CONDUIT TO METERED LOCATIONS.
- RMP INSTALLS CONDUCTORS AND MAKES CONNECTIONS TO LINE SIDE OF METER.

TRENCH NOTES:

- TRENCH BACKFILL SHALL BE PER SPECIFICATION 02221 AND APWA PLAN NO. 381, UNLESS OTHERWISE NOTED.
- PIPE ZONE CONSIDERED TO EXTEND 12" ABOVE CONDUITS. SAND FILL SHALL EXTEND 12" ABOVE CONDUITS.
- NATIVE COMPACTABLE BACKFILL OR 3/4" MINUS BASE ROCK. PEA GRAVEL SHALL NOT BE PLACED IN ANY PART OF THE TRENCH.
- WHERE SUBJECT TO VEHICULAR TRAFFIC 8" MINIMUM 3/4" MINUS ROAD BASE SHALL BE USED. WHERE NOT SUBJECT TO VEHICULAR TRAFFIC 4" MINIMUM 3/4" MINUS ROAD BASE SHALL BE USED.
- COMPACT ALL BACKFILL TO A MODIFIED PROCTOR DENSITY OF 95 PERCENT OR GREATER.
- CONTRACTOR SHALL PROVIDE DEEPER TRENCH AS NECESSARY TO CROSS EXISTING LATERALS. ALTERNATIVELY, CONTRACTOR MAY LOOP WATER SERVICE PER APWA PLAN NO. 542.
- TOP OF THE SAND FILL SHALL BE 5' MINIMUM BELOW TOP OF RAIL AT ALL TRACK CROSSINGS.

MATCHLINE: STA 207+00
SEE DWG SL-C-Y-1-235



SERVICE PEDAESTAL FOR TRAFFIC SIGNAL CONTROLLER
COORDINATE POWER SERVICES FROM POWER POLES
WITH RMP. SEE UTILITY SERVICES NOTES.

MATCHLINE: STA 212+00
SEE DWG SL-C-Y-1-237



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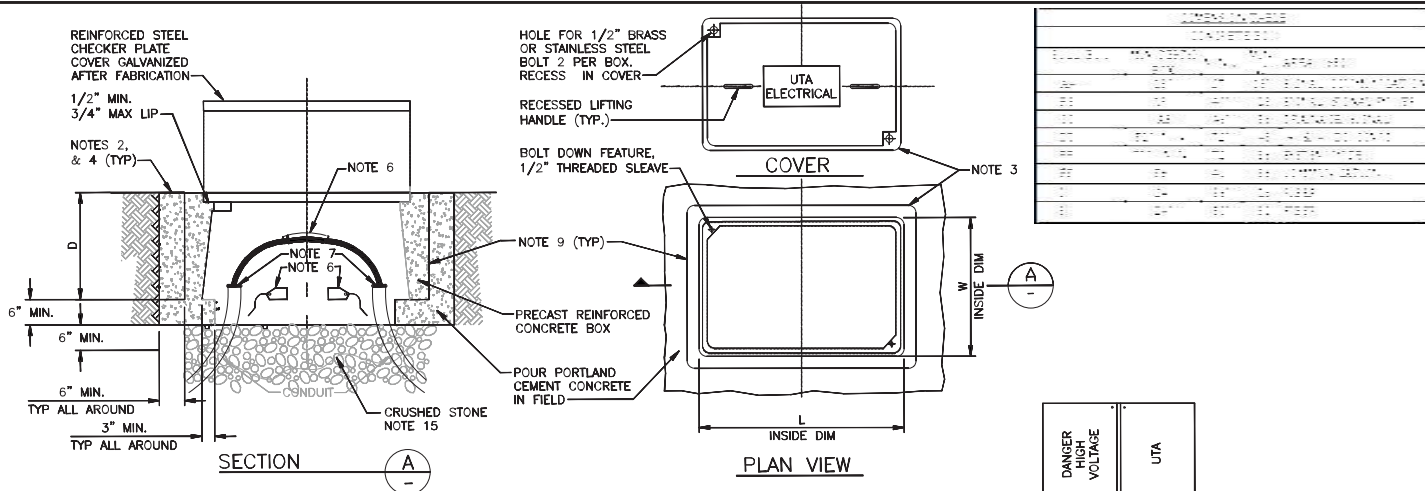
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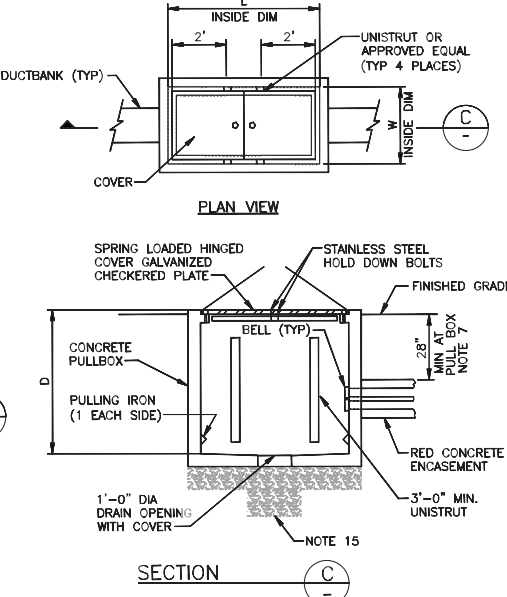
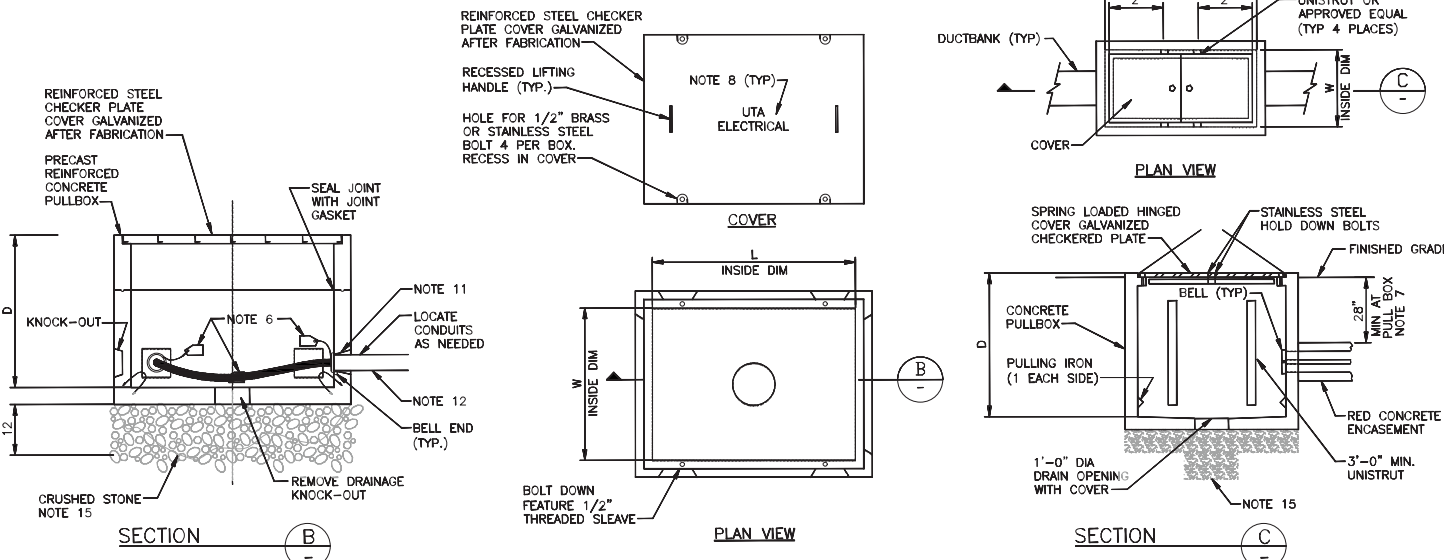
Designed By	A.JAIN
Drawn By	A.JAIN
Checked By	D.DUZAN
Approved By	Y.LIU

S-LINE EXTENSION PROJECT	
ELECTRICAL PLAN STA 207+00 TO STA 212+00	
Submitted By	Y.LIU

Scale	SCALE OF DWG
CADD Filename	SL-C-Y-1-239.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y1239
Sheet No.	



INSTALLATION DETAIL - PULLBOXES AA AND BB



- NOTES:**
- STEEL REINFORCING MUST MEET OR EXCEED MANUFACTURER'S RECOMMENDATIONS.
 - TOP OF PULL BOXES SHALL BE FLUSH WITH SURROUNDING GRADE OR TOP OF ADJACENT CURB, EXCEPT THAT IN UNPAVED AREAS WHERE PULL BOX IS NOT IMMEDIATELY ADJACENT TO AND PROTECTED BY A CONCRETE FOUNDATION, POLE OR OTHER PROTECTIVE CONSTRUCTION, THE BOX SHALL BE PLACED WITH ITS TOP MIN. 1.5 INCHES ABOVE SURROUNDING GRADE. WHERE PRACTICABLE, PULL BOXES SHOWN IN THE VICINITY OF CURBS SHALL BE PLACED ADJACENT TO THE BACK OF CURB.
 - THE OUTSIDE EDGE OF PULL BOXES AND COVERS FOR TYPES "AA" AND "BB" SHALL HAVE A MINIMUM RADIUS OF 4 INCH.
 - THE DEPTH OF THE PULL BOX IN SIDEWALK AREA, SHALL BE ADJUSTED SO THAT THE TOP OF THE BOX IS FLUSH WITH THE TOP OF SIDEWALK.
 - PULL BOX SHALL NOT BE WITHIN THE BOUNDARIES OF NEW OR EXISTING WHEELCHAIR RAMP.
 - ALL CONDUITS AND CABLES SHALL BE LABELED AS SPECIFIED IN THE CONTRACT SPECIFICATIONS.
 - ALL CONDUITS SHALL BE SEALED AS SPECIFIED IN THE CONTRACT SPECIFICATIONS.
 - ALL PULL BOXES THAT ARE BEING INSTALLED FOR THE UTA SHALL READ "UTA ELECTRICAL", "UTA TELEPHONE", "UTA COMMUNICATION", OR ANY OTHER APPROPRIATE LABEL THAT IS APPROVED BY THE UTA ENGINEER.
 - PULL BOXES THAT ARE BEING INSTALLED FOR AN AUTHORITY OTHER THAN UTA, SHALL MEET THE REQUIREMENTS OF THAT AUTHORITY.
 - EXTENSIONS MAY BE USED PER MANUFACTURER'S GUIDELINES.
 - KNOCK-OUT AREA AROUND CONDUIT SHALL BE GROUTED WITH NON-SHRINK GROUT PER CONTRACT SPECIFICATIONS.
 - CONDUITS SHALL SLOPE DOWN TOWARDS THE PULL BOX SO AS TO ALLOW THE CONDUITS TO DRAIN INTO THE PULL BOX.
 - PULL BOXES SHALL BE VEHICULAR TRAFFIC RATED BASED ON ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES".
 - WHERE CONDUITS ARE TO REMAIN EMPTY, CONTRACTOR SHALL MANDREL THE CONDUITS PER NEMA TCS 2-2000 AND INSTALL A PULL STRING IMMEDIATELY FOLLOWING. THE CONTRACTOR SHALL INSTALL AND TIGHTEN DOWN THE PULL BOX COVERS. CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HRS PRIOR TO MANDRELING.
 - INSTALL PERMEABLE MATERIAL UNDER PULL BOXES CONSISTING OF CRUSHED STONE 12" MINIMUM IN DEPTH AND 6" MINIMUM IN WIDTH, FREE FROM ORGANIC MATERIAL, CLAY BALLS, OR OTHER DELETERIOUS MATERIAL.
 - CONTRACTOR MAY USE A TRAFFIC RATED PULL BOX IN LIEU OF CAST-IN-PLACE CONCRETE.

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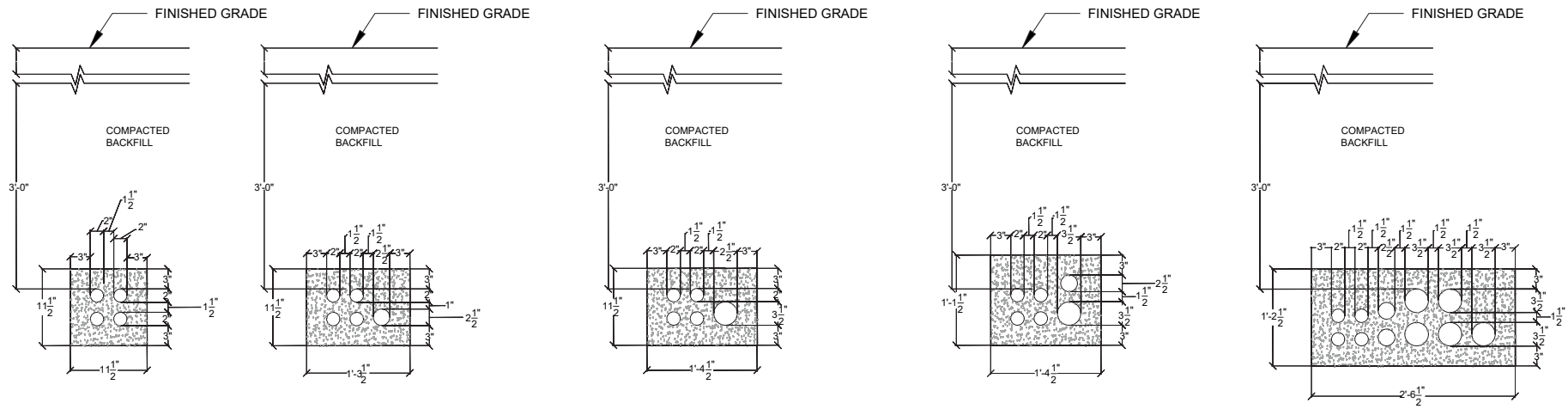


Designed By: A.JAIN
Drawn By: A.JAIN
Checked By: D.DUZAN
Approved By: Y.LIU

S-LINE EXTENSION PROJECT	
SYSTEMWIDE ELECTRICAL PULLBOXES DETAILS AND SCHEDULE	

State: AS SHOWN
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UTA Contract No.: 24-03849
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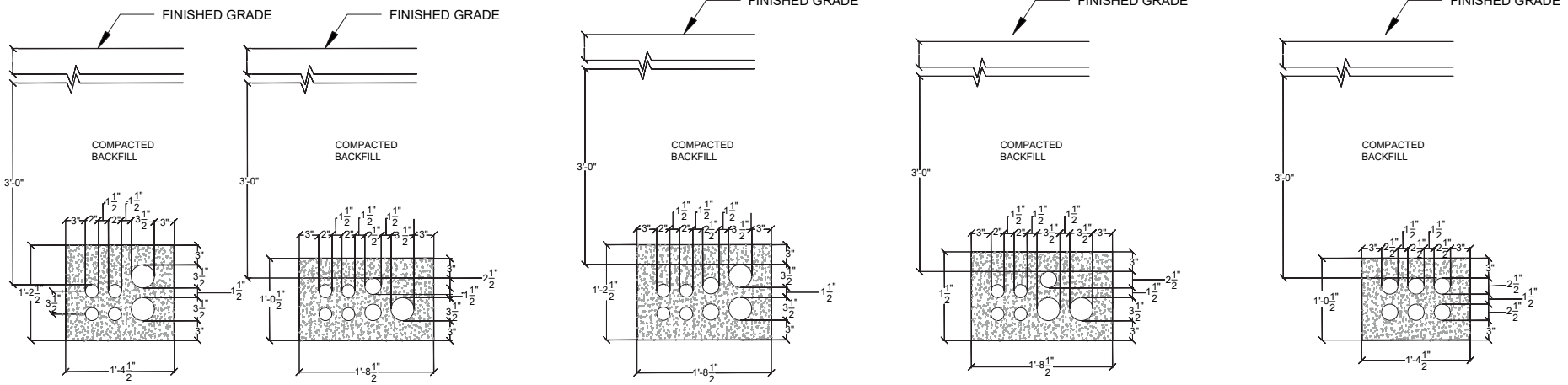
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4-1 1/2" CONDUITS
1-2" CONDUIT

4-1 1/2" CONDUITS
1-3" CONDUIT

4-1 1/2" CONDUITS
1-2" CONDUIT
1-3" CONDUIT

4-1 1/2" CONDUITS
2-2" CONDUIT
5-3" CONDUIT



4-1 1/2" CONDUITS
2-3" CONDUIT

4-1 1/2" CONDUITS
2-2" CONDUIT
1-3" CONDUIT

4-1 1/2" CONDUITS
2-2" CONDUIT
2-3" CONDUIT

4-1 1/2" CONDUITS
1-2" CONDUIT
2-3" CONDUIT

6-2" CONDUITS

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Designed By A.JAIN
Drawn By A.JAIN
Checked By D.DUZZAN
Approved By Y.LIU

S-LINE EXTENSION PROJECT

SYSTEMWIDE ELECTRICAL
RACEWAY SECTIONS
SHEET-1

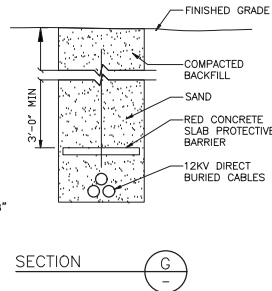
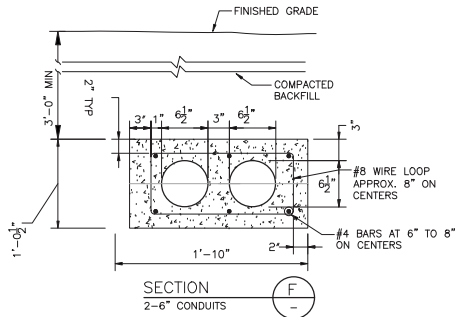
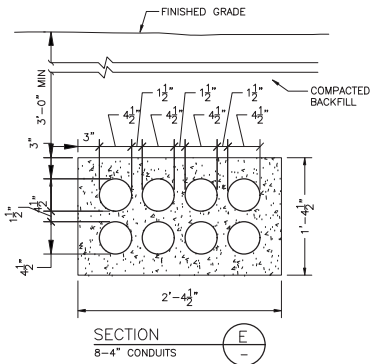
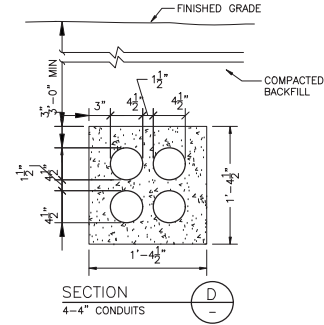
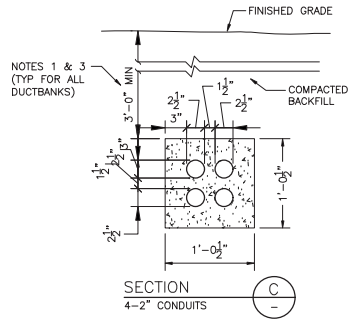
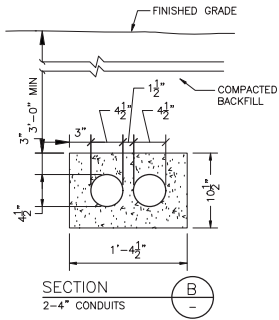
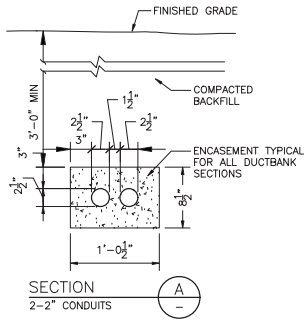
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Submit Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y4217
Sheet No.

Submitted By: _____

Approved By: _____

NOTES:

- WHERE CROSSING UNDER TRACK, TOP OF DUCT BANKS SHALL BE 4'-6" MIN BELOW TOP OF PAVED TRACK UNLESS OTHERWISE INDICATED.
- TRANSITION FROM PULL BOX ENTRANCE TO NORMAL DEPTH AS SHOWN ON DUCT BANK SECTIONS SHALL BE MADE WITH LONG CONDUIT SWEEPS.
- MINIMUM DIMENSIONS DO NOT APPLY AT CROSSINGS UNDER UTILITY PIPES.



NOTES 1 & 3
(TYP FOR ALL
DUCTBANKS)

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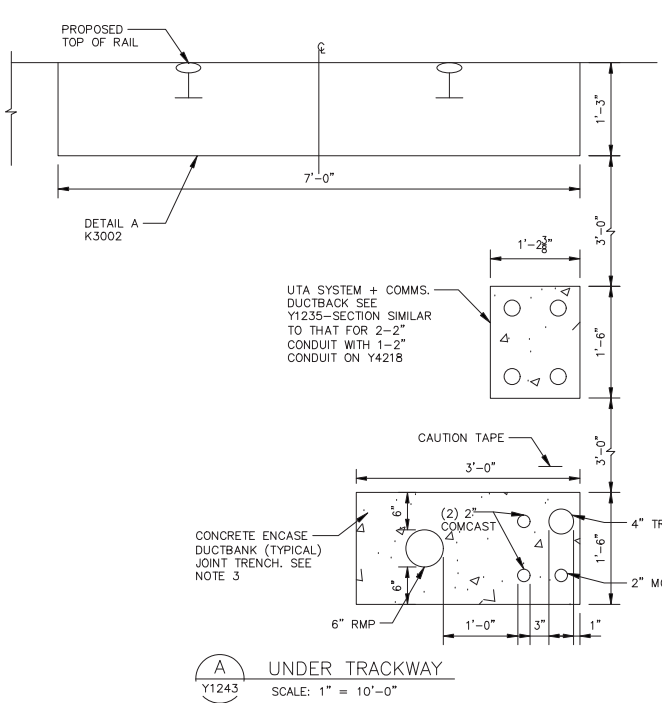
Designed By	A.JAIN
Drawn By	A.JAIN
Checked By	D.Duzan
Approved By	Y.LU

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
TRACTION POWER SYSTEM
RACEWAY SECTIONS

State	AS NOTED
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Submital Date	01-16-26
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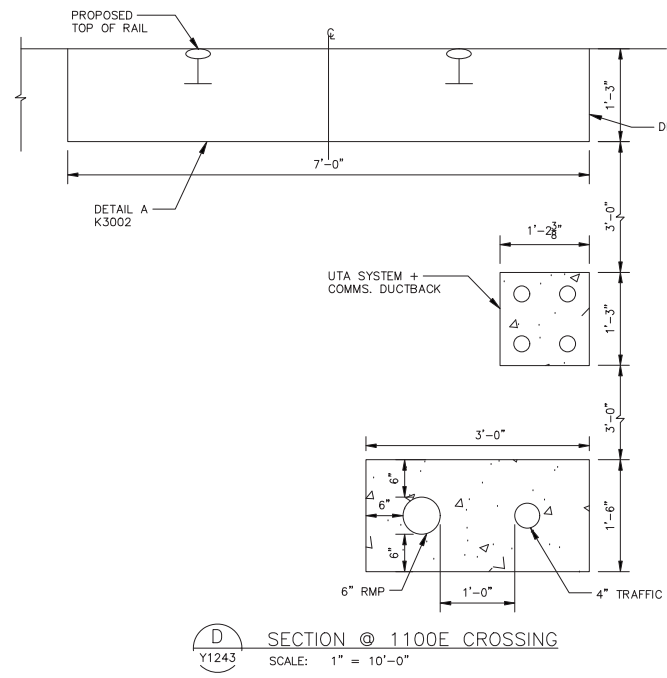
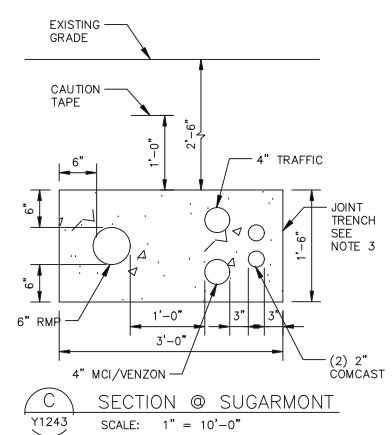
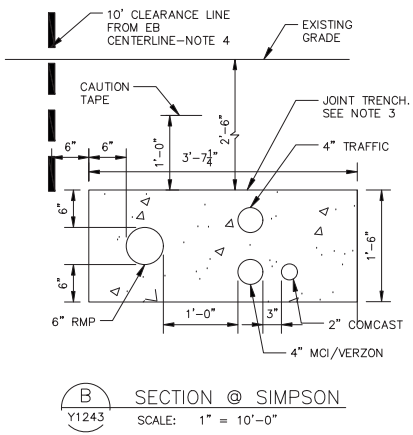
Submitted By: _____ Approved By: _____

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UTA SYSTEM + COMMS. DUCTBACK SEE Y1235-SECTION SIMILAR TO THAT FOR 2-2" CONDUIT WITH 1-2" CONDUIT ON Y4218

CONCRETE ENCASE DUCTBANK (TYPICAL) JOINT TRENCH. SEE NOTE 3



- GENERAL NOTES:**
1. ALL UNDERGROUND CONDUITS SHALL BE PVC SCHEDULE 40 OR EQUIVALENT.
 2. REFER TO SHEET Y1241 FOR SITE PLAN.
 3. JOINT TRENCH PER RMP UNDERGROUND CONDUIT SYSTEMS FOR PRIMARY AND SECONDARY CONDUCTORS (REV 11), SEPT. 2021, SECTION 2.3
 4. LOCATE JOINT TRENCH 10.5 LF FROM EB CENTERLINE
 5. JOINT TRENCH CONCRETE TO BE DYED RED. SEE SPECIFICATIONS FOR DETAILS.

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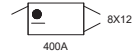


Designed By D. TREADWELL
Drawn By X. LIU
Checked By Y. LIU
Approved By Y. LIU

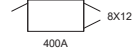
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Drawing No. Y1243	Sheet No.

Submitted By: _____ Approved By: _____

SIGNALS SYMBOLS



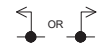
8x12 SIGNAL HOUSE, 400 AMP SERVICE WITH LCP-OBSERVER ORIENTATION



8x12 SIGNAL HOUSE, 400 AMP SERVICE WITHOUT LCP



AUDIO FREQUENCY TRACK CIRCUIT RECEIVER



AUDIO FREQUENCY TRACK CIRCUIT TRANSMITTER



BUMPING POST

2C#6

CABLE CONDUCTOR QUANTITY AND SIZE



COUPLER CASE MOUNTED TO I-BEAM OCS POLE



DUAL CONTROL POWER SWITCH MACHINE



IN TRACK/EMBEDDED DUAL CONTROL POWER SWITCH MACHINE



EMBEDDED POWER SWITCH MACHINE



IMPEDANCE BOND



WHEEL SENSOR FOR AXLE COUNTING SYSTEM



INSULATED JOINT - TRACK CIRCUIT EACH SIDE



INSULATED JOINT - TRACK CIRCUIT TO RIGHT



INSULATED JOINT - TRACK CIRCUIT TO LEFT



LRT BAR SIGNALS ON MAST



LRT BAR SIGNALS MOUNTED SIDE-BY-SIDE ON MAST



PEDESTRIAN CROSSING BLANK-OUT SIGN WITH BELL



PLATFORM PRIORITY SELECTOR



POWER SWITCH NORMALLY ALIGNED FOR STRAIGHT ROUTE



ROUTE SELECTOR



STREETCAR DETECTOR LOOP



TRACK CONNECTION



TRAFFIC SIGNAL CONTROLLER

NOTE:
SOME SYMBOLS/LINES MAY BE SHOWN ENLARGED FOR CLARITY.

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Designed By:	J. MITCHELL
Drawn By:	J. MITCHELL
Checked By:	C. ORTEGA
Approved By:	D. NGUYEN

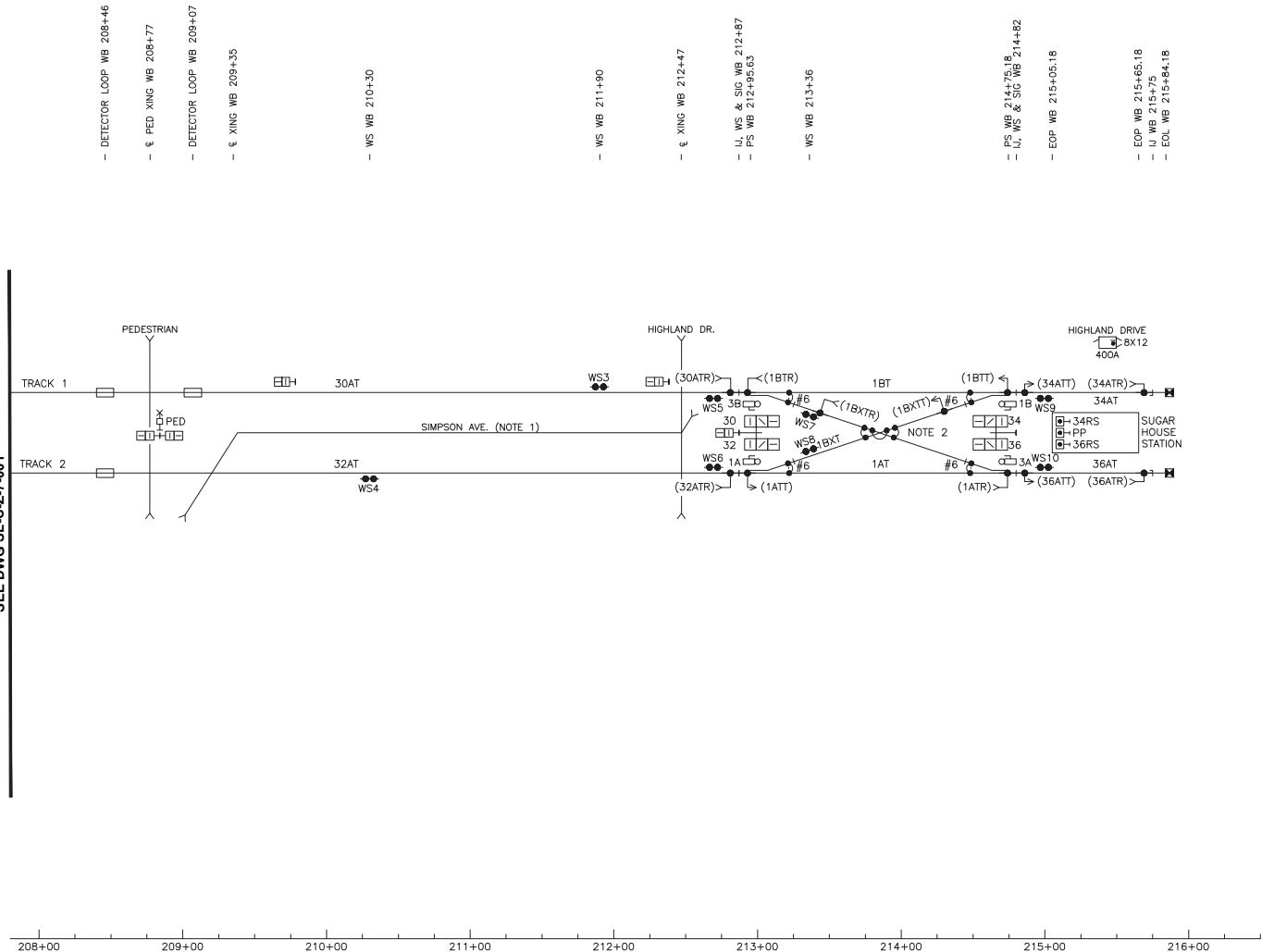
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GENERAL
SIGNALS SYMBOLS

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UTA Contract No.:	24-03849
Drawing No.:	Z0001
Sheet No.:	

Submitted By: _____ Approved By: _____

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SEE DWG SL-C-Z-7-001



- NOTE:
- BEGIN SHARED RIGHT OF WAY WITH STREET TRAFFIC ON SIMPSON AVE ENDING ON THE EAST SIDE OF THE HIGHLAND AVE INTERSECTION.
 - INSULATED JOINTS FOR 1BXT OMITTED FOR CLARITY.

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Designed By:	C. ORTEGA
Drawn By:	C. ORTEGA
Checked By:	J. MITCHELL
Approved By:	D. NGUYEN

S-LINE EXTENSION PROJECT

**SIGNALS SYSTEM
OVERALL SCHEMATIC**

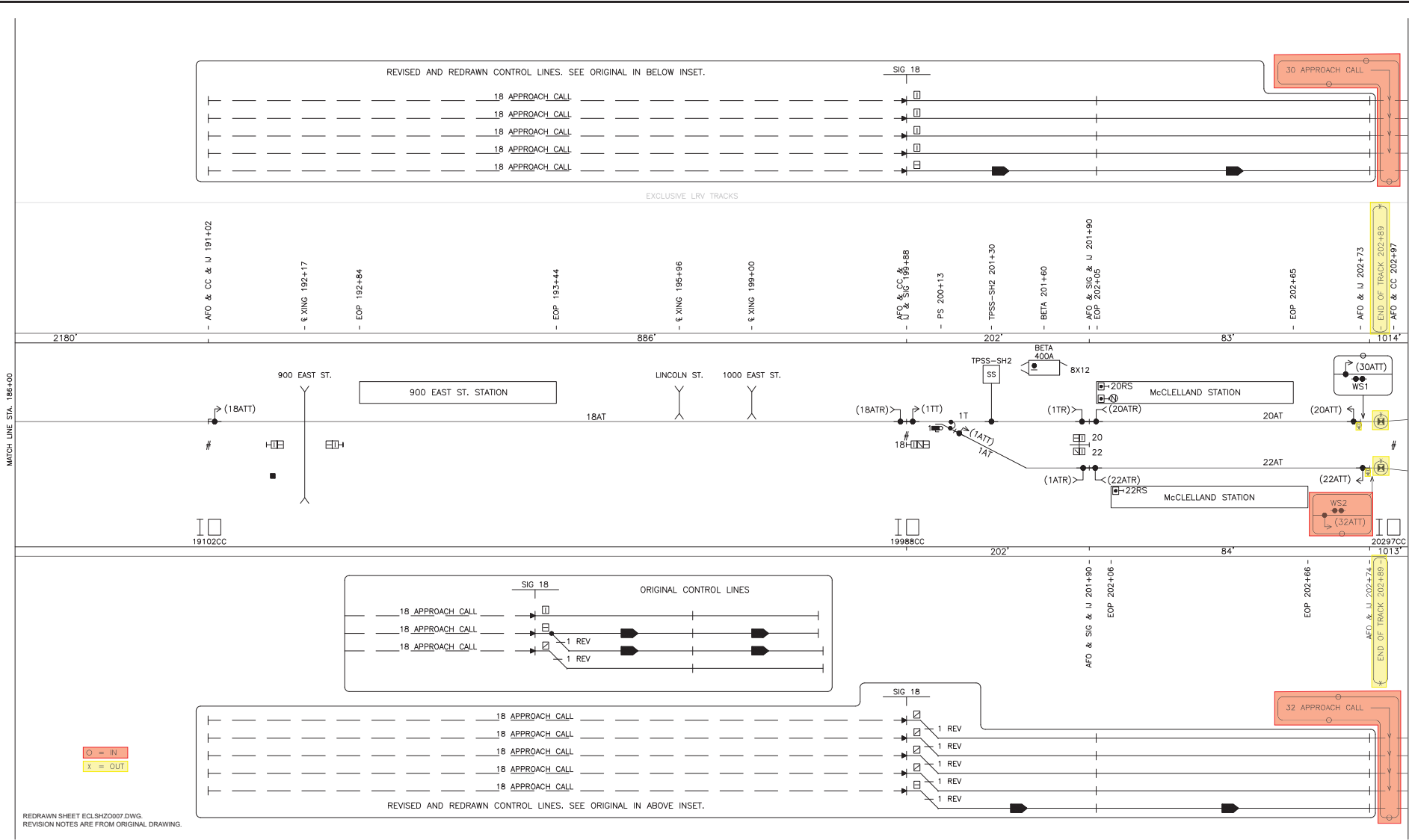
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Drawing No.:	Z7002
Sheet No.:	

Submitted By: _____

Approved By: _____

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REDRAWN SHEET ECLSHZ0007.DWG.
 REVISION NOTES ARE FROM ORIGINAL DRAWING.

11/15/2018		
10/12/12	REVISED PER UTA CHECK COMMENTS	
08/17/12	PHASE 1 SUBMITTAL	
REV	DATE	Description



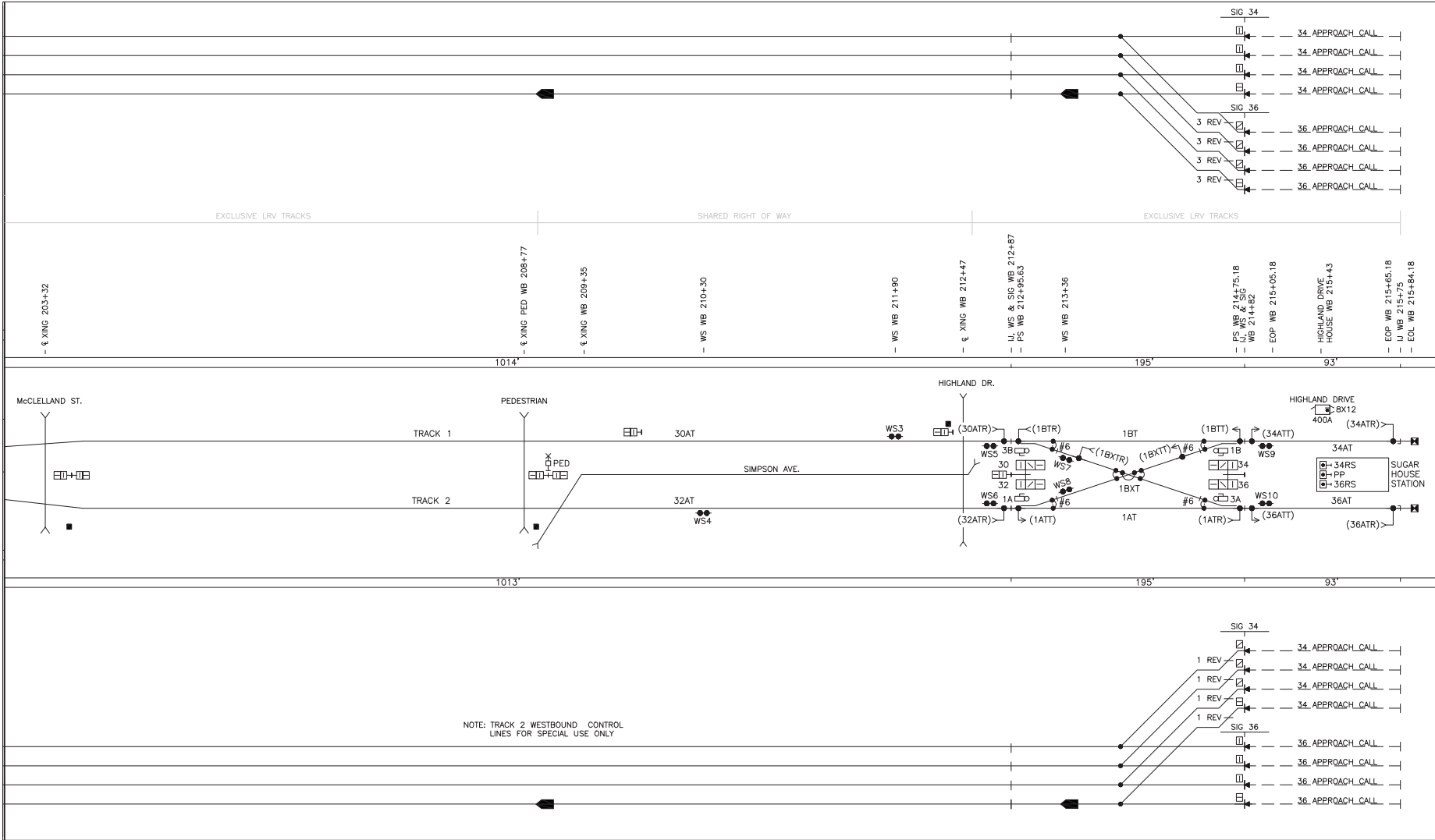
Designed By:	J. MITCHELL
Drawn By:	J. MITCHELL
Checked By:	C. ORTEGA
Approved By:	D. NGUYEN

S-LINE EXTENSION PROJECT

EASTBOUND CONTROL LINE PLAN
 STA. 186+00 TO STA. 203+00
 205+00

State:	NTS
CADD Filename:	SL-C-2-7-003.dwg
Submital Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Z7003
Sheet No.:	

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NOTE: TRACK 2 WESTBOUND CONTROL LINES FOR SPECIAL USE ONLY

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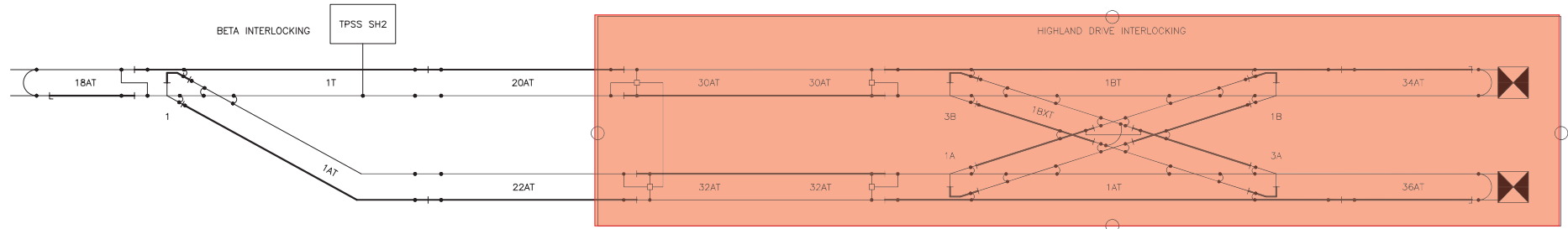


Designed By: J. MITCHELL
 Drawn By: J. MITCHELL
 Checked By: C. ORTEGA
 Approved By: D. NGUYEN

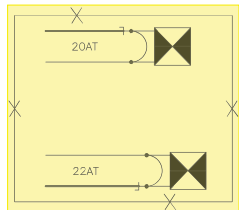
S-LINE EXTENSION PROJECT
WESTBOUND CONTROL LINE PLAN
 STA. 203+00 TO STA. 215+85

State	NTS
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Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Z7006
Sheet No.	

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- NOTES:
- O = IN
 - X = OUT
 - = SIGNAL RAIL
 - = NEGATIVE RAIL



RETAIN EXISTING INSULATED JOINTS.

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Designed By: C. ORTEGA
Drawn By: C. ORTEGA
Checked By: J. MITCHELL
Approved By: D. NGUYEN

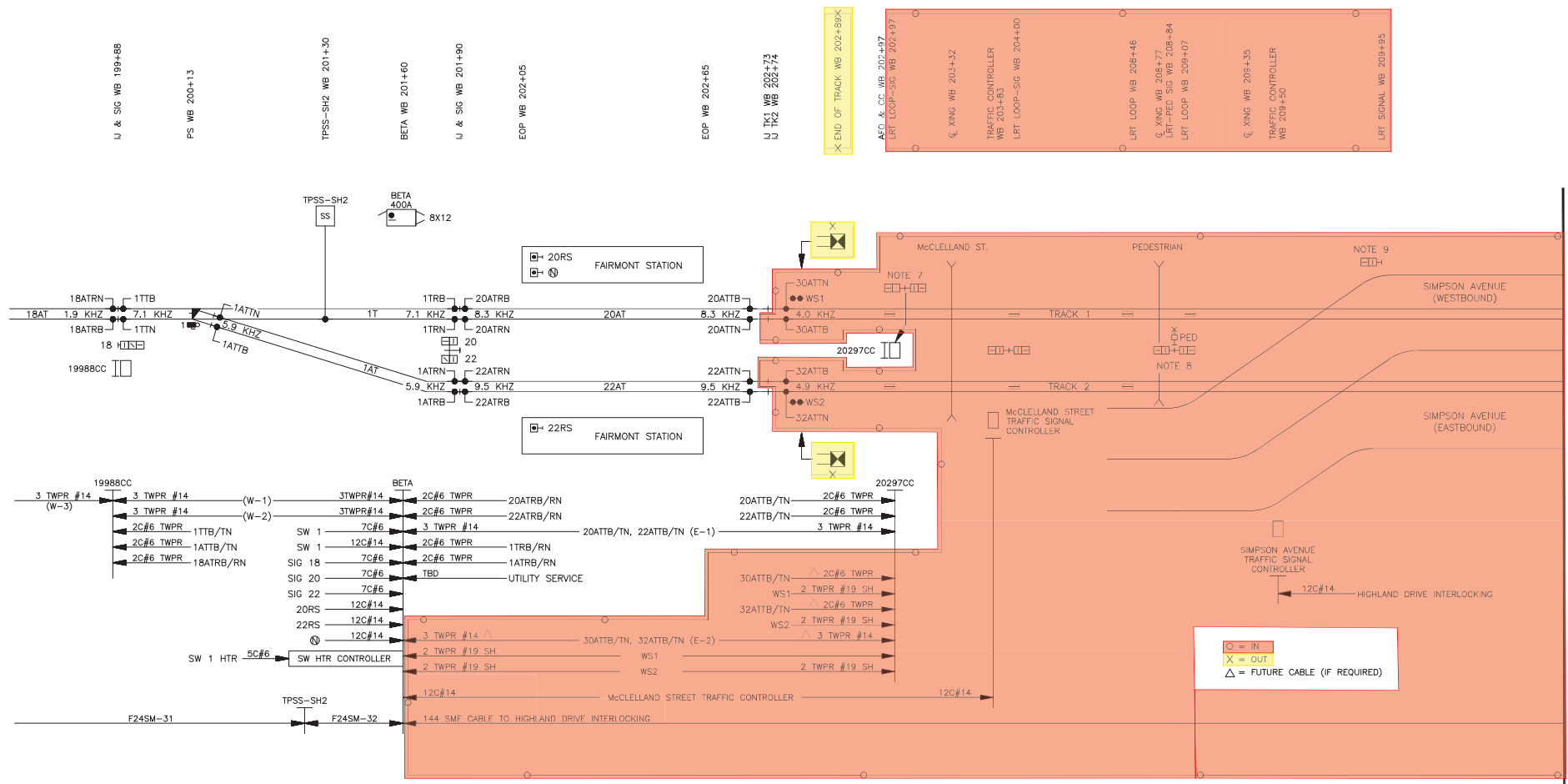
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SIGNALS
TRACK CIRCUIT ARRANGEMENT

Scale: NTS
CADD Filename: SL-C-27-007.dwg
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Drawing No.: Z7007
Sheet No.:

Submitted By: _____ Approved By: _____

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NOTES:

- REUSE EXISTING BETA SIGNAL HOUSE, SWITCH MACHINES, SIGNALS, INSULATED JOINTS AND COUPLER CASES.
- NEW CABLE FROM BETA INTERLOCKING HOUSE TO COUPLER CASE 20297CC FOR NEW AUDIO FREQUENCY TRACK CIRCUITS AND WHEEL SENSORS.
- NEW CONDUIT AND CABLE FROM 20297CC TO TRACK FOR NEW TRACK CONNECTION BOXES.
- PREPARE FOR FUTURE IMPEDANCE BONDS AT 202+73, BUT DO NOT INSTALL IMPEDANCE BONDS ON THIS PROJECT.
- RETIRE BUMPING POSTS AT CURRENT END OF LINE.
- NEW WORK AT BETA INTERLOCKING HOUSE INCLUDES NEW CUSTOM LOCAL CONTROL PANEL, FRAUSCHER AXLE COUNTING SYSTEM AND FIBER OPTIC CONNECTION TO HIGHLAND DRIVE INTERLOCKING.
- MOUNT NEW LRT SIGNALS ON MAST FOR 20297CC.
- PEDESTRIAN BLANK-OUT SIGN (MUTCD W10-7) AND BELL. MOUNT ON SIGNAL POLE P16 AND ALIGN LRT SIGNALS FOR STREETCAR MOVEMENTS. WHEEL SENSOR WS4 IS CHECK-OUT FOR EASTBOUND STREETCAR MOVEMENTS ON TRACK 2. NO CHECK-OUT FOR EASTBOUND STREETCAR MOVEMENTS ON TRACK 1.
- MOUNT ON TRAFFIC SIGNAL POLE P13 AND ALIGN SIGNAL FOR STREETCAR MOVEMENTS.

REV	DATE	Description



Designed By:	J. MITCHELL
Drawn By:	J. MITCHELL
Checked By:	C. ORTEGA
Approved By:	D. NGUYEN

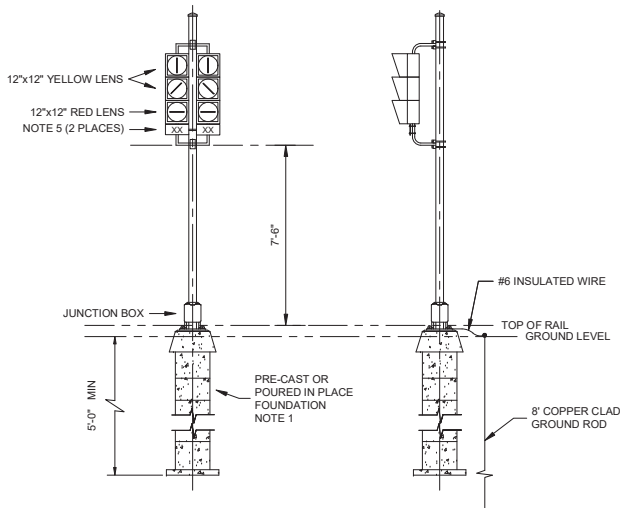
S-LINE EXTENSION PROJECT

SIGNALS TRACK AND CABLE PLAN
1 OF 2

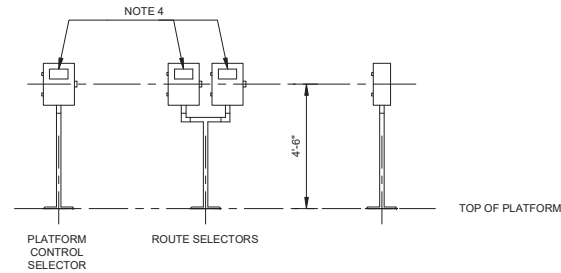
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SEE DWG SL-C-Z-8-002

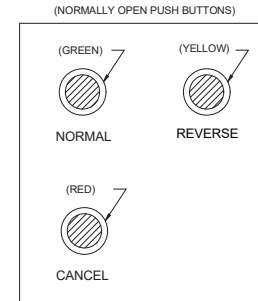
- NOTES:
1. CONTRACTOR TO SUBMIT FOUNDATION DESIGN FOR ENGINEER'S APPROVAL.
 2. 6'-6" MINIMUM CLEARANCE BETWEEN CENTERLINE OF TRACK AND SIGNAL EQUIPMENT ENCLOSURES, SELECTORS OR SIGNALS. UNDER NO CIRCUMSTANCE SHALL SIGNALING DEVICES INTERFERE WITH VEHICULAR TRAFFIC.
 3. PLATFORM CONTROL SELECTOR AND ROUTE SELECTORS SHALL BE ENCLOSED WITHIN A WEATHER-TIGHT ENCLOSURE WITH A HINGED AND LOCKING COVER.
 4. SELECTOR NAME PLATES SHALL HAVE 2.5" TALL CHARACTERS.
 5. SIGNAL NAME PLATES SHALL MATCH SIZE DESCRIBED IN DRAWING Z3002 NOTE 6.



LRV SIGNAL ON STANDARD SIGNAL POLE



PLATFORM CONTROL SELECTOR AND ROUTE SELECTOR DETAIL



ROUTE SELECTOR PUSH BUTTON FACEPLACE

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REV	DATE	Description	



Designed By:
J. MITCHELL

Drawn By:
J. HOWARD

Checked By:
C. ORTEGA

Approved By:
D. NGUYEN

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS

SIGNALS WAYSIDE

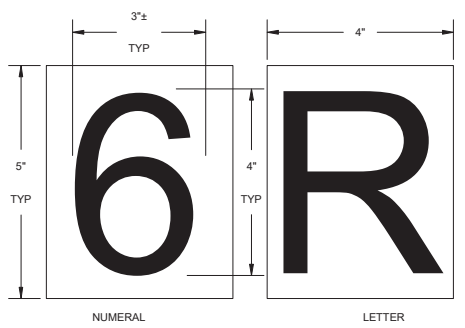
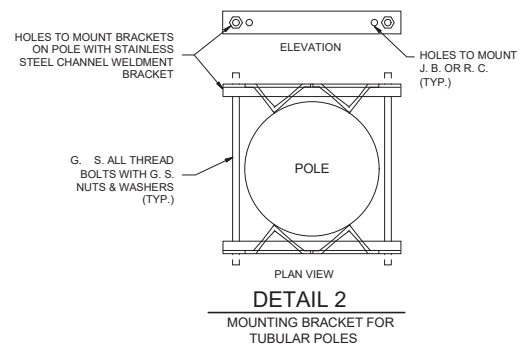
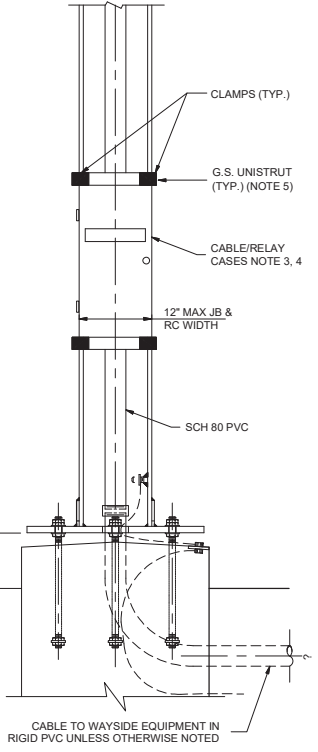
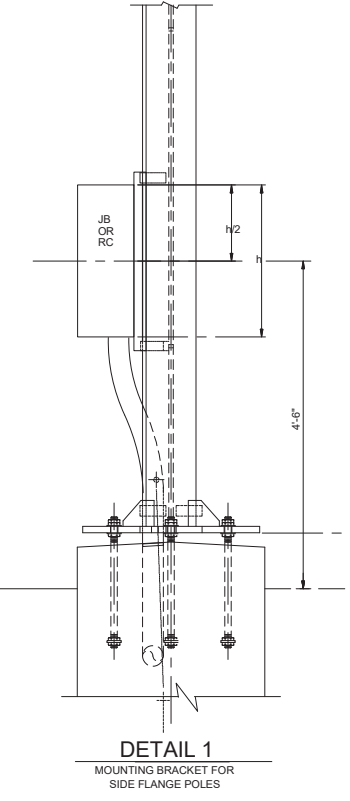
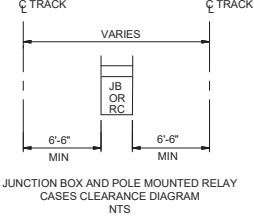
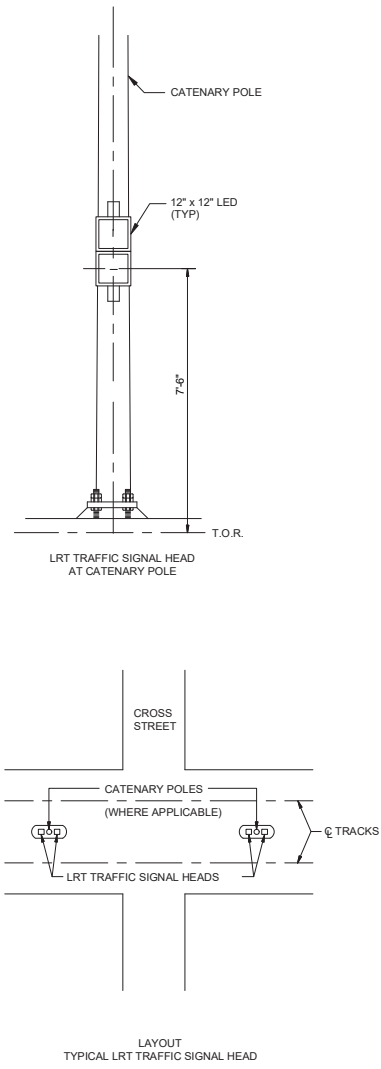
SIGNALING DETAILS 1 OF 2

State	NTS
CADD Filename	SL-C-2-3-001.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Z3001
Sheet No.	

1/16/2026

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- NOTES:**
1. CONTRACTOR SHALL EXTEND COILED CABLE FROM PULLBOXES ADJACENT TO CATENARY POLES TO THE LRT TRAFFIC SIGNAL HEAD. CONTRACTOR SHALL TERMINATE WIRES AT THE DEVICES. NOTIFY CITY TRAFFIC DEPARTMENT PRIOR TO TERMINATION.
 2. BRACKET DETAIL SHALL BE PAINTED THE SAME COLOR AS THE POLE.
 3. LABEL SHALL HAVE 2.5" TALL LETTER AND NUMBERS.
 4. RELAY CASE EQUIPMENT AND JUNCTION BOX TERMINALS SHALL BE ENCLOSED WITHIN A WEATHER TIGHT ENCLOSURE WITH HINGED AND LOCKING COVERS.
 5. FOR JUNCTION BOXES AND RELAY CASES ON TUBULAR TAPERED POLES SEE MOUNTING BRACKET DETAIL 2.
 6. NUMBER PLATES AND LABELING SHALL HAVE NUMBERS AND LETTERS THAT ARE 3/4" AS SHOWN BELOW. NUMBER FRAME SHALL ALLOW NUMBERS TO BE INSERTED FROM THE SIDES. LETTERING SHALL BE BLACK ON A WHITE BACKGROUND.

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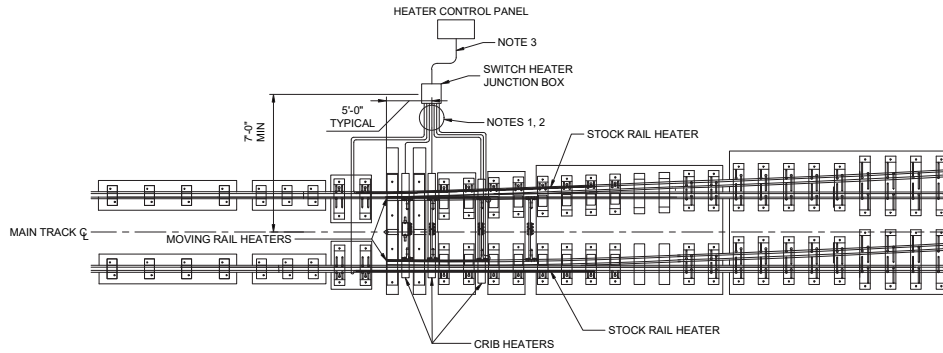


Designed By: J. MITCHELL
 Drawn By: J. HOWARD
 Checked By: C. ORTEGA
 Approved By: D. NGUYEN

S-LINE EXTENSION PROJECT
 STANDARD DRAWINGS
 SIGNALS WAYSIDE
 SIGNALING DETAILS 2 OF 2

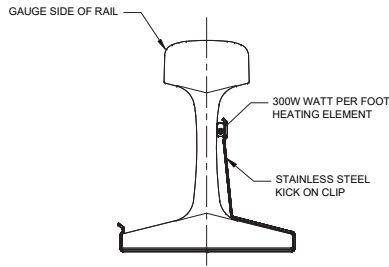
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CADD Filename	SL-C-2-3-002.dwg
Submit Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Z3002
Sheet No.	

Submitted By: _____ Approved By: _____

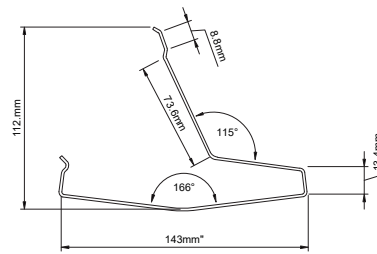


SWITCH POINT HEATING LOCATIONS A
NOT TO SCALE

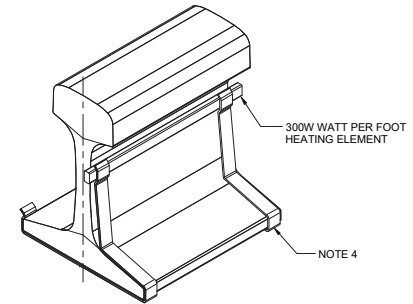
1. EACH HEATING ELEMENT TYPICALLY FURNISHED WITH 15 FOOT LONG LEADS. 2C#8, EXANE INSULATION. VERIFY LEAD CABLE CONSTRUCTION AND LENGTH WITH MANUFACTURER.
2. PROTECT HEATING ELEMENT LEADS WITH FLEXIBLE CONDUIT BETWEEN THE JUNCTION BOX AND HEATING ELEMENT TO PREVENT ABRASION OF LEAD INSULATION.
3. CABLE SIZE AND LENGTH BETWEEN JUNCTION BOX AND HEATER CONTROL PANEL TO BE SIZED FOR 3% MAXIMUM VOLTAGE DROP AT 125% NOMINAL POWER RATING OF ALL HEATING ELEMENTS CONNECTED TO THE CABLE. RAIL HEATERS AND CRIB HEATERS ARE TYPICALLY POWERED THROUGH SEPARATE CABLES.
4. INSTALL ONE KICK ON CLIP BETWEEN EACH TIE OR RAIL FASTENER.



KICK ON CLIP & RAIL SECTION 1
NOT TO SCALE



STAINLESS STEEL KICK ON CLIP 2
NOT TO SCALE



ISOMETRIC VIEW 3
NOT TO SCALE

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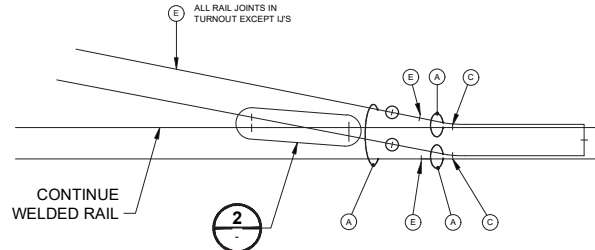
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REV	DATE	Description	



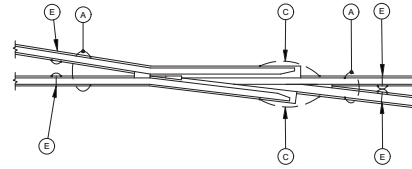
Submitted By: _____ Approved By: _____

Designed By: J. MITCHELL
Drawn By: J. HOWARD
Checked By: C. ORTEGA
Approved By: D. NGUYEN

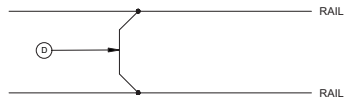
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	Submit Date: 01-16-26
	UTA Contract No.: 24-03849
Drawing No.: Z3003	Sheet No.:



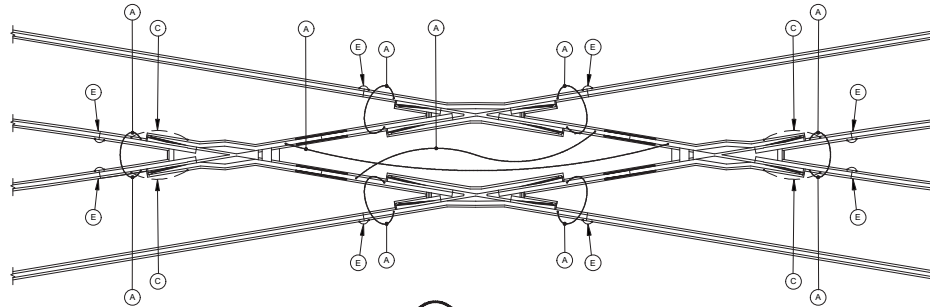
DETAIL 1
TYPICAL POWER BONDING - TURNOUT
MAIN TRACK TO MAIN TRACK



DETAIL 2
FROG BONDING



DETAIL 3
CROSS BONDING FOR
NON-SIGNALLED RAIL



DETAIL 4
DIAMOND BONDING

NOTES:

1. CABLES SHALL BE CONNECTED TO THE RAIL THROUGH BOLT STYLE CONNECTIONS UNLESS OTHERWISE NOTED.
 2. USE CAD WELD CONNECTIONS ON FROG.
- (A) 2-500 MCM
 - (B) 4-500 MCM
 - (C) 1-500 MCM
 - (D) 2-500 MCM
 - (E) 2-250 MCM - RAIL HEAD WELD

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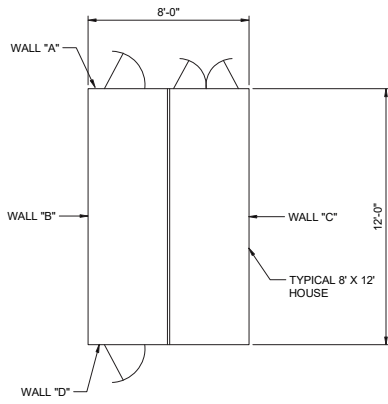


Designed By: J. MITCHELL
Drawn By: J. HOWARD
Checked By: C. ORTEGA
Approved By: D. NGUYEN

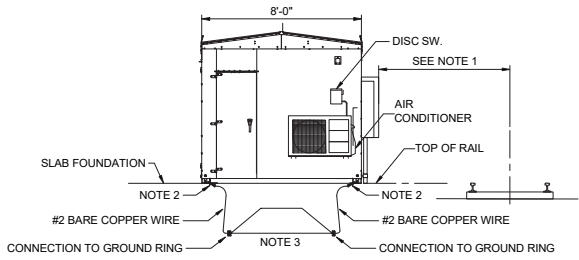
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STANDARD DRAWINGS
SIGNAL TYPICAL BONDING DETAILS

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Submit Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Z3004
Sheet No.:

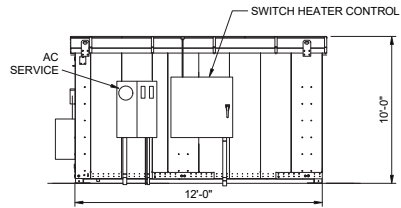
Submitted By: _____ Approved By: _____



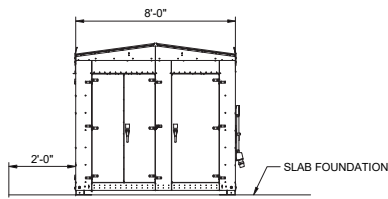
SIGNAL HOUSE TOP VIEW
SCALE:NTS



WALL ELEVATION "D"
SCALE:NTS



WALL ELEVATION "C"
SCALE:NTS



WALL ELEVATION "A"
SCALE:NTS

- NOTE:**
- PREFERRED DISTANCE FOR WAYSIDE SIGNAL HOUSE IS 25'-0" FROM CENTER LINE OF NEAREST TRACK.
 - HOUSE GROUND CONNECTION TO GROUNDING PLATE AT EACH CORNER OF HOUSE. GROUNDING PLATE TO BE BURNDY YGF292N OR EQUIVALENT.
 - #4 AWG (MINIMUM) BARE COPPER GROUND RING THAT CREATES A CONCRETE-ENCASED GROUNDING ELECTRODE PER NATIONAL ELECTRICAL CODE (NEC).

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REV	DATE	Description	



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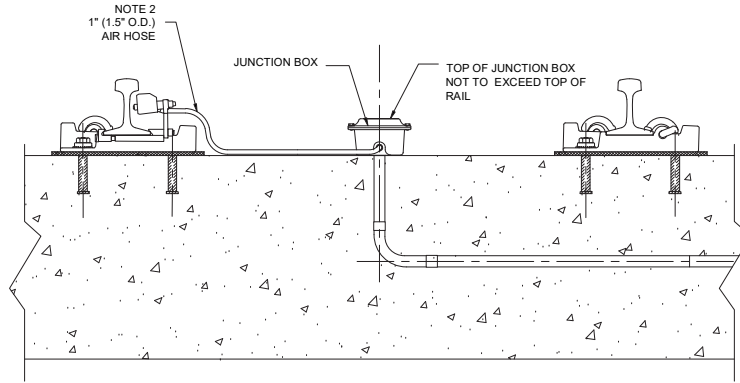
Approved By: _____

Designed By: J. MITCHELL
Drawn By: J. HOWARD
Checked By: C. ORTEGA
Approved By: D. NGUYEN

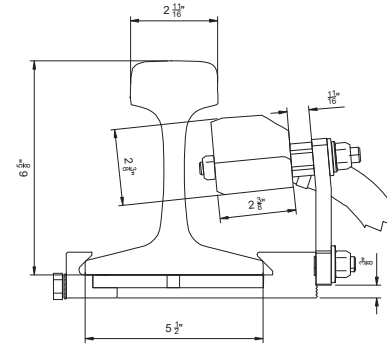
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	State NTS
	CADD Filename: SL-C-2-3-005.dwg
	Submital Date: 01-16-26
	UTA Contract No.: 24-03849

NOTES:

1. NO GROUNDING CONNECTION REQUIRED FOR WHEEL SENSOR INSTALLATION.
2. PROTECTIVE HOSE PER SIGNAL SYSTEM SPECIFICATION.



**DIRECT FIXATION TRACK
WHEEL SENSOR JUNCTION BOX** 1
SCALE: NTS



RAIL CLAW SK-140-016 2
SCALE: NTS

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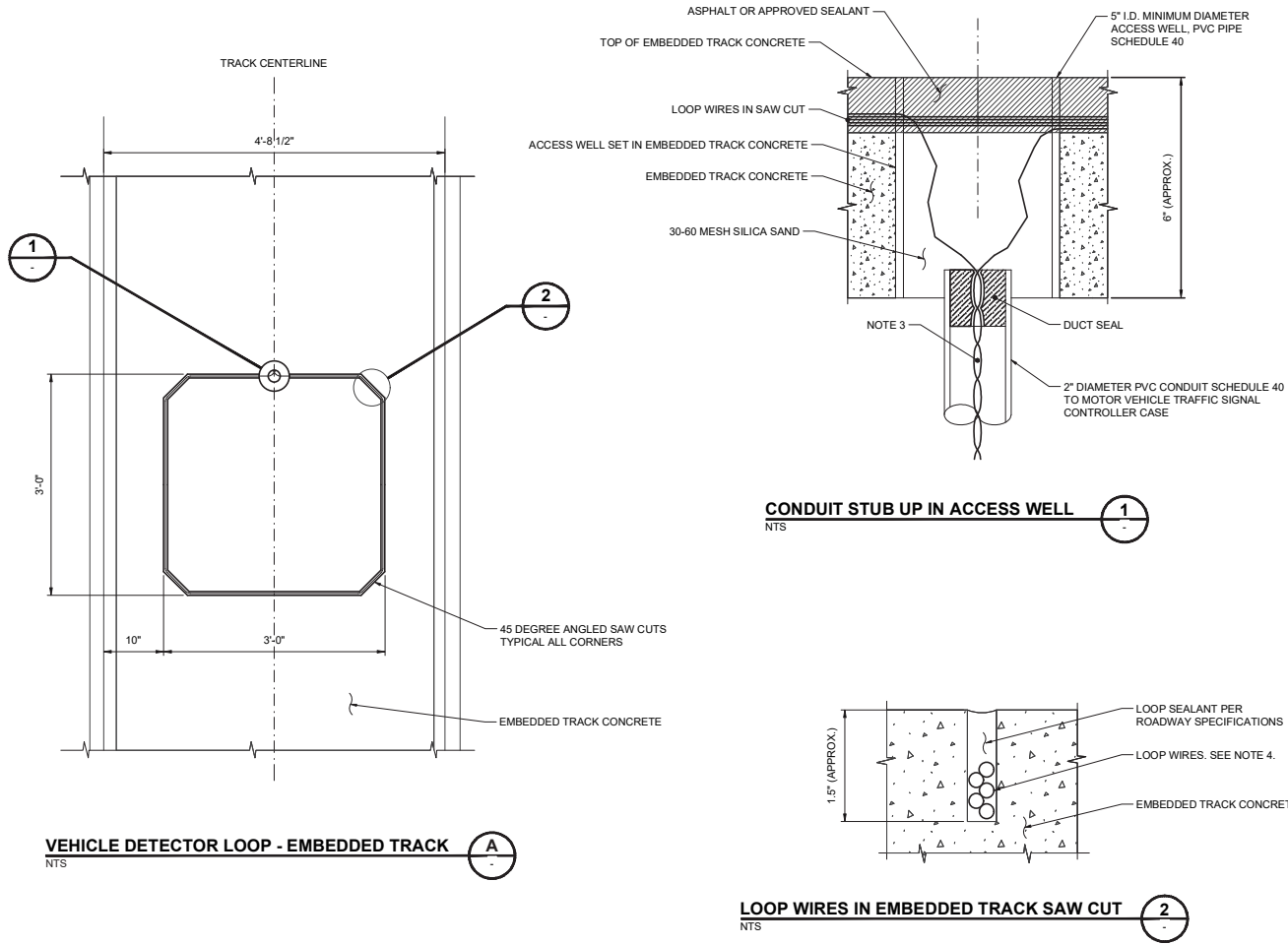
Designed By: J. MITCHELL
Drawn By: J. HOWARD
Checked By: C. ORTEGA
Approved By: D. NGUYEN

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS
SIGNALS
TYPICAL WHEEL
SENSOR INSTALLATION

State:	NTS
CADD Filename:	SL-C-2-3-006.dwg
Submit Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Z3006
Sheet No.:	

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- NOTES:
1. PRIOR TO LOOP INSTALLATION, SUBCONTRACTOR TO COORDINATE WITH ENGINEER FOR EXACT LOCATION OF LIGHT RAIL DETECTOR LOOP PLACEMENT.
 2. SAW CUT GROOVES TO BE FREE OF DEBRIS AND WATER PRIOR TO WIRE INSTALLATION AND SEALING.
 3. LOOP WIRE 1C#14 XHHW OR AS RECOMMENDED PER VEHICLE LOOP DETECTOR MANUFACTURER. TWIST WIRES TOGETHER, SIX TWISTS PER FOOT, BETWEEN CONDUIT STUB-UP AND VEHICLE LOOP DETECTOR.
 4. NUMBER OF LOOP WIRE TURNS IN SAW CUT PER VEHICLE LOOP DETECTOR MANUFACTURER. FIVE LOOPS IS ESTIMATED.
 5. FILL SAW CUT GROOVES WITH APPROVED SEALANT.

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Designed By:	J. MITCHELL
Drawn By:	J. MITCHELL
Checked By:	C. ORTEGA
Approved By:	D. NGUYEN

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
SIGNALS
TYPICAL VEHICLE DETECTOR
LOOP INSTALLATION

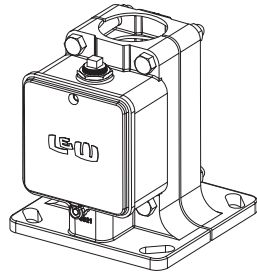
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UTA Contract No.:	24-03849
Drawing No.:	Z3008
Sheet No.:	

Submitted By: _____

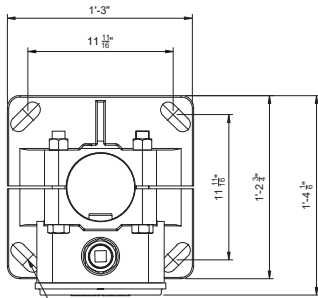
Approved By: _____

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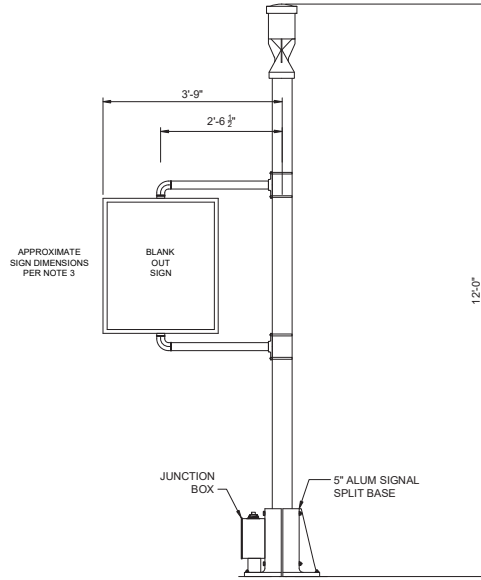
1. TWO-WAY BLANK OUT SIGN TO DISPLAY MUTCD GRAPHIC W10-7.
2. GRAPHIC TO BE FORMED BY INDIVIDUAL LEDS AND EQUIVALENT TO ORANGE TRAFFIC, PART NUMBER LSW10-7F, OR APPROVED EQUAL.
3. 24" X 24" DISPLAY MOUNTED IN 28" X 28" (OUTSIDE DIMENSIONS) FRAME.
4. ATTACHMENT TO MAST IS SHOWN AS 2" NOMINAL PIPE SIZE WITH STAINLESS STEEL BAND MOUNT. MOUNTING SYSTEM WILL VARY PER SIGN MANUFACTURER.



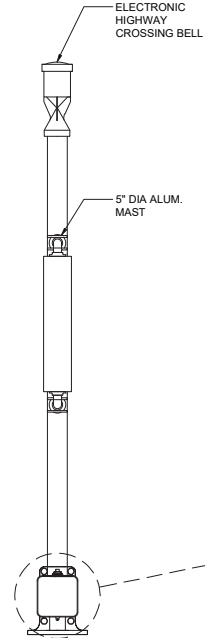
ISOMETRIC VIEW SIGNAL BASE A
SCALE: NTS



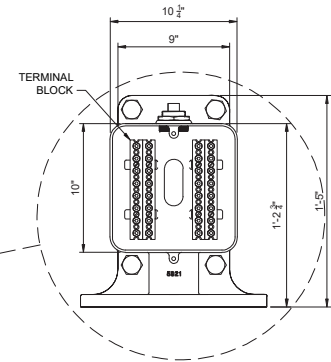
TOP VIEW SIGNAL BASE 1
SCALE: NTS



PEDESTRIAN CROSSING SIGN 2
SCALE: NTS



PEDESTRIAN CROSSING SIGN 3
SCALE: NTS



TERMINAL BLOCK VIEW 4
SCALE: NTS

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Designed By:	J. MITCHELL
Drawn By:	J. HOWARD
Checked By:	C. ORTEGA
Approved By:	D. NGUYEN

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
SIGNALS
PEDESTRIAN CROSSING BLANK OUT SIGN

State:	NTS
CADD Filename:	SL-C-2-3-009.dwg
Submit Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	Z3009
Sheet No.:	

Submitted By: _____ Approved By: _____

EXHIBIT C – EMERGENCY CONTACTS

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Salt Lake City Department of Public Utilities Dispatch
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MAINTENANCE OF FACILITIES

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