

**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:

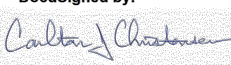
1. That the Board hereby approves the Interlocal Cooperation Agreement with Salt Lake City Corporation and the Salt Lake City Community Reinvestment Agency in substantially the same form as attached as Exhibit A.
2. That the Executive Director is authorized to execute the Interlocal Cooperation Agreement 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.

DocuSigned by:

86E38485ACBE4D0

Carlton Christensen, Chair
Board of Trustees

ATTEST:

DocuSigned by:

8D8A6B67E3AA459

Secretary of the Authority



(Corporate Seal)

Approved as to Form:

Signed by:

EAE6B697AB9B4AA...

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.

4.1.6 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.

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

4.1.8 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.

4.1.9 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

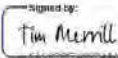
INTERLOCAL PROVISIONS

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**

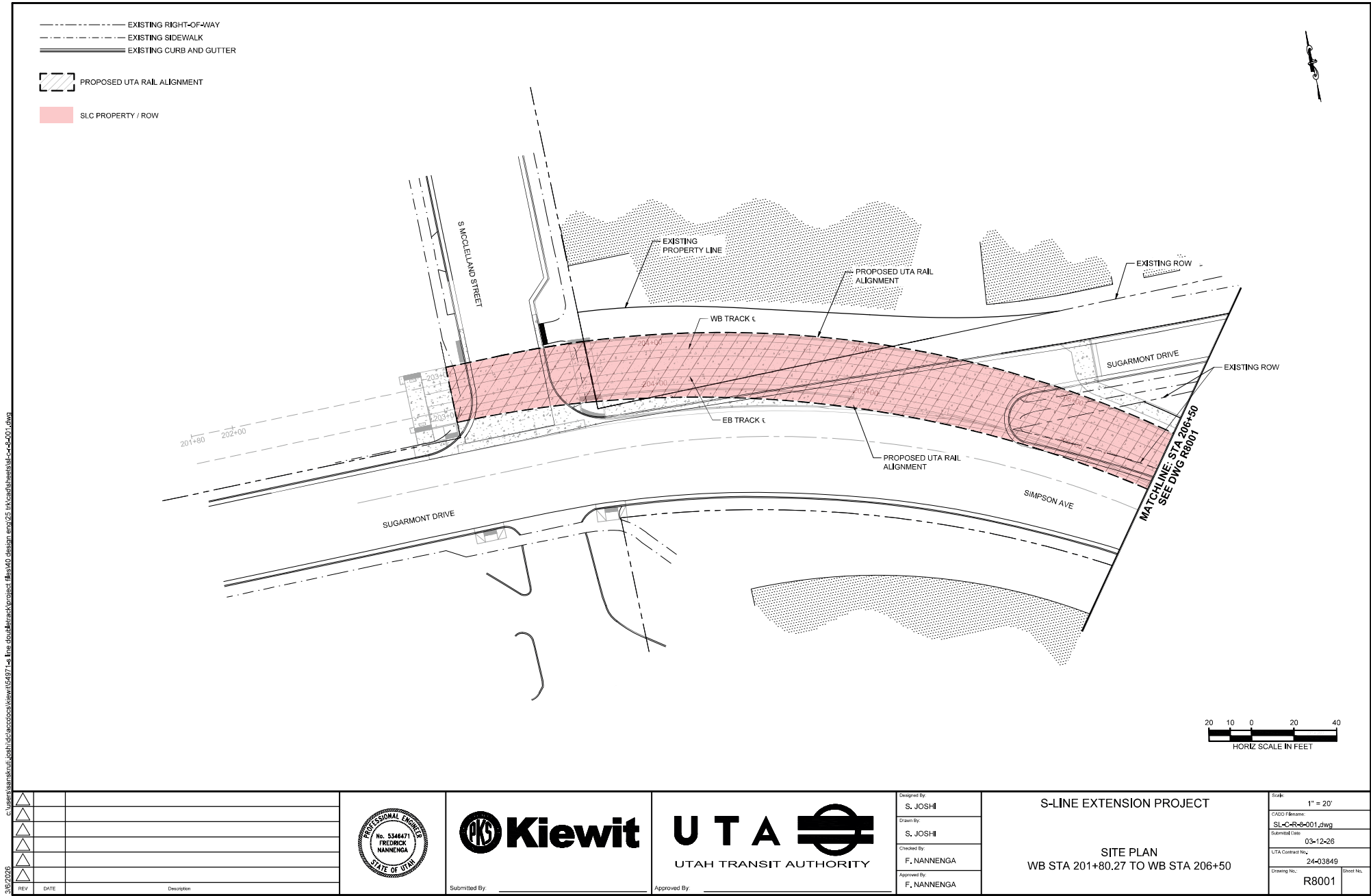
By: _____
City Recorder

By: _____
Erin Mendenhall
Executive Director

APPROVED AS TO FORM

By: _____
Jennifer Huntsman

EXHIBIT A – Licensed Property Map



3/8/2026	REV	DATE	Description
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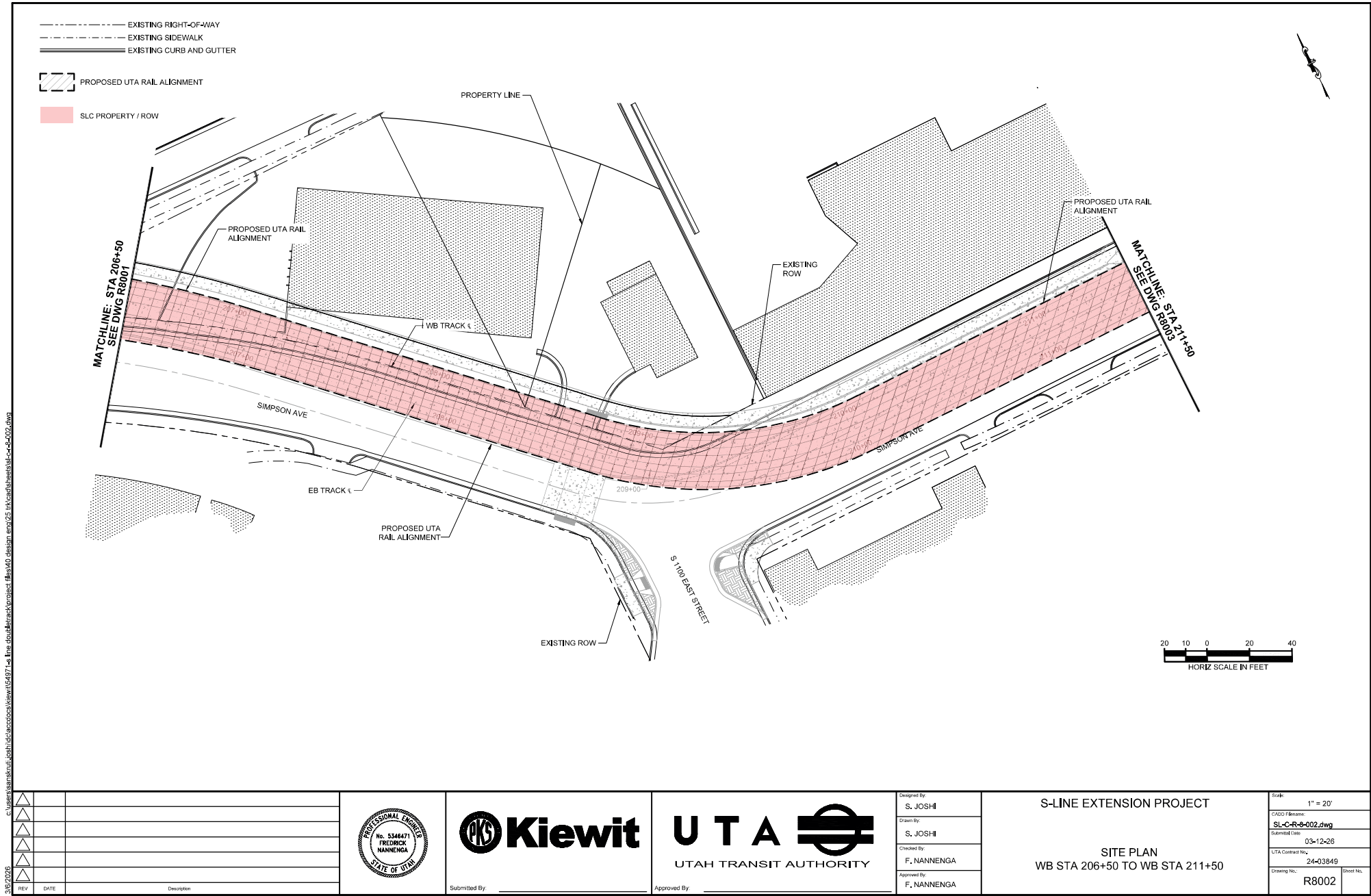


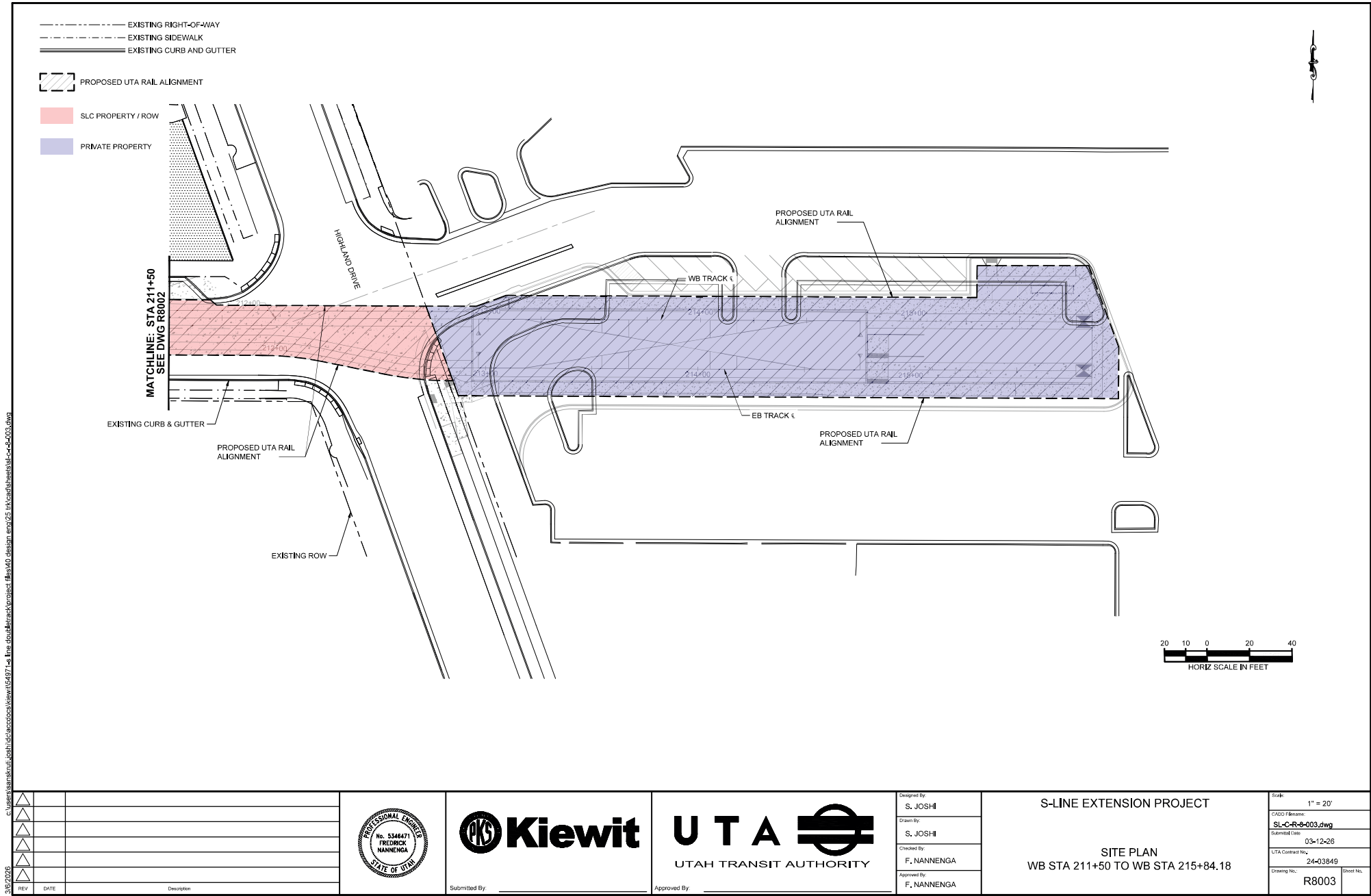
Designed By	S. JOSHI
Drawn By	S. JOSHI
Checked By	F. NANNENGA
Approved By	F. NANNENGA

S-LINE EXTENSION PROJECT

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

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





3/8/2026					
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

1/15/2026

1/15/2026

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TRACK AND ROAD ALIGNMENT			GENERAL ABBREVIATIONS		
HORIZONTAL			A		
CS	POINT OF CHANGE FROM CIRCULAR CURVE TO SPIRAL	AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS	DEB	DETENTION BASIN
D, Dc	DEGREE OF CURVE (CURVATURE BY ARC DEFINITION)	ABC	ABANDONED	DED	DECK DRAIN
A	DELTA or DEFLECTION ANGLE (SPIRAL CURVE)	ABND	ABUTMENT	DEF or DEFL	DEFLECTION
DIA	DIAMOND (CROSSOVER)	ABUT	AND	DEPT	DEPARTMENT
ES	EXTERNAL DISTANCE	AC	AC or A.C.	DF	DIRECT FIXATION
Ea	SUPERELEVATION, ACTUAL	ACC	ACCESS	DG	DIESEL GAS or DRY GAS
Eu	SUPERELEVATION, UNBALANCED	ADA	AMERICANS WITH DISABILITIES ACT	DI or D.I.	DUCTILE IRON
L	TOTAL CURVE LENGTH	AGG	AGGREGATE	DIP	DUCTILE IRON PIPE
Lc	TOTAL LENGTH OF CHORD	ALIGN	ALIGNMENT	DIA or Ø	DIAMETER
Ls	TOTAL LENGTH OF SPIRAL CURVE	AL	AREA INLET	DIM	DIAGRAM or DIAGONAL DIMENSION
Ls1	SUFFIX (1) AT THE SYMBOL DENOTES THE DATA FOR THE FIRST SPIRAL ON AN UNSYMMETRICAL SPIRALIZED CURVE	APPROX	APPROXIMATE	DIST	DISTRICT or DISTANCE
Ls2	SUFFIX (2) - SAME AS ABOVE. SECOND SPIRAL	APWA	AMERICAN PUBLIC WORKS ASSOCIATION	DIT	DOUBLE POINT SPLIT SWITCH
Ls IN	SUFFIX (IN) AT THE SYMBOL DENOTES THE DATA FOR THE LEADING SPIRAL OF A SPIRALIZED CURVE	A.R.E.M.A.	AMERICAN RAILWAY ENGINEERING & MAINTENANCE OF WAY ASSOCIATION	DPCW	DENVER AND RIO GRANDE WESTERN RAILROAD
Ls OUT	SUFFIX (OUT) AT THE SYMBOL DENOTES THE DATA FOR THE TRAILING SPIRAL OF A SPIRALIZED CURVE	A/R	AS REQUIRED	DRTK	DRILL TRACK
L.T.	LONG TANGENT	A.S.	AS SHOWN	DW	DOMESTIC WATER
P	THROW	ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	DWG	DRAWING
PC	POINT OF CURVATURE or POINT OF CHANGE FROM TANGENT TO CIRCULAR CURVE	ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	DWY	DRIVEWAY
PCC	POINT OF COMPOUND CIRCULAR CURVES	ASPH	ASPHALT	E	
PI	POINT OF INTERSECTION OF TWO TANGENTS	ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	E	EAST or ELECTRIC
PITO	POINT OF INTERSECTION, TURNOUT	AT	AUTOMATIC TRAIN CONTROL	EACH	EACH
(PO)	POWER OPERATED (REFERS TO TURNOUT)	ATMS	ADVANCED TRAFFIC MANAGEMENT SYSTEM	EB	EASTBOUND or END OF BRIDGE
POB	POINT OF BEGINNING	AVE	AVENUE	E/E	EAST OF EAST RIGHT-OF-WAY LINE
POC	POINT ON CIRCULAR CURVE	AWG	AMERICAN WIRE GAGE	EJ	EXPANSION JOINT
POE	POINT OF ENDING	B		ELEV	ELEVATION
POS	POINT ON SPIRAL	BE	BURIED ELECTRIC	EMH	ELECTRICAL MANHOLE
POT	POINT ON TANGENT	BEG	BEGIN or BEGINNING	E/O	EAST OF
PRC	POINT OF REVERSE CIRCULAR CURVE	BET	BETWEEN	ECA	EDGE OF ASPHALT
PT	POINT OF TANGENCY or POINT OF CHANGE FROM CIRCULAR CURVE TO TANGENT	BIT	BITUMINOUS	ECH	OVERHEAD ELECTRIC
PS	POINT OF SWITCH	BK	BACK	ECP	EDGE OF PAVEMENT
Qs	CENTRAL ANGLE OF SPIRAL or SPIRAL ANGLE	BL	BASELINE	EQ	EQUAL or EQUATION
R	RADIUS OF CIRCULAR CURVE	BLDG	BUILDING	ES	EXTRA STRENGTH
SC	POINT OF CHANGE FROM SPIRAL TO CIRCULAR CURVE	BLVD	BOULEVARD	ETC	END TRACK
SS	POINT OF CHANGE FROM SPIRAL TO SPIRAL	BM	BENCH MARK	ETCETERA	ETCETERA
ST	POINT OF SPIRAL TO TANGENT	BSNF	BURLINGTON NORTHERN AND SANTA FE RAILWAY	EW	EAST OF WEST RIGHT-OF-WAY LINE
S.T.	SHORT TANGENT	BOT	BOTTOM	EXIST or EX	EXISTING
T	TOTAL CURVE TANGENT LENGTH OF COMPLETE CURVE	BRDG	BRIDGE	EXT	EXTERIOR
Tc	TANGENT LENGTH FROM PC or PT to PI	BRG	BEARING	F	
TO	TURNOUT	BRK	BRICK	F	FILL (WALL) or FIBER
Ts	TANGENT DISTANCE FROM TS or ST to PI	BTEL	BURIED TELEPHONE	(F)	FREIGHT
TL	TOTAL LENGTH OF CURVE (SPIRAL & CIRCULAR PORTIONS)	BU CA or BCTV	BURIED CABLE	FB	FREEBOARD
TS	POINT OF CHANGE FROM SPIRAL TO SPIRAL	BW	BOTTOM OF WALL or BACK OF WALL	FES	FLARED END SECTION
TTL	TOTAL TANGENT LENGTH (SPIRALS & CIRCULAR PORTIONS)	BCR	BEGIN CURB RETURN	FF	FINISHED FLOOR or FAR FACE or FRONT FACE
XO	CROSSOVER	C		FFE	FINISHED FLOOR ELEVATION
Ys	TANGENT DISTANCE AT SC or CS	C	CUT (WALL)	FG	FROG GAUGE PLATE or FINISH GRADE
Ys	TANGENT OFFSET AT SC or CS	CAS	CASING	FH	FIRE HYDRANT
VERTICAL			CTV	CATCH BASIN	FIN
K	RATE OF VERTICAL CURVATURE OR LENGTH OF CURVE	CB	CONCRETE BOX CULVERT	for FL	FLOWLINE
L	LENGTH OF VERTICAL CURVE	CBC	CENTER TO CENTER	FLG	FLANGE
PVCC	POINT OF COMPOUND VERTICAL CURVE	c-c	CHECK DAM	FLR	FLOOR
PVC	POINT OF VERTICAL CURVATURE	CFS	CUBIC FEET PER SECOND	FO	FIBER OPTIC LINE
PVI	POINT OF VERTICAL INTERSECTION or POINT OF INTERSECTION OF TWO PROFILE TANGENTS	C&G	CURB AND GUTTER	FOC	FOOT OF CURB
R	RATE OF CHANGE IN CURVATURE	CI or C.I.	CAST IRON	FPS	FOOT PER SECOND
PRVC	POINT OF REVERSE VERTICAL CURVE	CJ	CONSTRUCTION JOINT or CONTROL JOINT	FWY	FREEWAY
PVT	POINT OF VERTICAL TANGENCY	CL	CENTER LINE	FS	FLAGSTONE or FINISHED SURFACE
VC	ELEVATION	CLG	CLEARANCE or CLEAR	FAM	FOUND ALUMINUM MONUMENT
ELEV		CLR	CORRUGATED METAL PIPE	FBC	FOUND BRASS CAP
		CO	CARE OF	FIP	FOUND IRON PIN
		COL	COLUMN	FT or FT.	FOOT or FEET
		CONC	CONCRETE	FWHA	FEDERAL HIGHWAY ADMINISTRATION
		CONN	CONNECT or CONNECTION	FRA	FEDERAL RAILROAD ADMINISTRATION
		CONST or CONSTR	CONSTRUCT or CONSTRUCTION	FTA	FEDERAL TRANSIT ADMINISTRATION
		CONT	CONTINUED, CONTINUOUS or CONTINUATION	FTG	FOOTING
		CSP	CORRUGATED STEEL PIPE	G	
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GENERAL ABBREVIATIONS

[illegible]

11/6/2026

11/6/2026

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 TANGET 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.

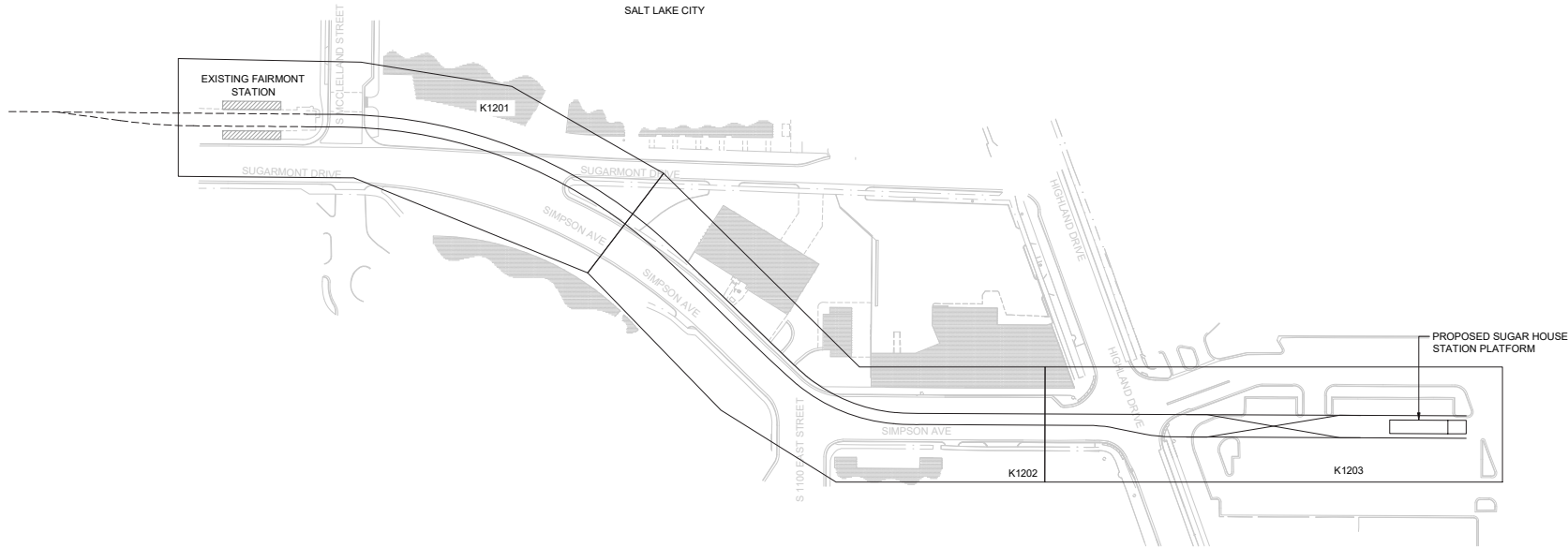
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			PROFESSIONAL ENGINEER No. 14209258 ANTHONY DIGIROLAMO STATE OF UTAH	PKS Kiewit	U T A UTAH TRANSIT AUTHORITY	Designed By T. COVEYOU	S-LINE EXTENSION PROJECT GENERAL GENERAL NOTES	State NTS CADD Filename SL-C-G-0-013.dwg Submitted Date 01-16-26 UTA Contract No. 24-03849 Drawing No. G0013 Sheet No.
						Drawn By T. COVEYOU		
						Checked By A. DIGIROLAMO		
						Approved By A. DIGIROLAMO		
	REV	DATE	Description		Submitted By: _____	Approved By: _____		

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Submitted By: _____ Approved By: _____

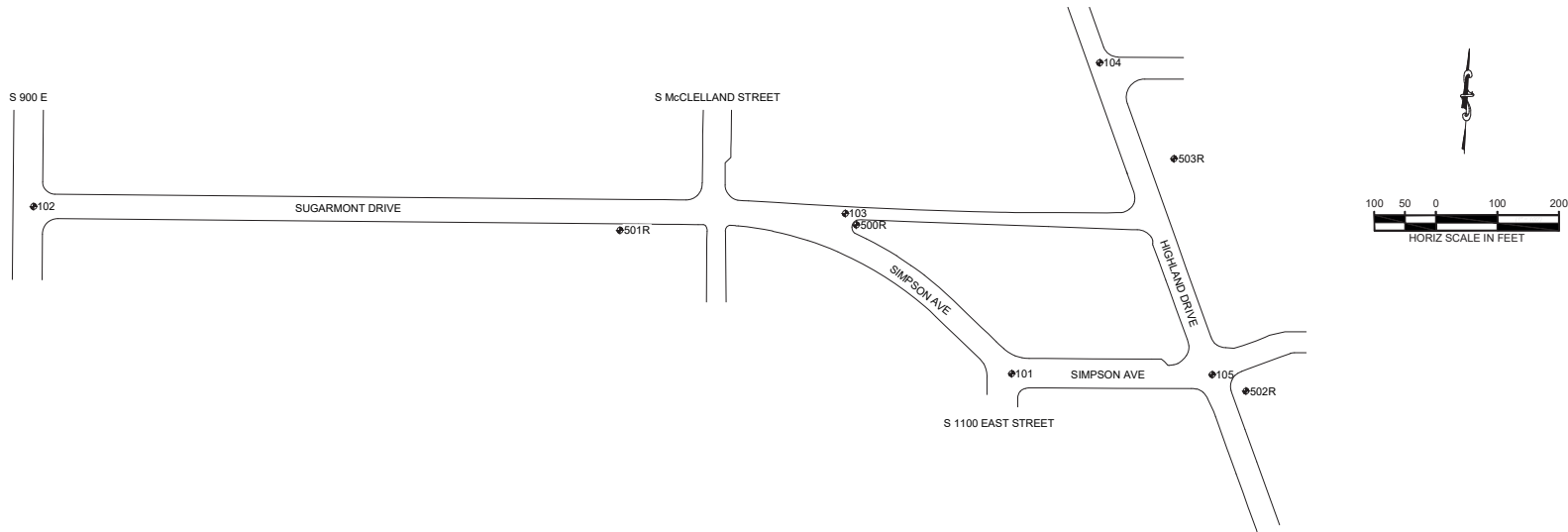
Designed By	S. JOSHI
Drawn By	S. JOSHI
Checked By	A. DIGIROLAMO
Approved By	A. DIGIROLAMO

S-LINE EXTENSION PROJECT
TRACK KEY MAP

Scale	NTS
CADD Filename	SL-C-K-0-001.dwg
Submittal 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 UTAH'S 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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Submitted By: _____ Approved By: _____

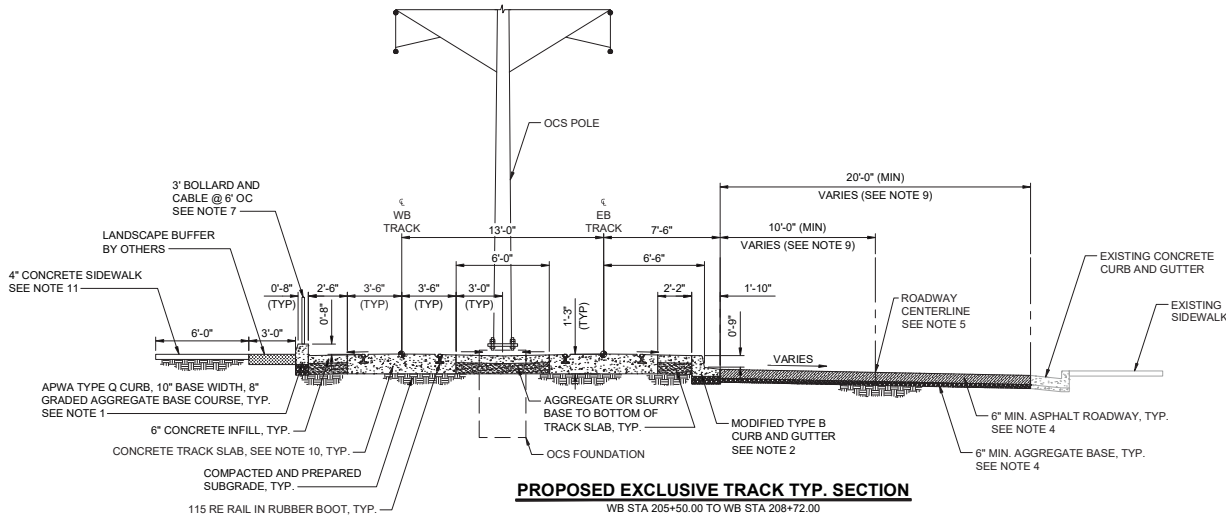
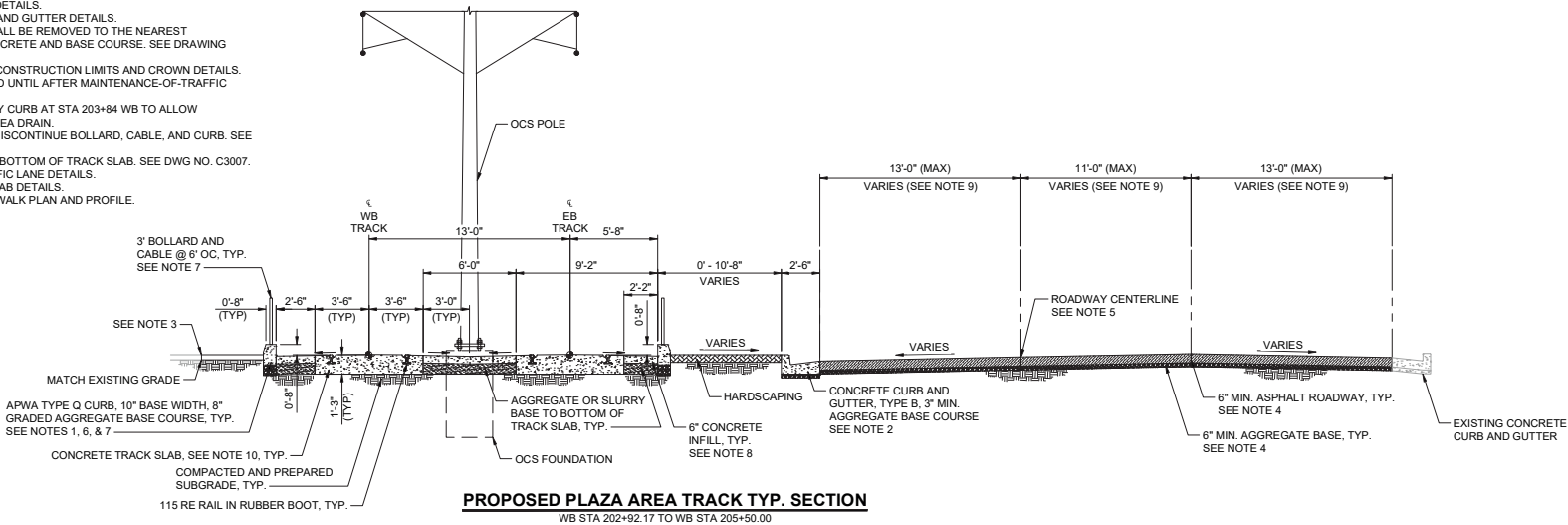
Designed By	S. JOSHI
Drawn By	T. COVEYOU
Checked By	A. DIGIROLAMO
Approved By	A. DIGIROLAMO

S-LINE EXTENSION PROJECT
SURVEY CONTROL DATA

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

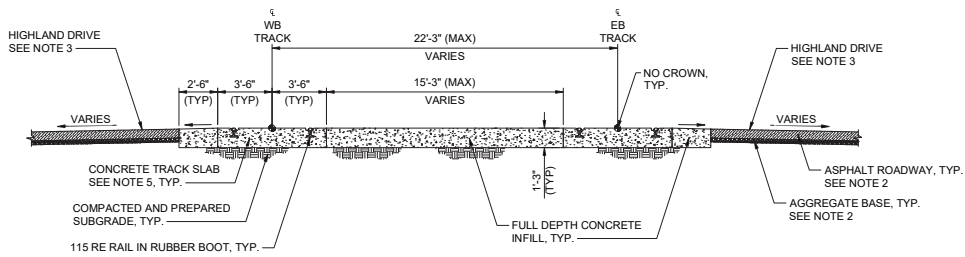
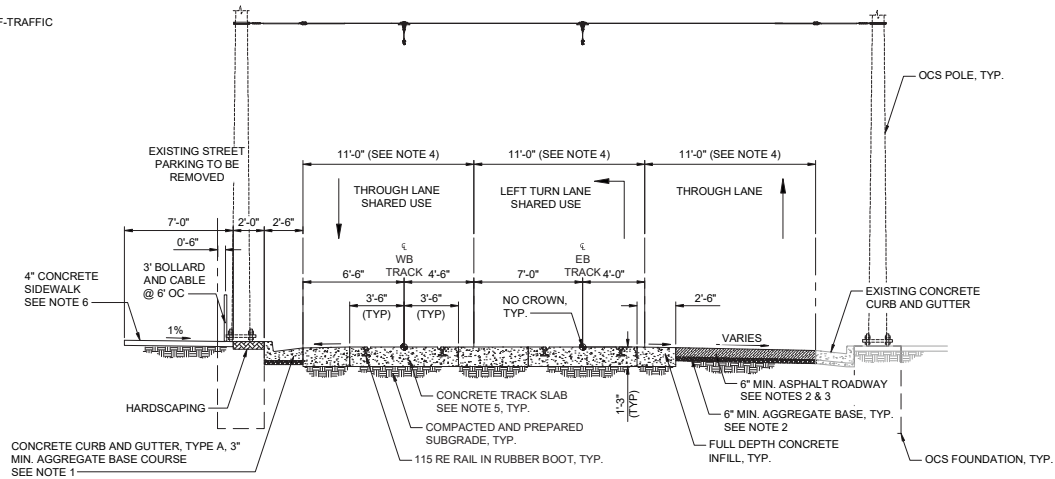
NOTES:

- 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.



C-100	△						Designed By T. COVEYOU	S-LINE EXTENSION PROJECT	Scale 1/4"=1'-0"	
	△									CADD Filename SL-C-K-4-201.dwg
	△									Submittal Date 01-16-26
	△									UTA Contract No. 24-03849
	△									Drawing No. K4201
10/20/26	REV	DATE	Description	Submitted By: _____	Approved By: _____		Checked By: A. DIGIRILAMO	TRACK TYPICAL SECTIONS SHEET 1 OF 4	Sheet No. K4201	
						Approved By: A. DIGIRILAMO				

- 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.



1/20/2023
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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	A. DIGIROLAMO

S-LINE EXTENSION PROJECT

TRACK TYPICAL SECTIONS
SHEET 2 OF 4

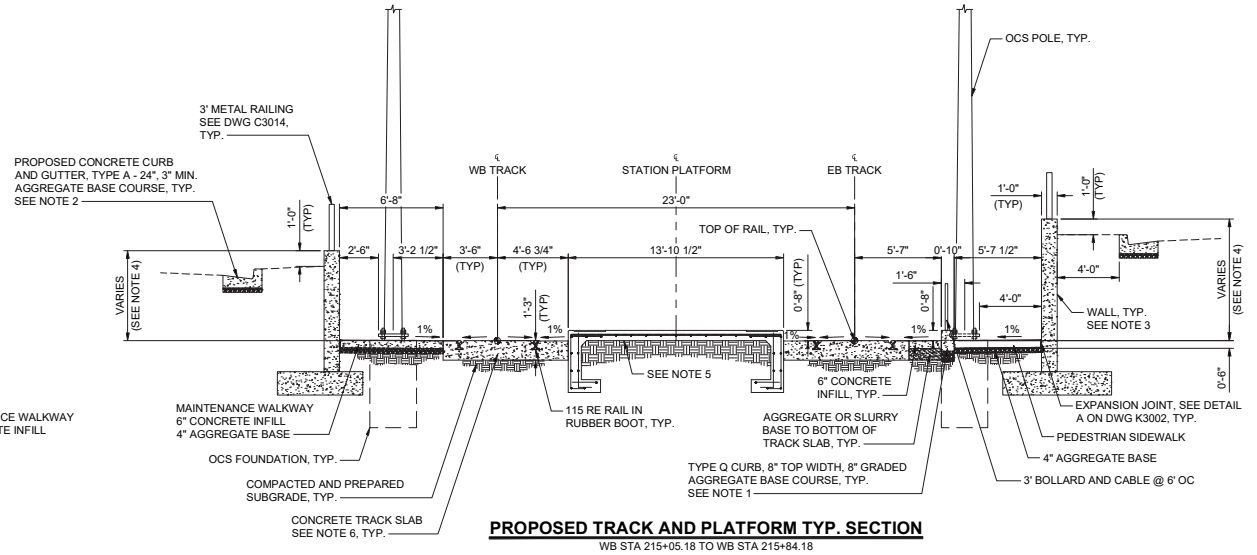
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Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	K4202
Sheet No.	

WB STA 212+93.05 TO WB STA 214+77.76

WB STA 214+77.76 TO WB STA 215+05.18

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

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.



18/2026 △ △ △ △ △			
	REV	DATE	Description



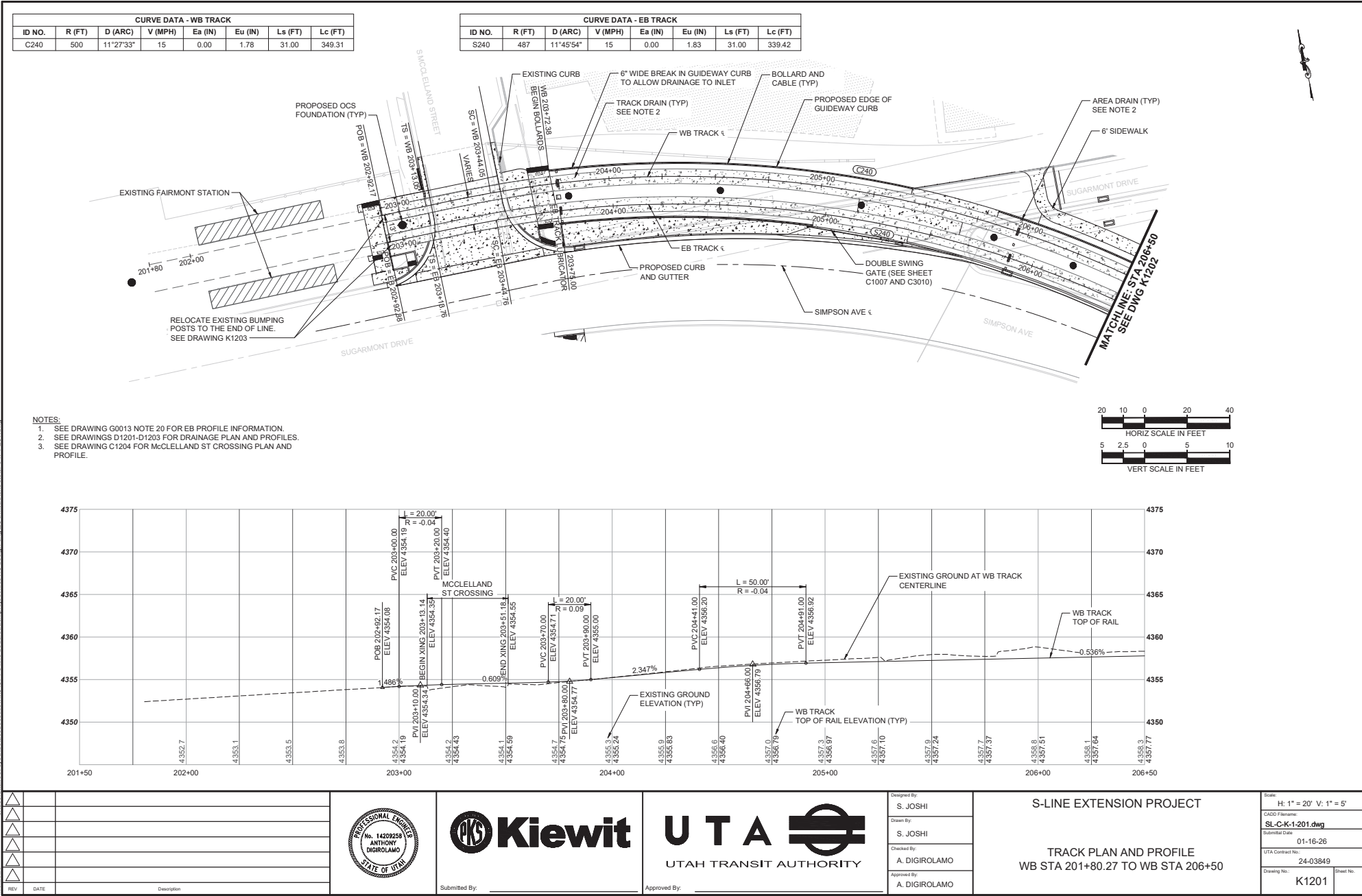
Approved By: _____

TRACK TYPICAL SECTIONS
SHEET 4 OF 4

Scale:	1/4"=1'-0"
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Submittal Date	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	K4204

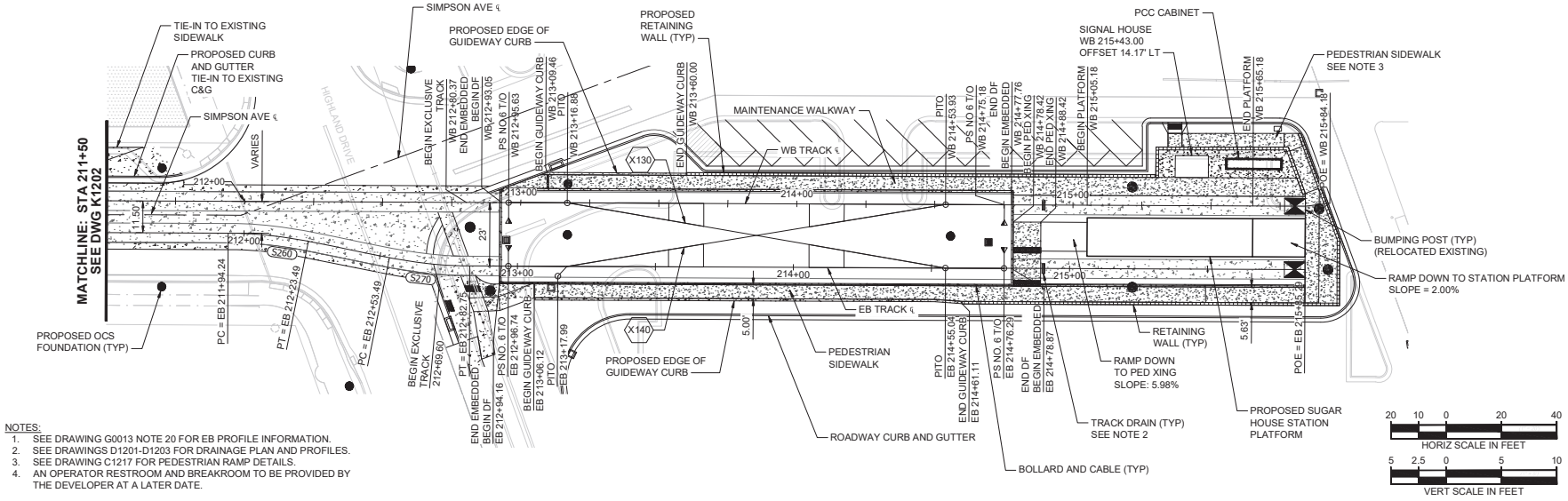
EXTENSION - EB TRACK																
CURVE / XO / TO NUMBER	DESCRIPTION	STATION	DEGREE OF CURVE (ARC)	RADIUS (FT)	Lc (FT)	Ls IN (FT)	Ls OUT (FT)	Eg (IN)	Ea (IN)	Eu (IN)	DESIGN V (MPH)	CURVE DELTA	NORTHING	EASTING	TANGENT LENGTH (FT)	BEARING
	POB	202+92.88											7432209.415	1540210.438		
															20.88	S 89° 30' 24" E
	TS	203+13.76											7432209.236	1540231.318		
	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		
															138.80	S 45° 55' 35" E
	TS	208+53.99											7431964.651	1540692.288		
	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		
															169.30	S 89° 44' 37" E
	PC	211+94.24											7431901.461	1541014.843		
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		
															30.00	S 78° 34' 12" E
	PC	212+53.49											7431892.543	1541073.302		
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		
															13.99	S 89° 44' 37" E
	PS	212+96.74											7431889.507	1541116.353		
X140																S 89° 44' 37" E
	PITO	213+17.99											7431889.412	1541137.603		
															137.05	S 89° 44' 37" E
	PITO	214+55.04											7431888.799	1541274.644		
X130																S 89° 44' 37" E
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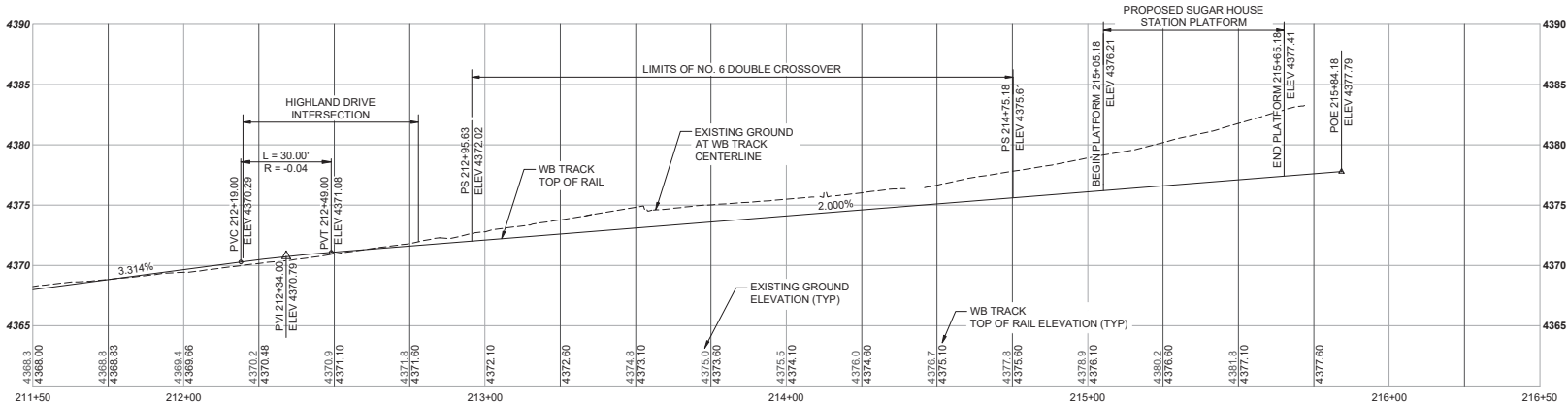
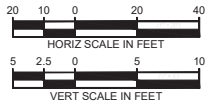




CURVE DATA - EB TRACK							
ID NO.	R (FT)	D (ARC)	V (MPH)	Ea (IN)	Eu (IN)	Ls (FT)	Lc (FT)
S260	150	38°11'50"	10	0.00	2.64	0.00	29.25
S270	150	38°11'50"	10	0.00	2.64	0.00	29.25

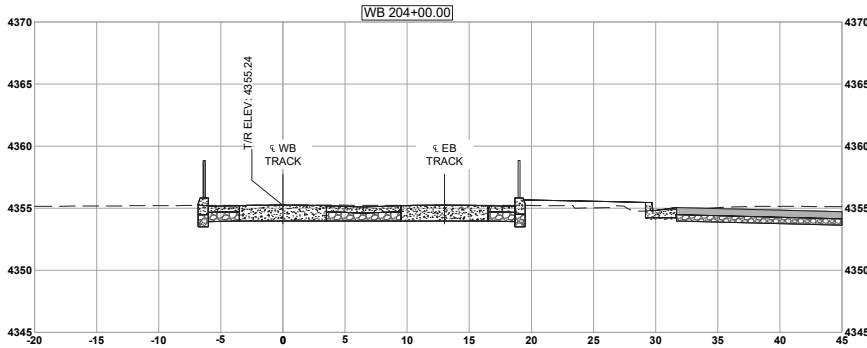
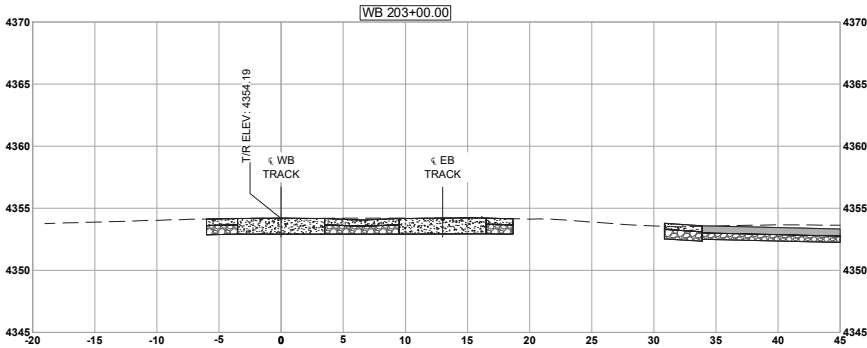
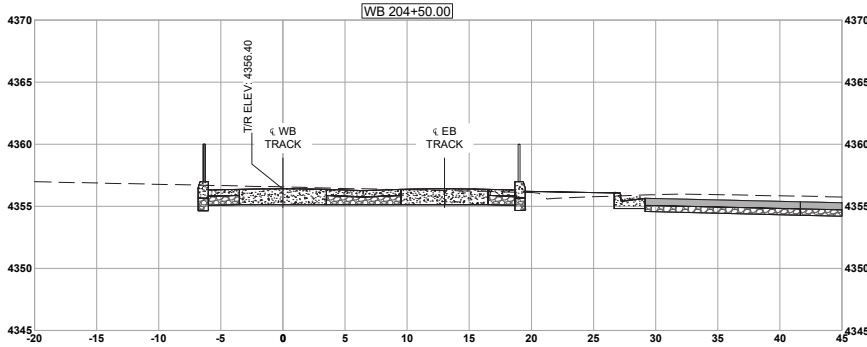
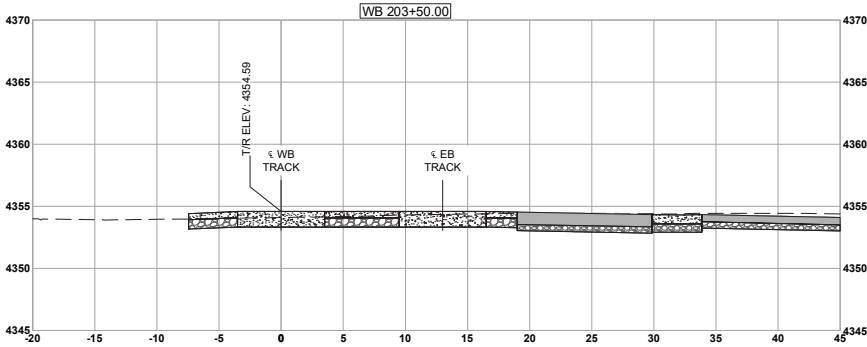


- NOTES:
- SEE DRAWING G0013 NOTE 20 FOR EB PROFILE INFORMATION.
 - SEE DRAWINGS D1201-D1203 FOR DRAINAGE PLAN AND PROFILES.
 - SEE DRAWING C1217 FOR PEDESTRIAN RAMP DETAILS.
 - AN OPERATOR RESTROOM AND BREAKROOM TO BE PROVIDED BY THE DEVELOPER AT A LATER DATE.

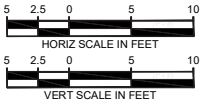


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				Checked By A. DIGIROLAMO		Submitted Date 01-16-26
				Approved By A. DIGIROLAMO		UTA Contract No. 24-03849
						Drawing No. K1203

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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



Submitted By: _____



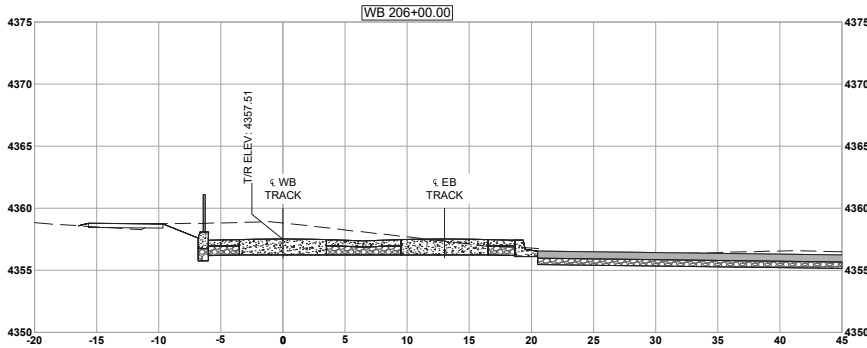
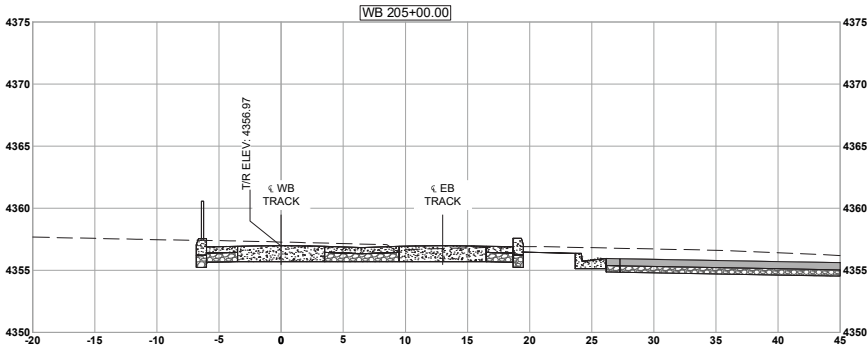
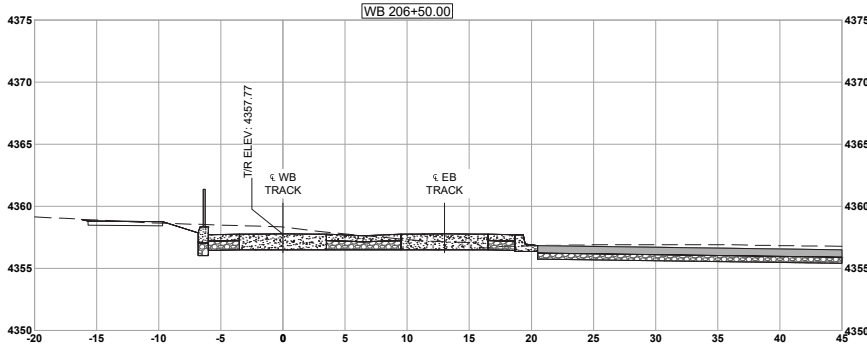
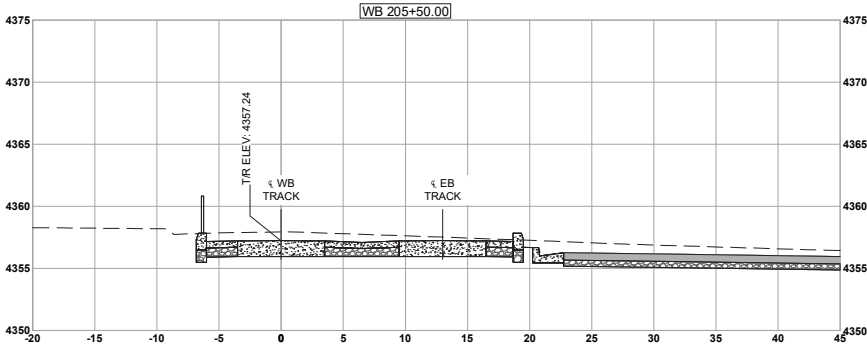
Approved By: _____

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

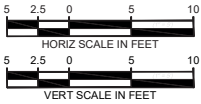
S-LINE EXTENSION PROJECT
TRACK CROSS SECTIONS WB STA 201+80.27 TO WB STA 204+50

Scale: H: 1" = 5' V: 1" = 5'
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Submittal Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: K5201
Sheet No.:

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1/8/2023



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

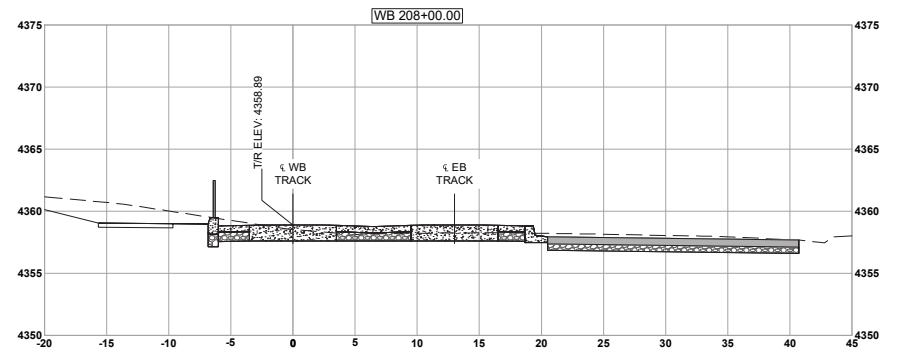
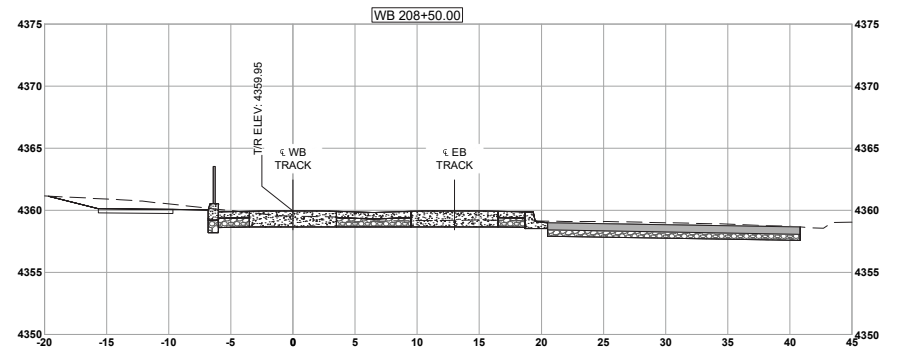


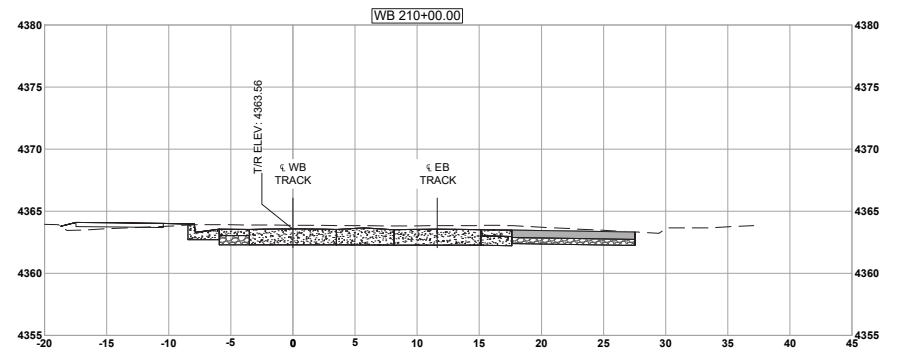
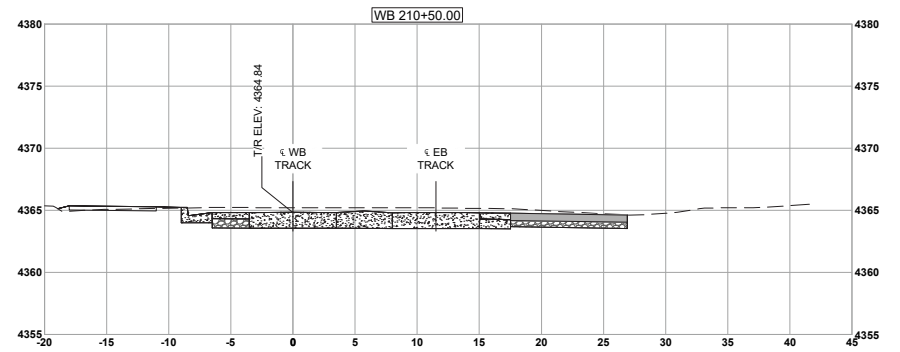
Submitted By: _____ Approved By: _____

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

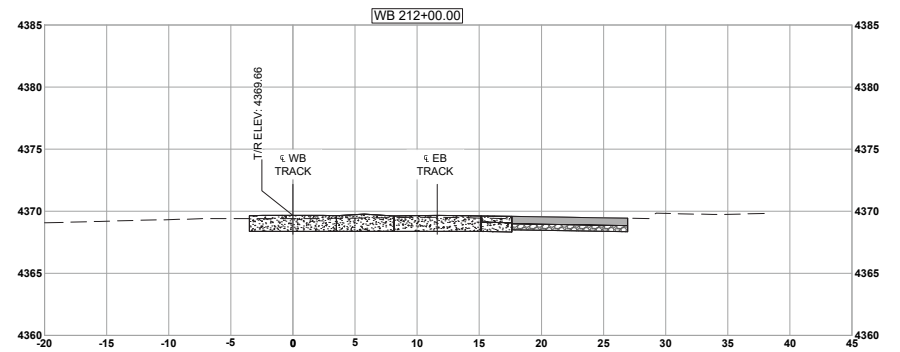
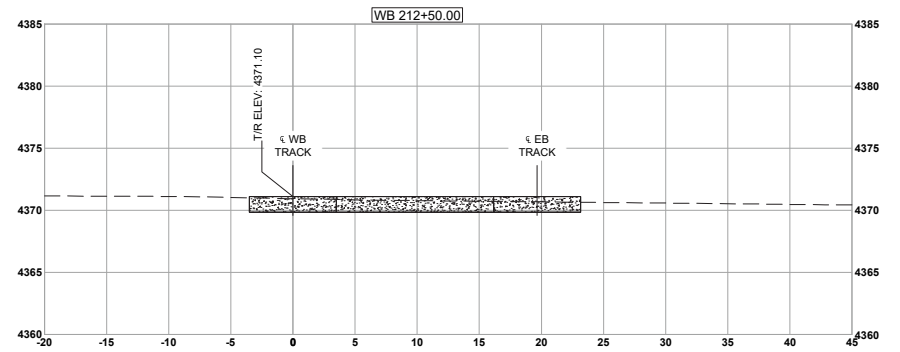
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TRACK CROSS SECTIONS WB STA 205+00 TO WB STA 206+50

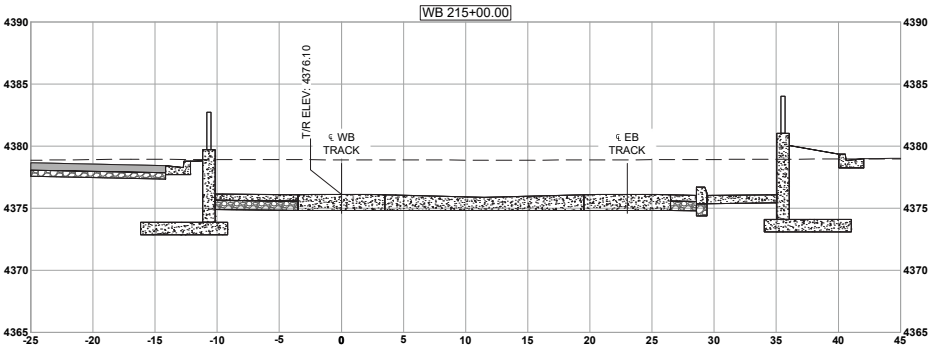
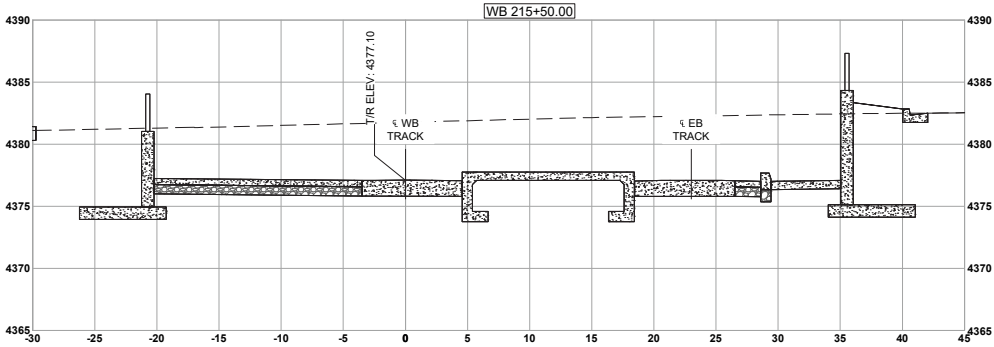
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Submittal Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: K5202
Sheet No.:

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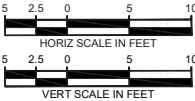


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									Drawn By: S. JOSHI		CADD Filename: SL-C-K-5-204.dwg
									Checked By: A. DIGIROLAMO		Submitted Date: 01-16-26
									Approved By: A. DIGIROLAMO		UTA Contract No.: 24-03849
											Drawing No.: K5204
16/03/2026	REV	DATE	Description							TRACK CROSS SECTIONS WB STA 209+00 TO WB STA 210+50	Sheet No.:

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



1/8/2028	REV	DATE	Description
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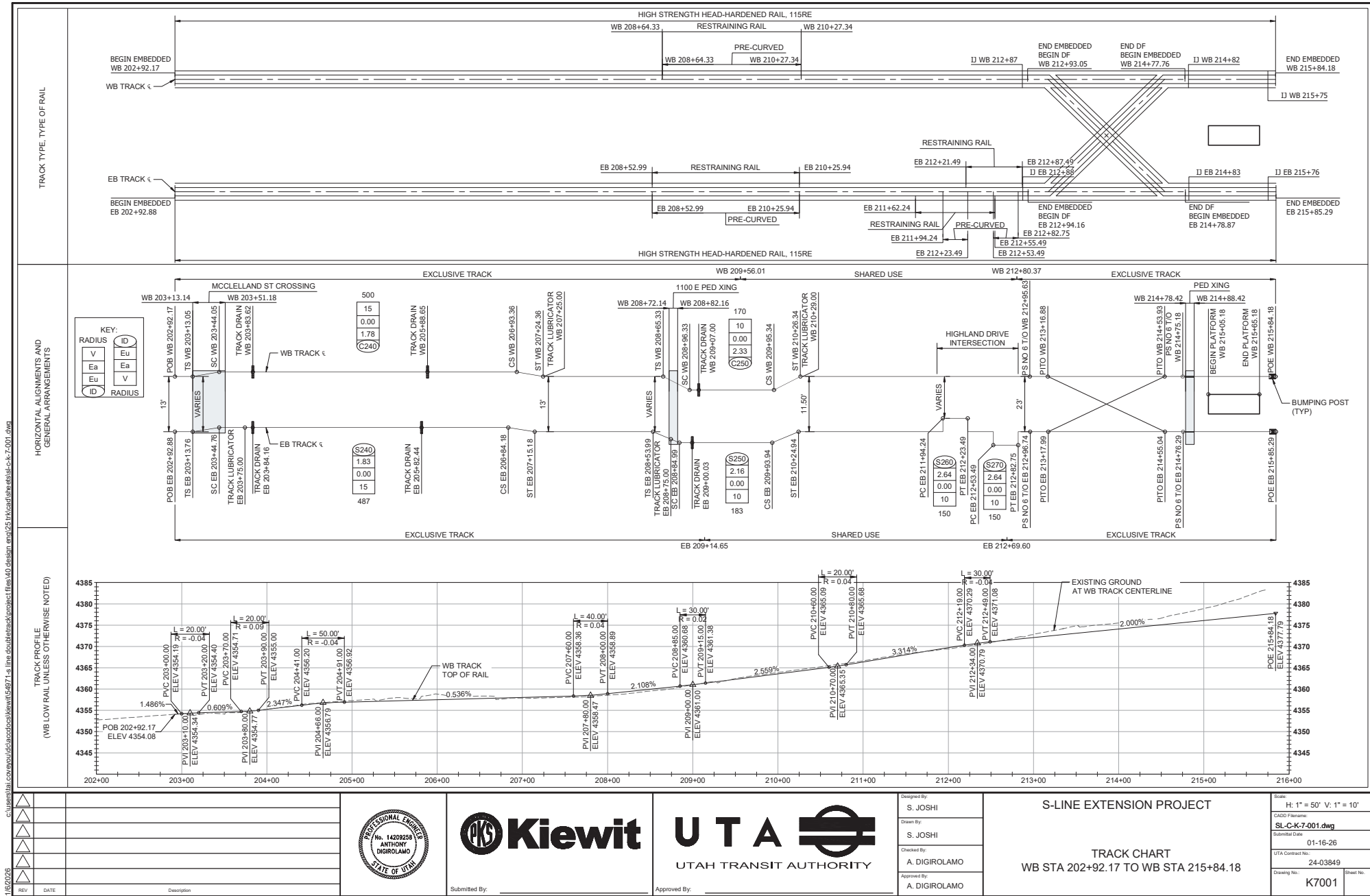
Submitted By: _____ Approved By: _____

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 215+00 TO WB STA 215+84

Scale	H: 1" = 5' V: 1" = 5'
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Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	K5207
Sheet No.	



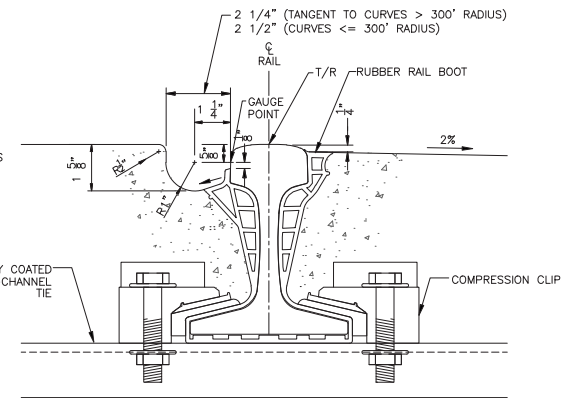


RAIL LUBRICATORS DETAIL

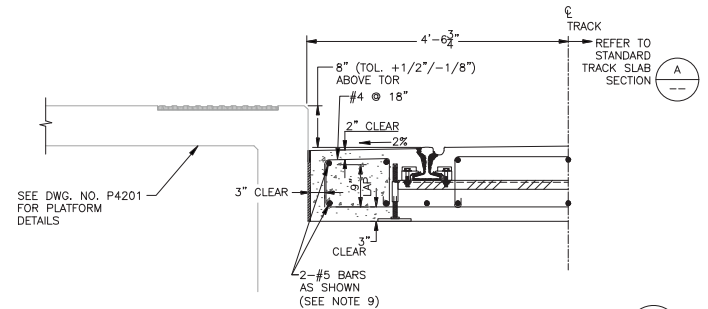
SCALE: NTS

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.

1420258 REV DATE Description	PROFESSIONAL ENGINEER No. 1420258 ANTHONY DIGIROLAMO STATE OF ILL.	PKS Kiewit	U T A UTAH TRANSIT AUTHORITY	Designed By: F. NANNENGA	S-LINE EXTENSION PROJECT STANDARD DRAWINGS TRACKWORK RAIL LUBRICATOR	Scale: NTS
			Drawn By: T. COVEYOU	CAD Filename: SL-C-K-3-001.dwg		
			Checked By: A. DIGIROLAMO	Submitted Date: 01-16-26		
			Approved By: A. DIGIROLAMO	UTA Contract No.: 24-03849		
				Drawing No.: K3001		



RAIL BOOT/FLANGWAY 
SCALE: NTS

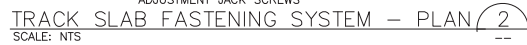


TRACK SLAB SECTION AT STATION PLATFORM (B)

SCALE: NTS

- | | | |
|--|--|--|
| 1. THE SHAPE OF THE TRACK SLAB SHALL BE MAINTAINED AS SHOWN, BUT ROTATED AS A UNIT IN AREAS OF SUPERELEVATION. | 5. SHOULD THE CONTRACTOR ENCOUNTER UNSUITABLE OR SOFT MATERIAL DURING TRACK SLAB EXCAVATION, SEE SPECIFICATION 02225 SECTION 3.1.D. | 11. SEE SPECIFICATIONS 02462 – EMBEDDED TRACK CONSTRUCTION AND 03310 – CONCRETE WORK FOR CONCRETE FINISH REQUIREMENTS. |
| 2. ROUND ALL CORNERS ALONG THE TOP SURFACE OF SLAB TO 1/2" RADIUS. | 6. A HOT FUSED JOINT SEALANT IS TO BE PLACED FOR THE TOP 2 INCHES OF THE PREFORMED JOINTS ACCORDING TO ASTM D-3405 OR APPROVED EQUAL. SEE DETAIL 3 ON DWG K3003. | 9. LAP LENGTH FOR #5 LONGITUDINAL BARS SHALL BE 1'-6" |
| 3. ALL REBAR IN TRACK SLAB SHALL BE EPOXY COATED AND SHALL HAVE A TENSILE STRENGTH OF 60 KSI. | 7. PROVIDE EXPANSION JOINTS EVERY 60' MAXIMUM IN THE CONCRETE INFILL. SEE NOTES ON JOINT DETAIL 1 ON DWG K3003. | 10. 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. |
| 4. ALL CONCRETE IS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI. | | |

[illegible]

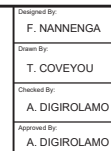


1. EXPANSION JOINT SPACING 60' MAXIMUM.
2. CONTROL JOINTS TO BE SPACED EVENLY BETWEEN EXPANSION JOINTS AND SHALL BE NO FURTHER APART THAN 10 FEET. CONTROL JOINT SHALL BE LOCATED OVER C-CHANNEL CROSSTIES.
3. FOR TRACK SLAB SECTION, SEE DWG. K3002.
4. C-CHANNEL TIES ARE TO BE SPACED AT 10'-0" O.C. IN TANGENT 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 $\frac{1}{2}$ " 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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REV	DATE	Description	



Scale:		NTS	
CADD Filename:		SL-C-K-3-004.dwg	
Submittal Date		01-16-26	
UTA Contract No.:		24-03849	
Drawing No.:		K3004	Sheet No.



* SUGGESTED



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.

[illegible]



STREET CAR DYNAMIC CLEARANCE TABLE

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

[illegible]



1. INSTALL CUFF IN ACCORDANCE WITH MANUFACTURER'S PROCEDURES. ENSURE CONTINUOUS ELECTRICAL ISOLATION IS ACHIEVED ACROSS THE SPLICE.

- 4'-8 1/2" GAUGE (TANGENT AND RADIUS $\geq 280'$)
 4'-8 3/4" GAUGE (200' < RADIUS < 280')
 4'-9" GAUGE (82' $\leq$ RADIUS < 200')



1. AT ALL RESTRAINING RAIL APPLICATIONS, PROVIDE FLANGWAY OF 2" BETWEEN RUNNING RAIL AND RESTRAINING RAIL, AND INDICATED TRACK GAUGE, AS SHOWN.

- SCHEMATIC RESTRAINING RAIL

RAIL END BEVEL

NTS

RESTRAINING RAIL

25°

1 1/2"

1"

18" x 9" SQUARE HEAD BOLT (TYP)

HEADLOCK WASHER

SPRING WASHER

"D" WASHER

END BLOCK

RUNNING RAIL

END BLOCK SECTION

NTS

A

END BLOCK SECTION A



SEPARATOR BLOCK SECTION

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

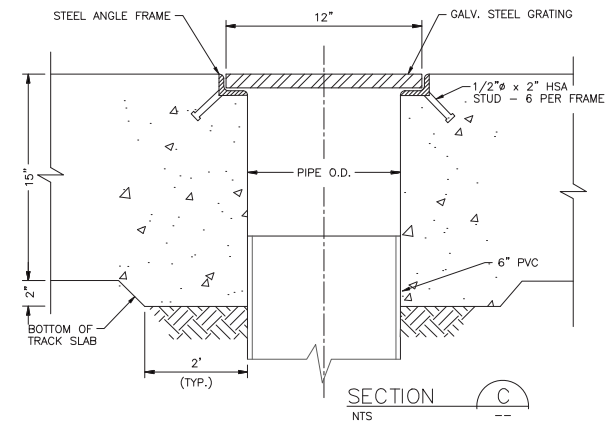
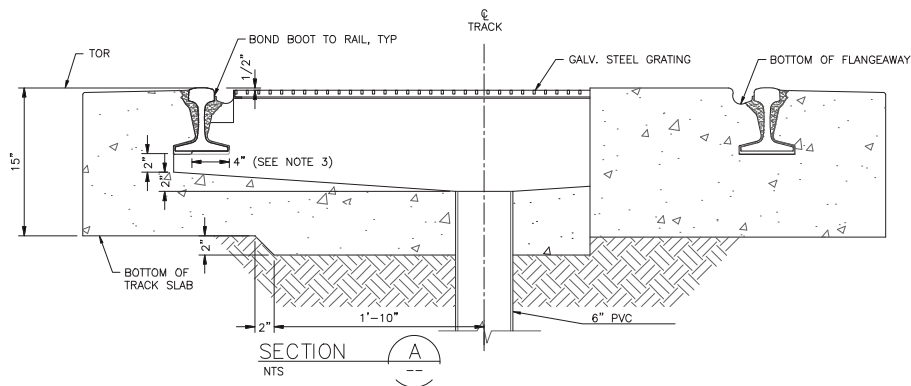


RESTRAINING RAIL JOINT ASSEMBLY

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.

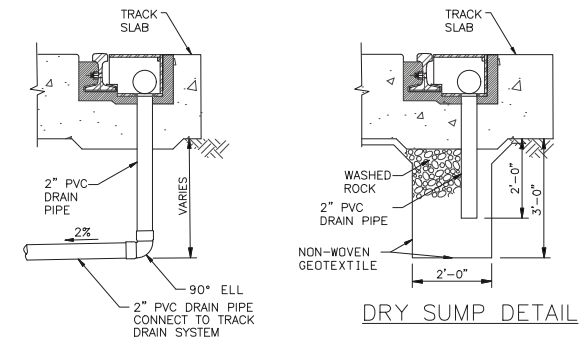
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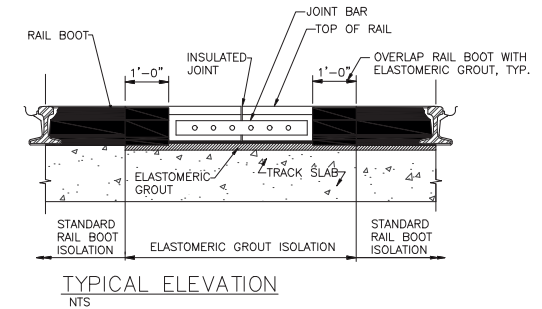


1. SUBMIT STEEL ANGLE FRAME AND GALVANIZED STEEL GRATING SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION. GRATING SHALL BE BOLTED TO THE STEEL ANGLE FRAME AT SIX (MIN) LOCATIONS. STEEL ANGLE FRAME SHALL BE HOT DIPPED GALVANIZED. FRAME AND GRATE SHALL BE DESIGNED TO MEET AASHTO HS-20 LOADING.
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.

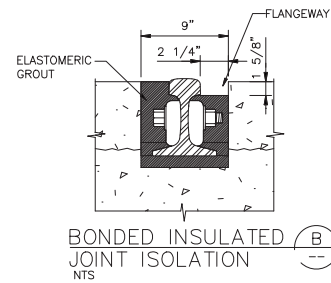
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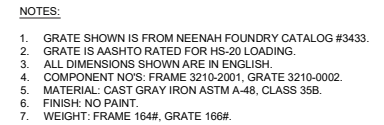
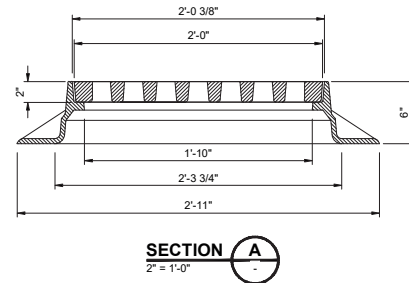
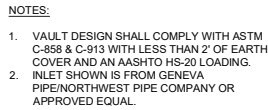


CONNECTION TO TRACK DRAIN DETAIL (2)



1. SEE DUCTBANK PLANS FOR LOCATIONS OF SIGNAL TRACK CONNECTION BOXES.
2. CONDUIT ENTRANCE HOLE DIAMETER, QUANTITY, AND LOCATION MAY VARY ACCORDING TO LOCATION OF BOX. SEE SYSTEMS PLANS FOR CONDUIT REQUIREMENTS FOR EACH INDIVIDUAL BOX.
3. SIGNAL CONNECTION BOX OR EQUIVALENT SHALL BE CONSTRUCTED AS SHOWN; CONTRACTOR SHALL SUBMIT SIGNAL CONNECTION BOX SHOP DRAWING FOR REVIEW.
4. REINFORCING SHOWN ON THIS DRAWING SHOWS REQUIRED MODIFICATIONS. REFER TO DWG. K3004 FOR STD. TRACK SLAB REINFORCING DETAILS.
5. 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.
6. FINAL TRACK CIRCUIT CONNECTION BOX LOCATION TO BE LOCATED AND COORDINATED WITH SYSTEMS CONTRACTOR.
7. POWER CONNECTION BOX, SEE DWG. K3005 FOR DETAILS.

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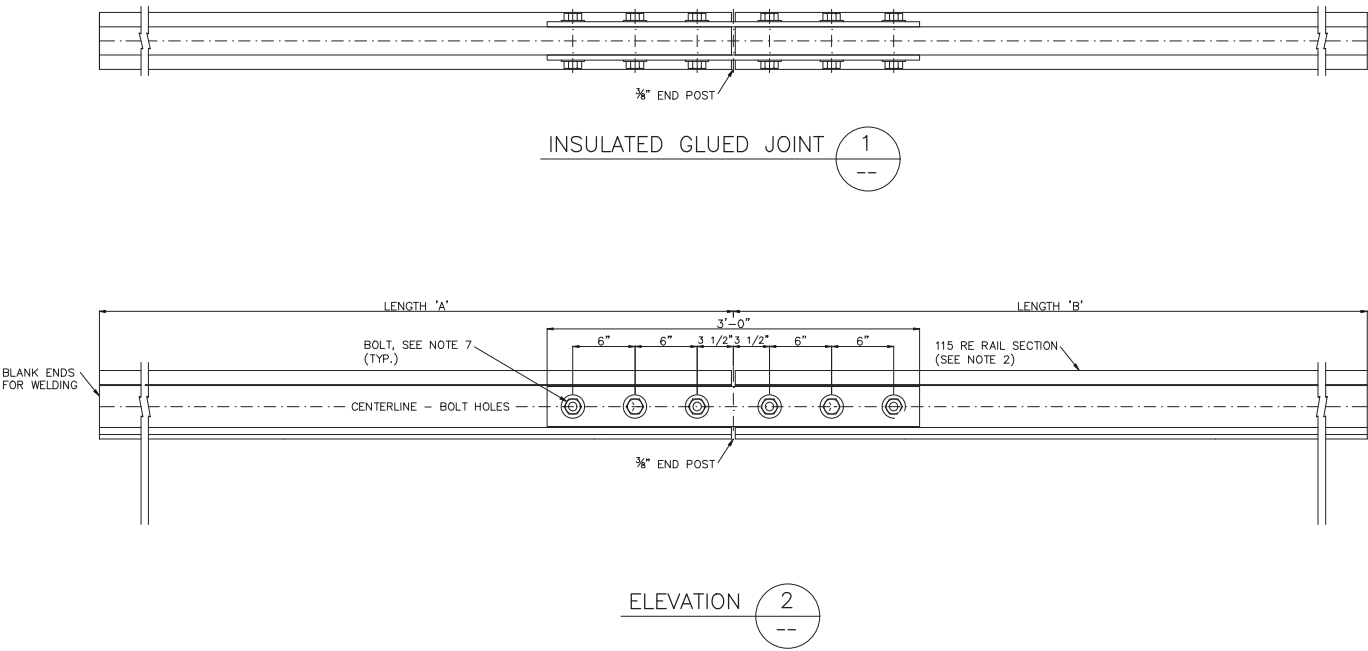
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Designed By:	F. NANNENGA
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	A. DIGIROLAMO

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
TRACKWORK
DRAINAGE CATCH BASIN

Scale:		AS NOTED	
CADD Filename:		SL-C-K-3-011.dwg	
Submittal Date		01-16-26	
UTA Contract No.:		24-03849	
Drawing No.:		K3011	
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LOCATION	A	B ¹	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:
1. EXCEPT FOR INSULATED JOINTS LOCATED JUST WEST OF THE DOUBLE CROSSOVER NEAR STATION EB 212+89, FIELD INSTALLED JOINTS CAN BE USED.

- NOTES:
1. INSULATED JOINTS CAN BE FIELD FABRICATED OR JOINT PLUGS. WORKMANSHIP AND MATERIALS SHALL MEET OR EXCEED CURRENT AREMA SPECIFICATIONS, CHAPTER 4 PART 3.
2. RAIL AND COMPONENTS SHALL CONFORM TO 115 RE RAIL SECTION
3. RAIL LENGTH MINIMUM IS SHOWN IN TABLE.
4. 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.
5. ALL INSULATED JOINTS SHALL HAVE THE MANUFACTURER TAGS.
6. ALL BOLT HOLES SHALL BE CHAMFERED.
7. HUCK BOLTS 1 1/2" ASTM A490, OR 1 1/2" SAW GRADE 8 BOLTS WITH SECURITY LOCKNUTS SHALL BE FURNISHED. THE BOLTS SHALL BE LUBRICATED AND TORQUED TO 850 FOOT-POUNDS.
8. I/J'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. DIGRIOLAMO
Approved By A. DIGRIOLAMO

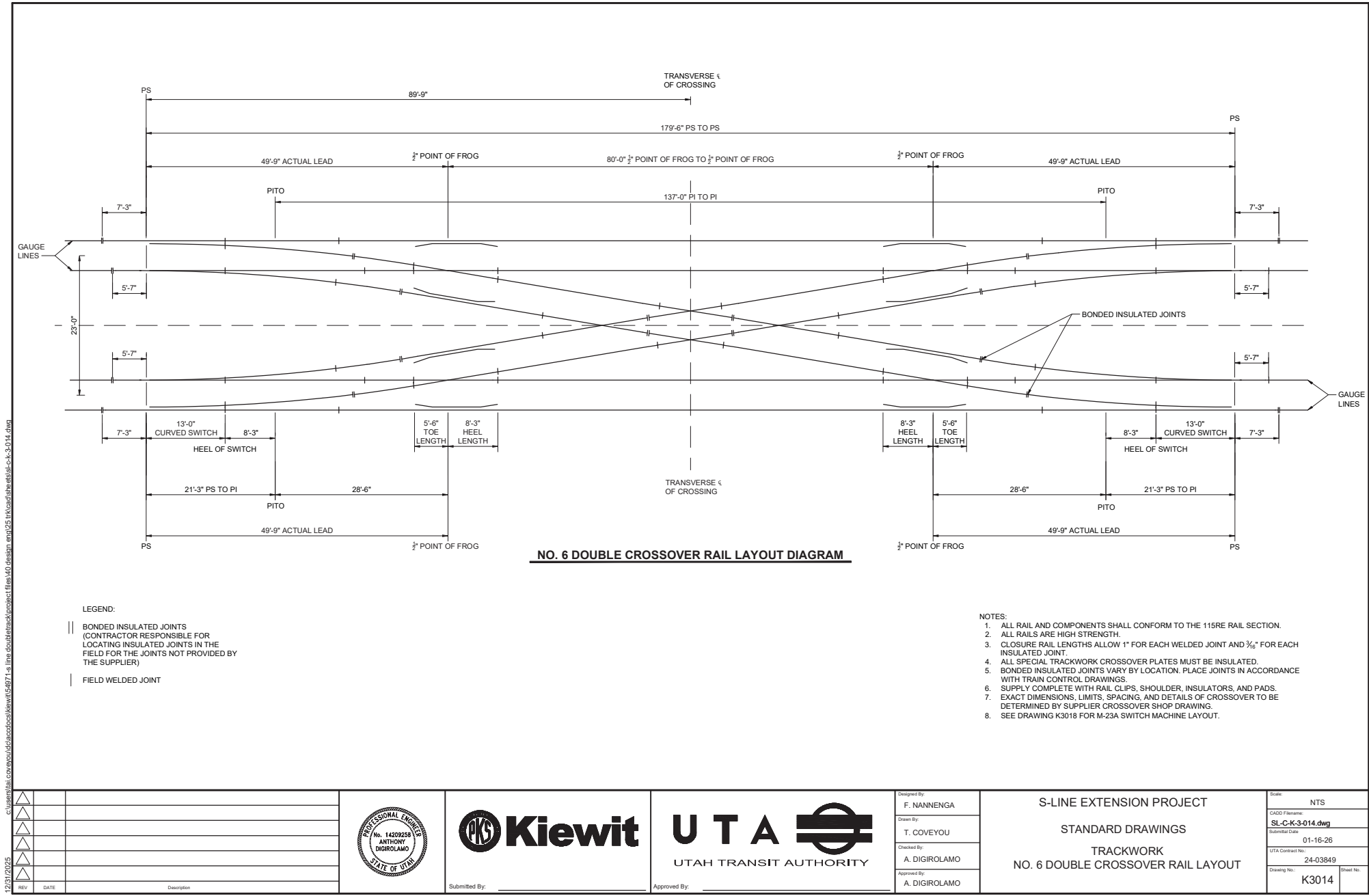
S-LINE EXTENSION PROJECT

STANDARD DRAWINGS

TRACKWORK

INSULATED JOINT DETAILS

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

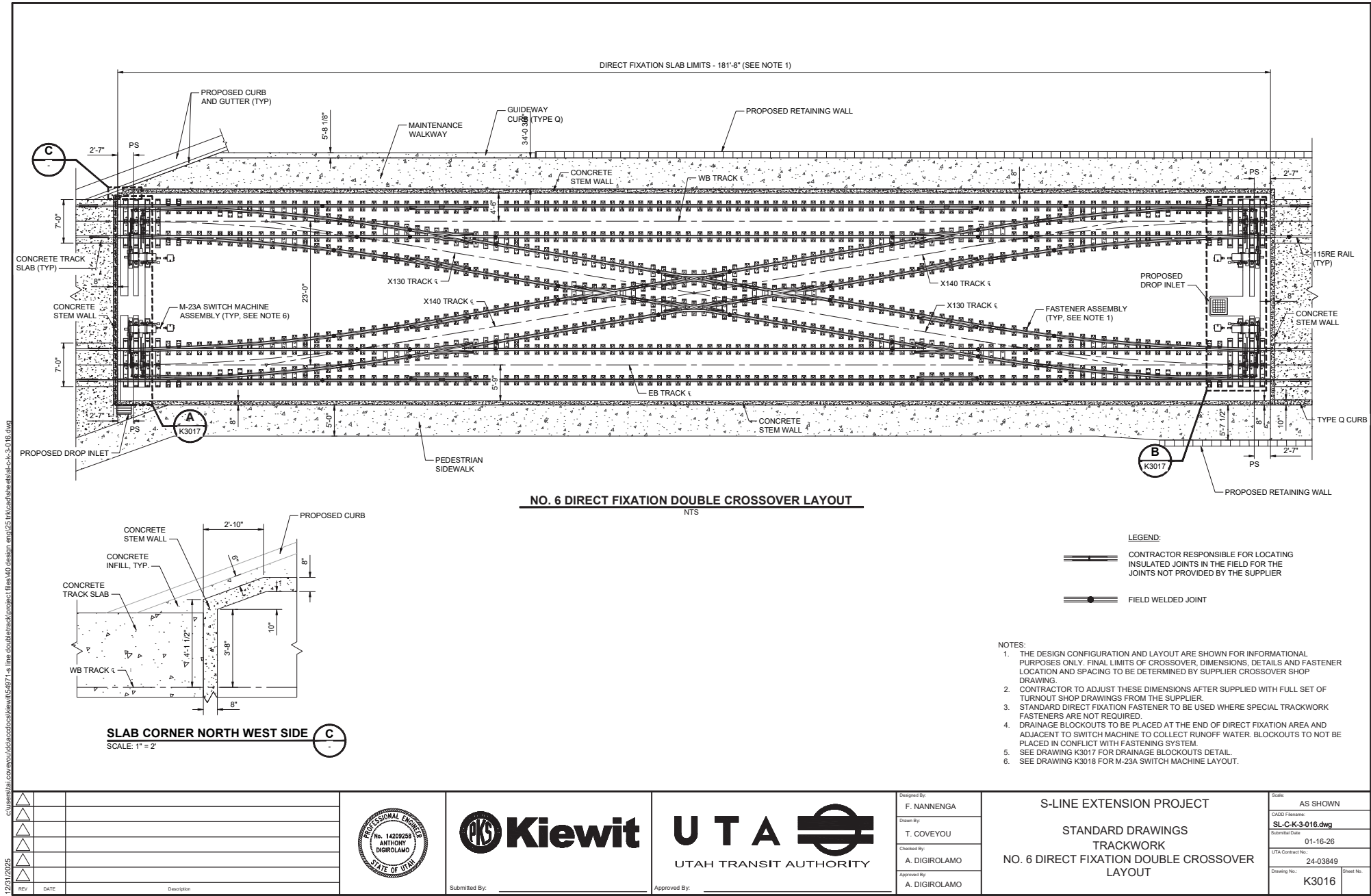


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- NOTES:
1. ALL RAIL AND COMPONENTS SHALL CONFORM TO THE 115RE RAIL SECTION.
 2. ALL RAILS ARE HIGH STRENGTH.
 3. CLOSURE RAIL LENGTHS ALLOW 1" FOR EACH WELDED JOINT AND $\frac{3}{16}$ " FOR EACH INSULATED JOINT.
 4. THE DESIGN CONFIGURATION AND LAYOUT 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 DRAWING.
 8. SUPPLY COMPLETE WITH RAIL CLIPS, SHOULDER, INSULATORS, AND PADS.
 9. CROSSOVER IS SYMMETRICAL ABOUT TRANSVERSE CL.
 10. SEE DRAWING K3018 FOR M-23A SWITCH MACHINE LAYOUT.

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12/21/2025	REV	DATE	Description

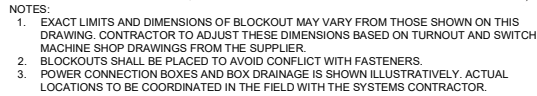


Submitted By: _____ Approved By: _____

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

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

State	AS SHOWN
CADD Filename	SL-C-K-3-016.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	K3016
Sheet No.	



    		
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REV	DATE	Description



UTA 
UTAH TRANSIT AUTHORITY

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

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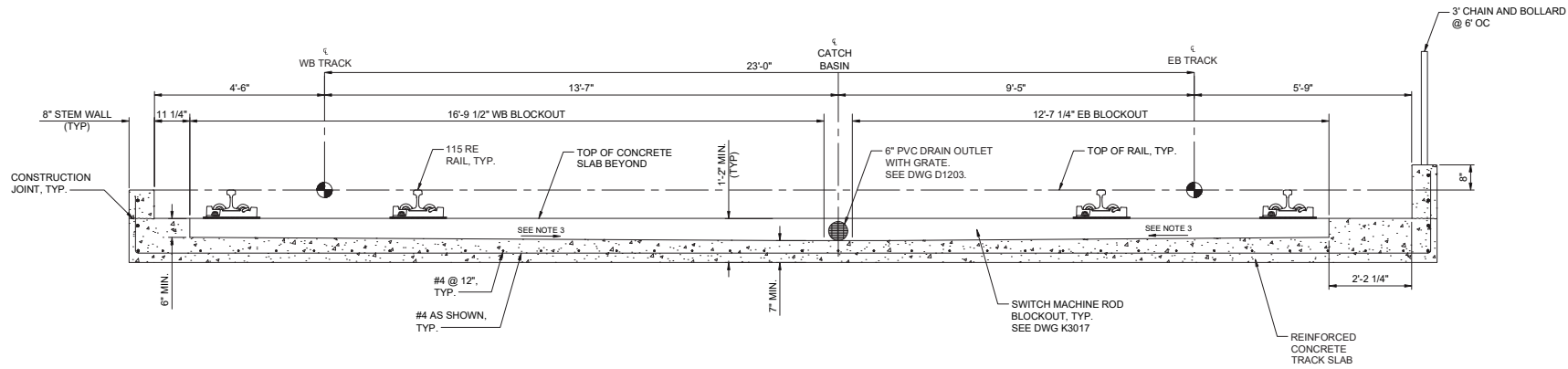


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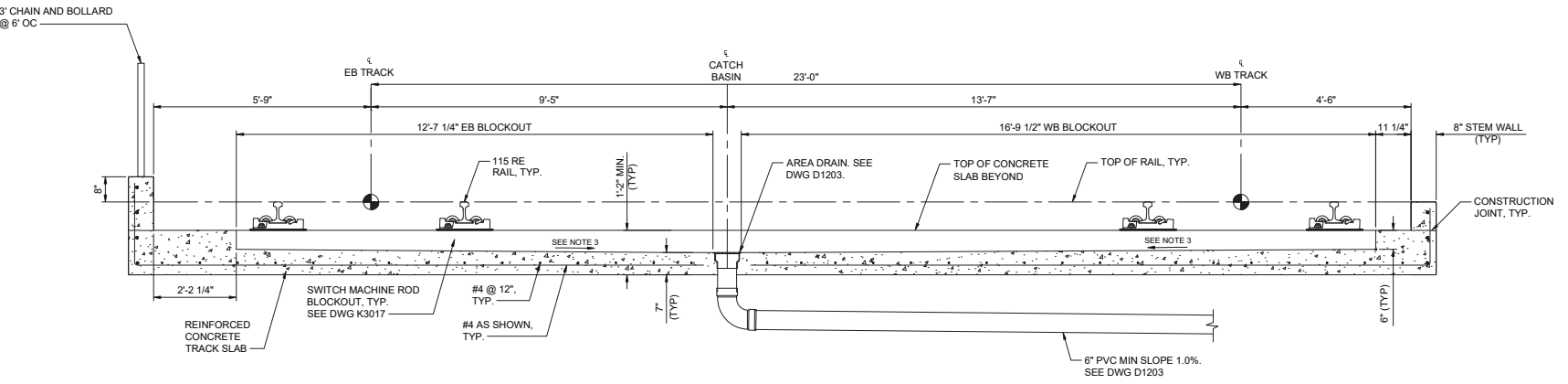


UTA 
UTAH TRANSIT AUTHORITY

Scale:		NTS	
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Submittal Date		01-16-26	
UTA Contract No.:		24-03849	
Drawing No.:		K3018	
		Sheet No.	



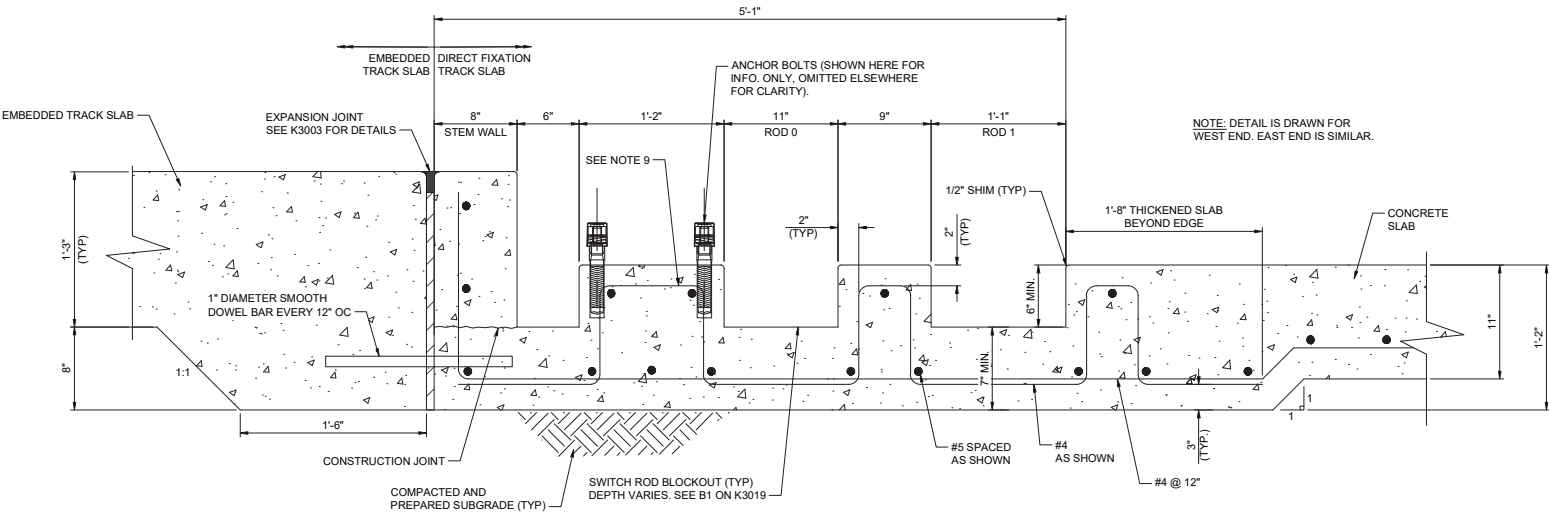
WEST END SWITCH MACHINE BLOCKOUTS **A1**
K3017



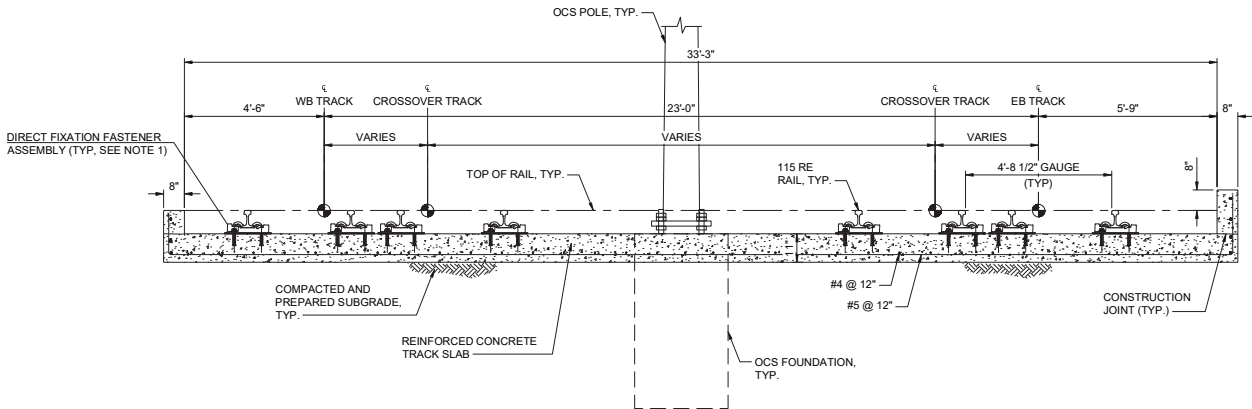
EAST END SWITCH MACHINE BLOCKOUTS **B1**
K3017

- 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.

12/21/2025			
			
			
			
			
REV	DATE	Description	



SECTION - SWITCH ROD BLOCKOUT REINFORCING A
SCALE: 1" = 0'-6"



SECTION - DIRECT FIXATION ON SLAB B
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.

12/21/2025					
REV	DATE				Description

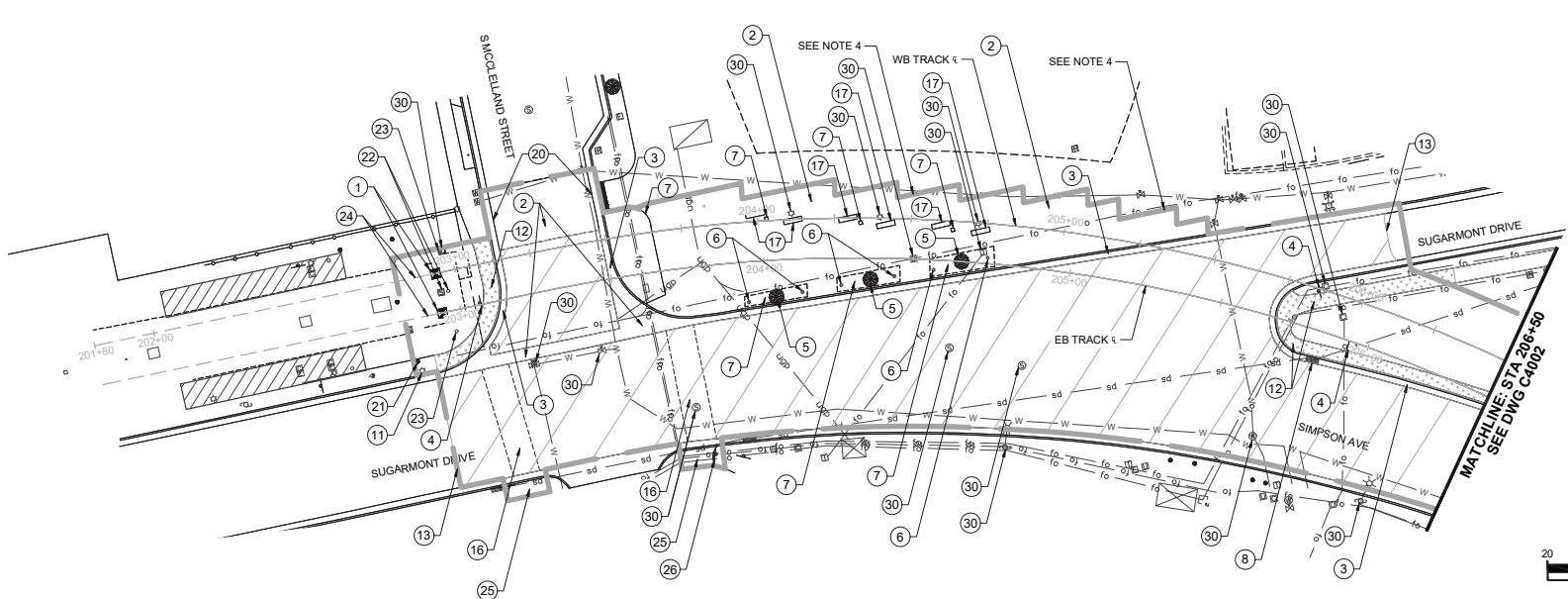


Designed By	F. NANNENGA
Drawn By	T. COVEYOU
Checked By	A. DIGIROLAMO
Approved By	A. DIGIROLAMO

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
TRACKWORK
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.	

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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 CRA ALONG SIMPSON AVE. WILL ENDOURCH OVER PROPERTY LINES. BUILDINGS THAT ENDOURCH 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.

REV	DATE	Description

Designed By
T. COVEYOU

Drawn By
T. COVEYOU

Checked By
A. DIGIROLAMO

Approved By
F. NANNENGA

S-LINE EXTENSION PROJECT

DEMOLITION PLAN

WB STA 201+80.27 TO WB STA 206+50

Scale
1" = 20'

CADD Filename
SL-C-C-4-001.dwg

Submittal Date
01-16-26

UTA Contract No.
24-03849

Drawing No.
C4001

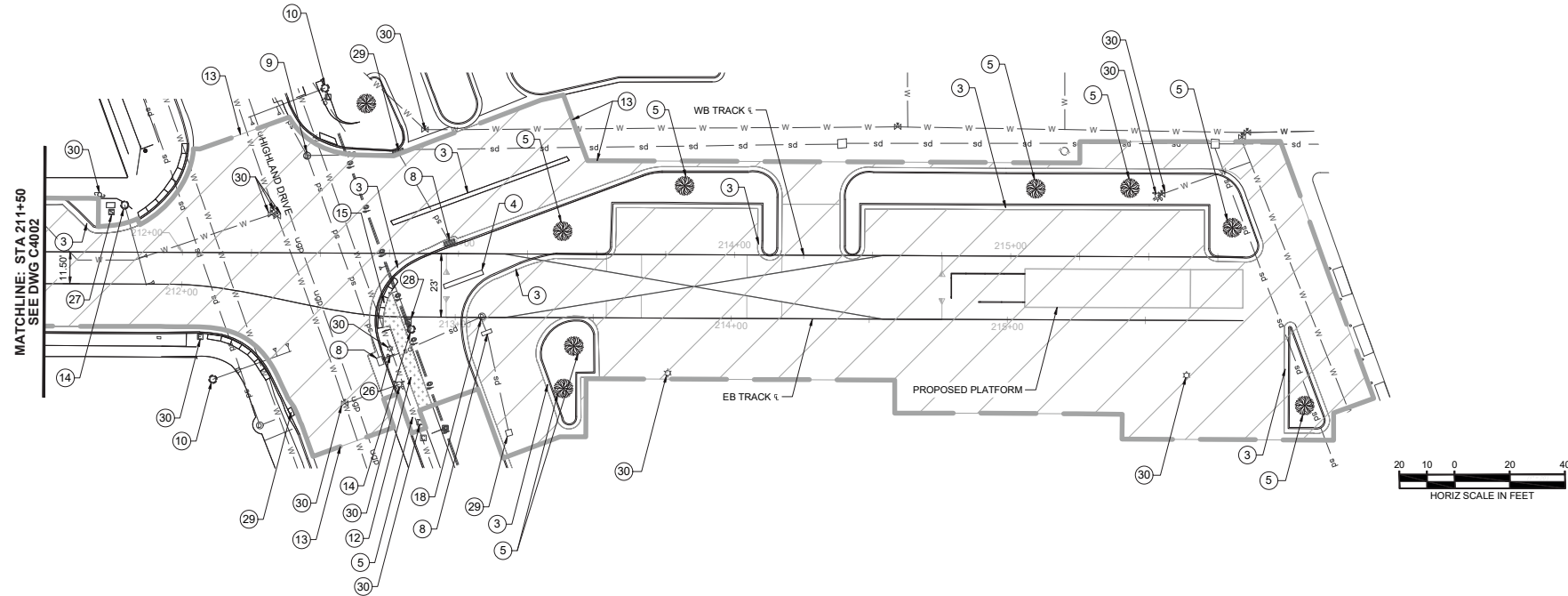
Sheet No.



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 PLACES, SEE UTILITY RELOCATION PLAN DRAWINGS U1210 - U1214, U1225, U1231, AND U1232.
5. CURB REMOVAL IS TO BE TO THE NEXT CONTRACTION JOINT FROM THE INTERSECTION AREA AND IS TO REMAIN WITHIN THE LIMITS OF CONSTRUCTION.
6. IN C.R.A. 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 C.R.A SITE DEMO. IF NOT, THIS PROJECT WILL REMOVE IT.
8. EXISTING BUILDINGS ON THE PROPERTY OWNED BY CITE 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.

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

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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.
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. ITEM TO BE SALVAGED AND RETURNED TO OWNER.
8. EXISTING BUILDINGS ON THE PROPERTY OWNED BY CRA ALONG SIMPSON AVE. WILL ENCROACH OVER PROPERTY LINES. BUILDINGS THAT ENCRACH INTO THE PUBLIC RIGHT OF WAY WILL NEED TO BE DEMOLISHED PRIOR TO FINAL PLAT APPROVAL.
9. SEE CIVIL SHEETS C1108 AND C1109 FOR DEMOLITION GEOMETRY.
10. SEE DRAWINGS D1201 - D1203 FOR MORE INFORMATION.
11. SEE DRAWINGS C1003 FOR THE LOCATIONS OF THE PROPOSED LANDSCAPING.

1/15/2028			
REV	DATE	Description	



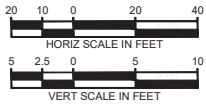
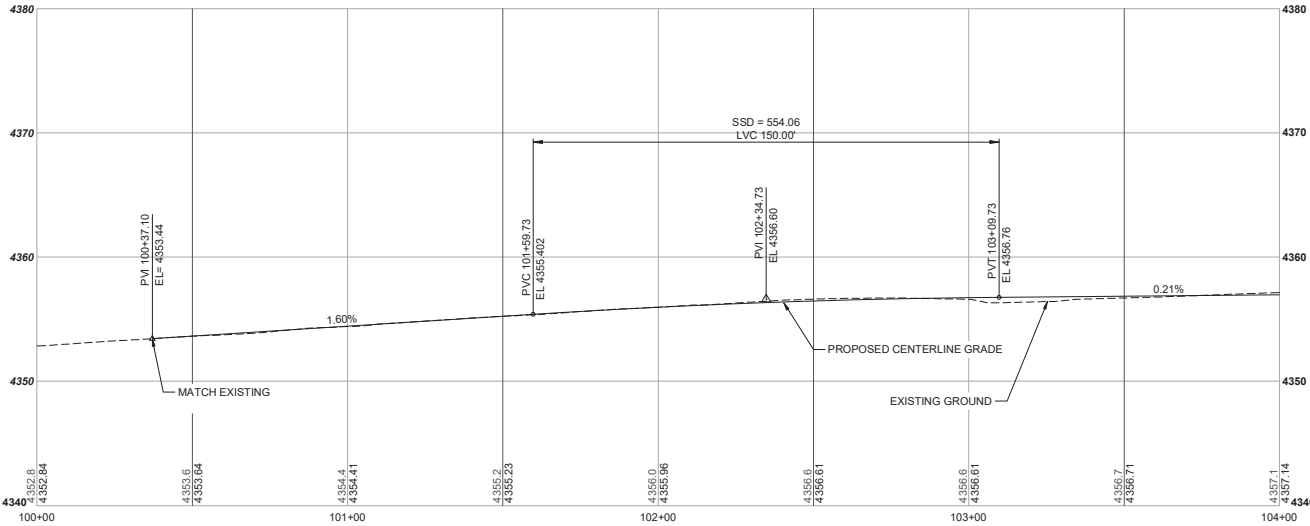
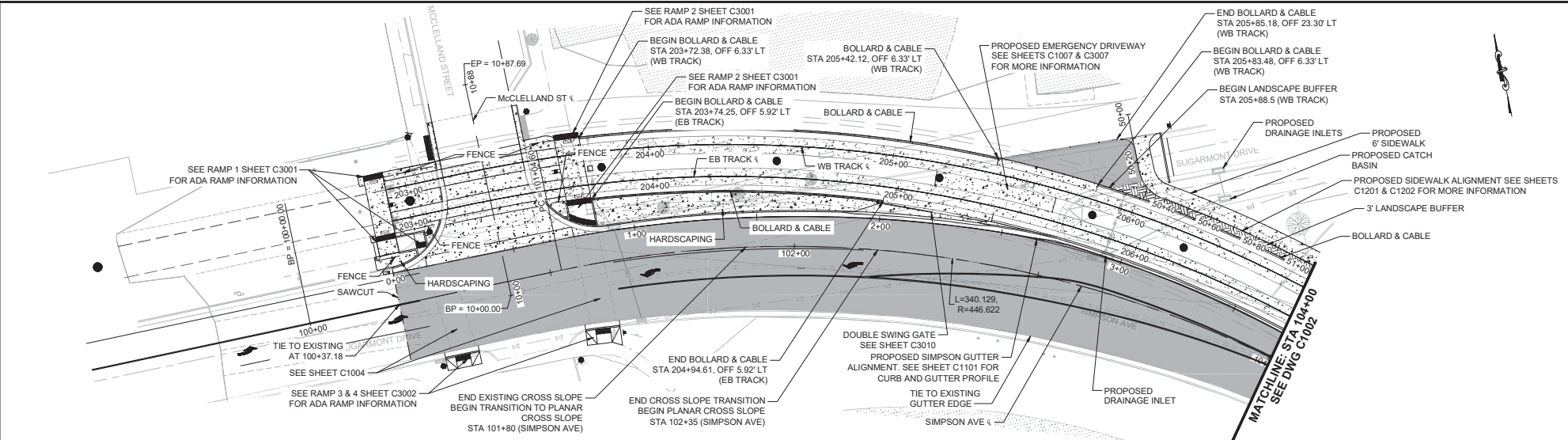
Designed By	T. COVEYOU
Drawn By	T. COVEYOU
Checked By	A. DIGIROLAMO
Approved By	F. NANNENGA

S-LINE EXTENSION PROJECT

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

Scale	1" = 20'
CADD Filename:	SL-C-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

REV	DATE	Description

Submitted By: _____

Approved By: _____

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

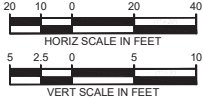
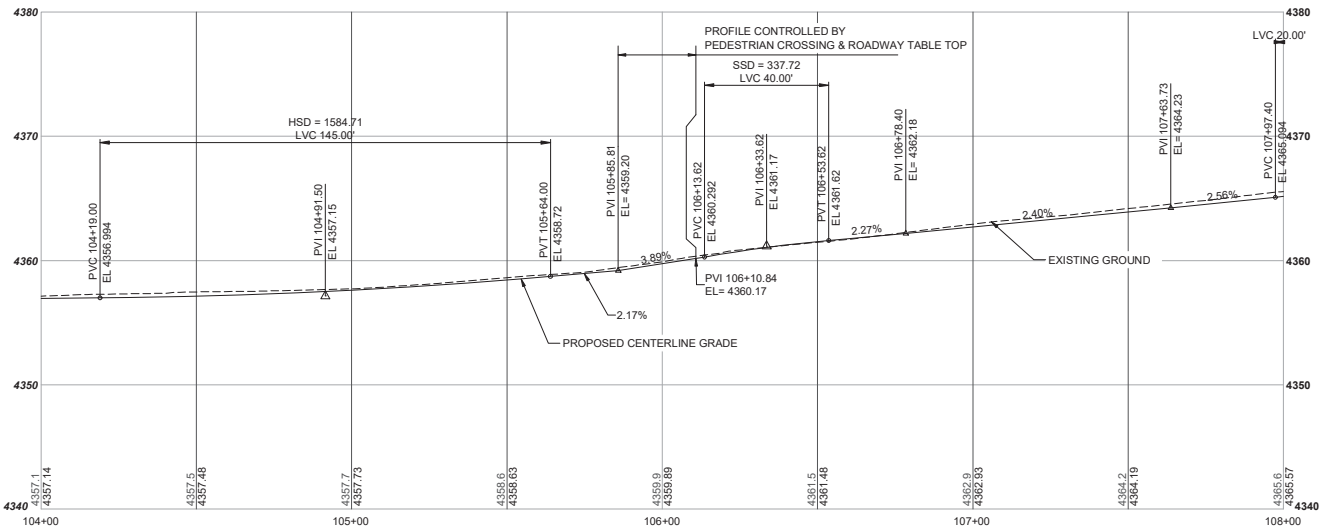
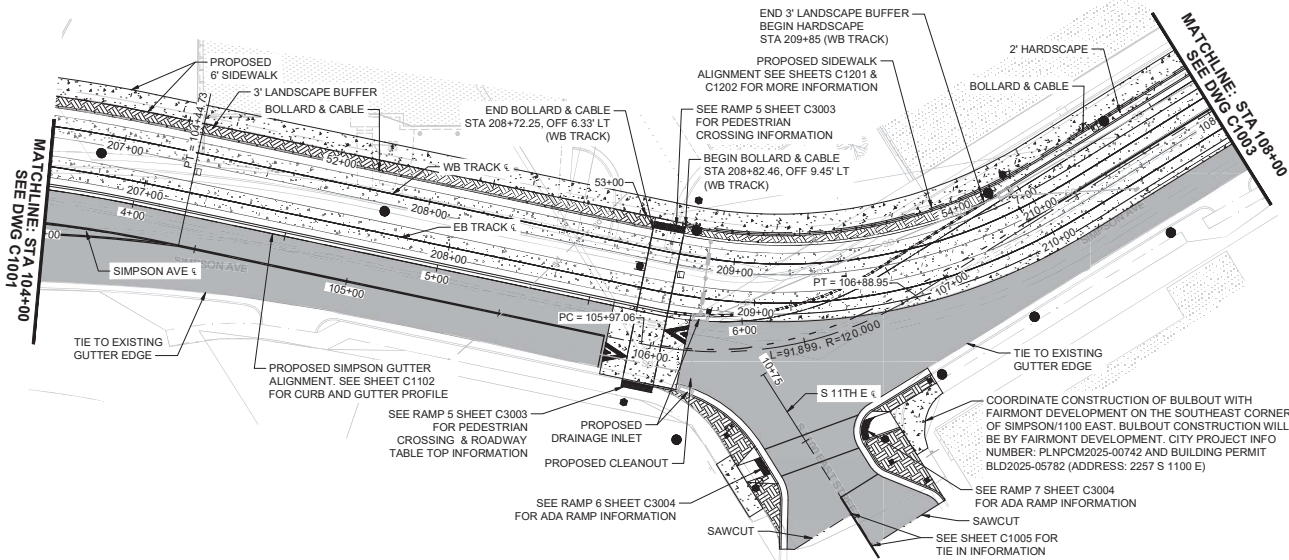
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Submittal Date: 01-16-26

UTA Contract No: 24-03849

Drawing No: C1001



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

1/15/2028	REV	DATE	DESCRIPTION
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2			
3			
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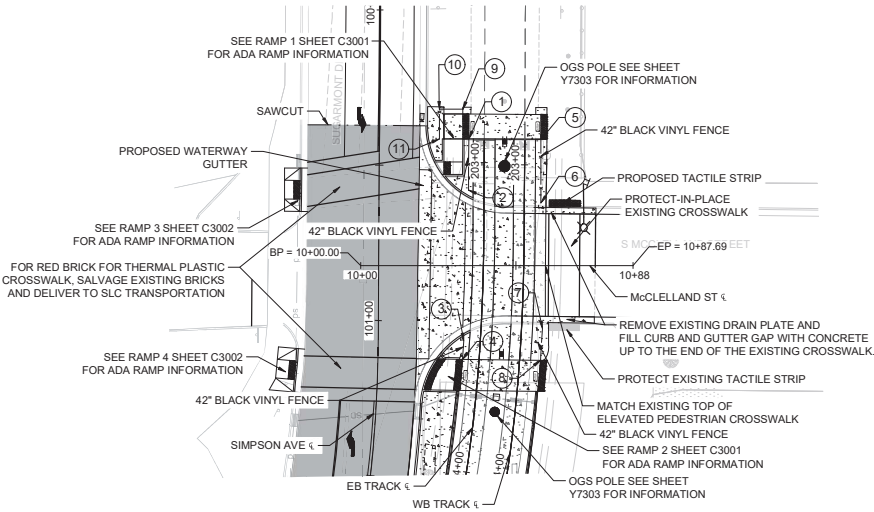
Designed By	M. HARTMANN
Drawn By	M. HARTMANN
Checked By	A. DIGIROLAMO
Approved By	F. NANNENGA

S-LINE EXTENSION PROJECT

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

Scale	H: 1" = 20' V: 1" = 5'
CADD Filename	SL-C-C-1-002.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	C1002
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

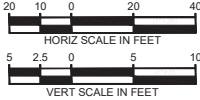
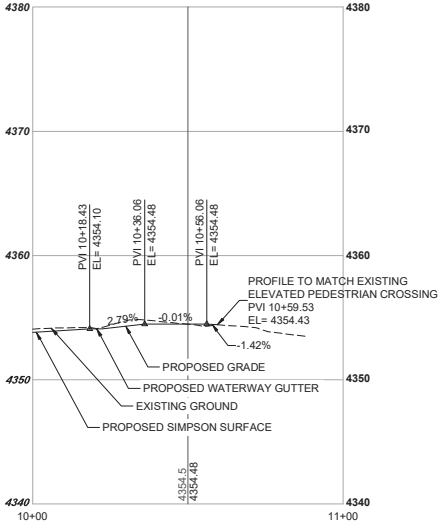
BEGIN 42" BLACK VINYL FENCE
STA 203+53.46, OFF 5.41' LT
(WB TRACK)
- 8

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:

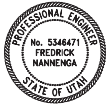
PAVEMENT

LANDSCAPING

CONCRETE

BP = BEGIN POINT
EP = END POINT

1/15/2028					
REV	DATE				Description

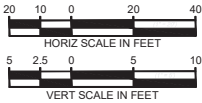
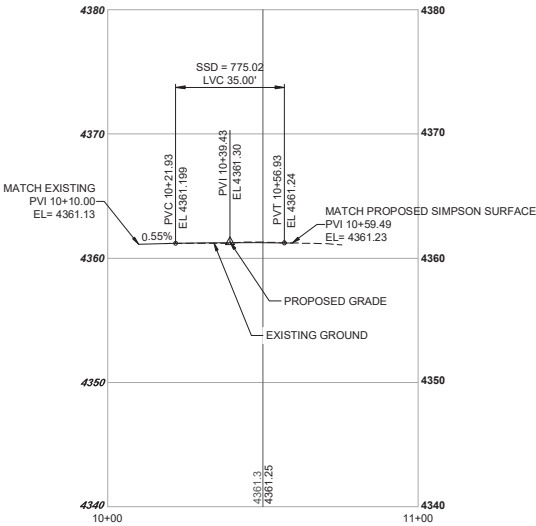
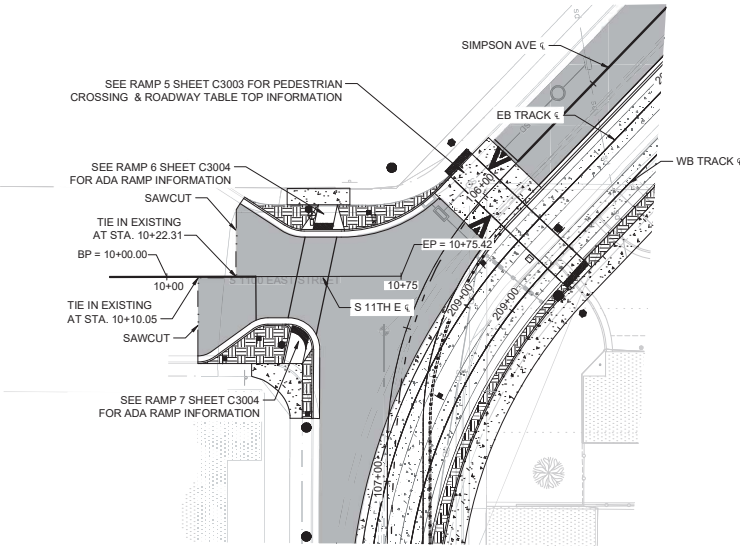


Designed By	M. HARTMANN
Drawn By	M. HARTMANN
Checked By	A. DIGIROLAMO
Approved By	F. NANNENGA

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-C-1-004.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	C1004
Sheet No.	



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

1/15/2028					
REV	DATE				Description



Submitted By: _____ Approved By: _____

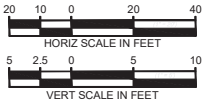
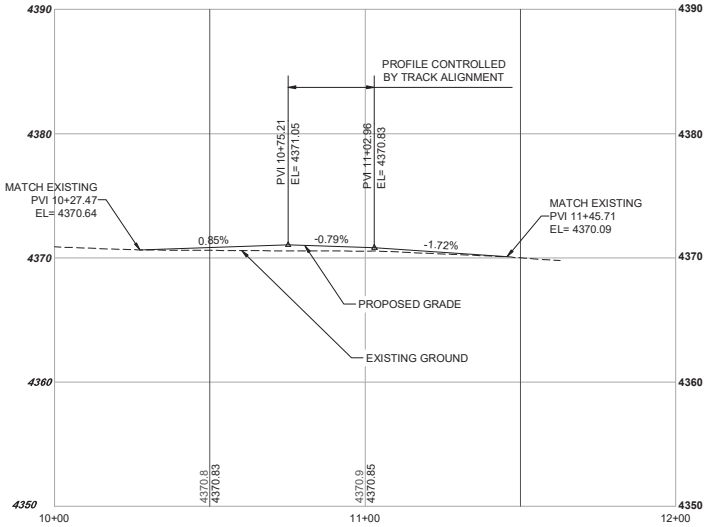
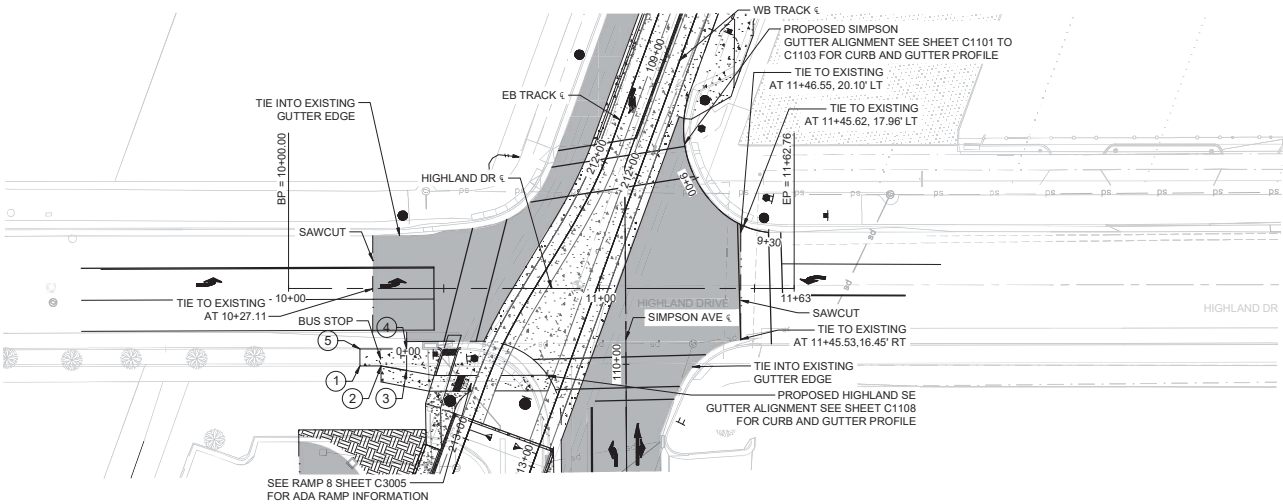
Designed By:	M. HARTMANN
Drawn By:	M. HARTMANN
Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT

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

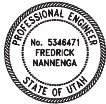
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Submittal Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1005
Sheet No.:	

- 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+22.99, OFF 19.51' RT
(HIGHLAND DR CL)
MATCH EXISTING BACK OF CURB



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

1/15/2028			
REV	DATE	Description	



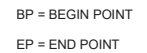
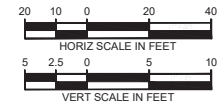
Submitted By: _____ Approved By: _____

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

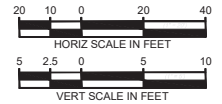
S-LINE EXTENSION PROJECT

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

Scale	H: 1" = 20' V: 1" = 5'
CADD Filename	SL-C-C-1-006.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	C1006
Sheet No.	



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Submittal Date 01-16-26	
UTA Contract No.: 24-03849	
Drawing No.: C1007	Sheet No.

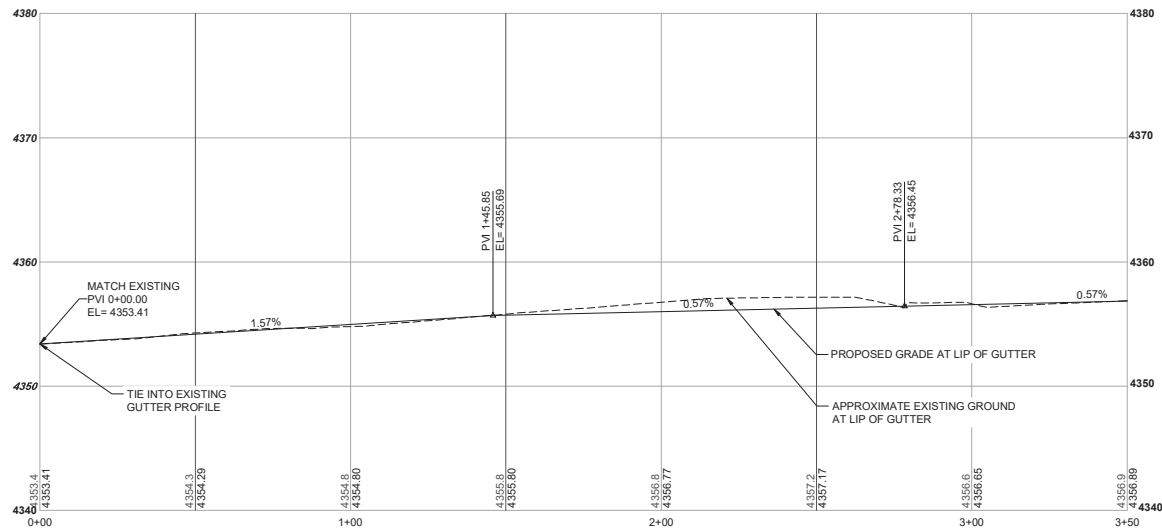


PAVEMENT

LANDSCAPING

CONCRETE

EP = END POINT



REV	DATE	Description

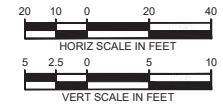


UTA 
UTAH TRANSIT AUTHORITY

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

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	
Submittal Date 01-16-26	
UTA Contract No.: 24-03849	
Drawing No.: C1101	Sheet No.



PAVEMENT

LANDSCAPING

CONCRETE

BP = BEGIN POINT

EP = END POINT

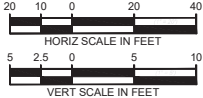
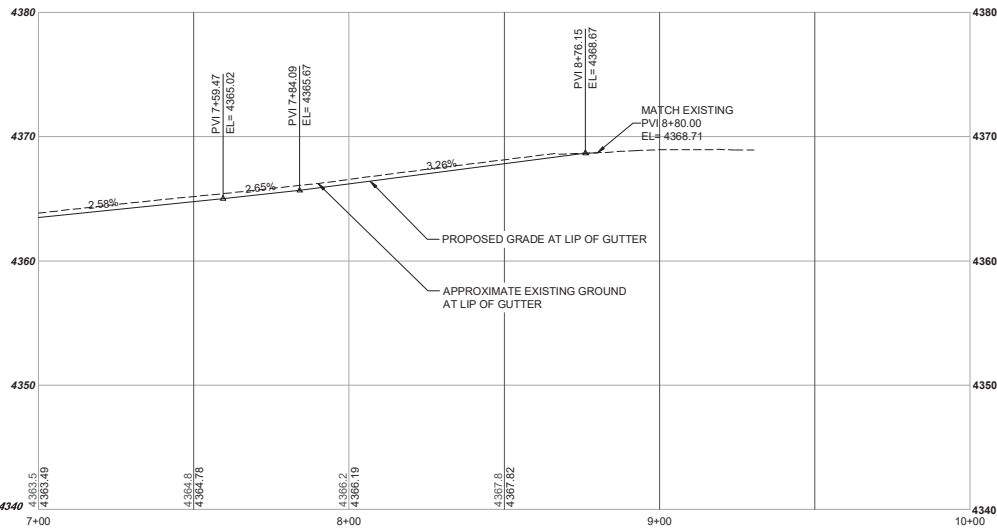
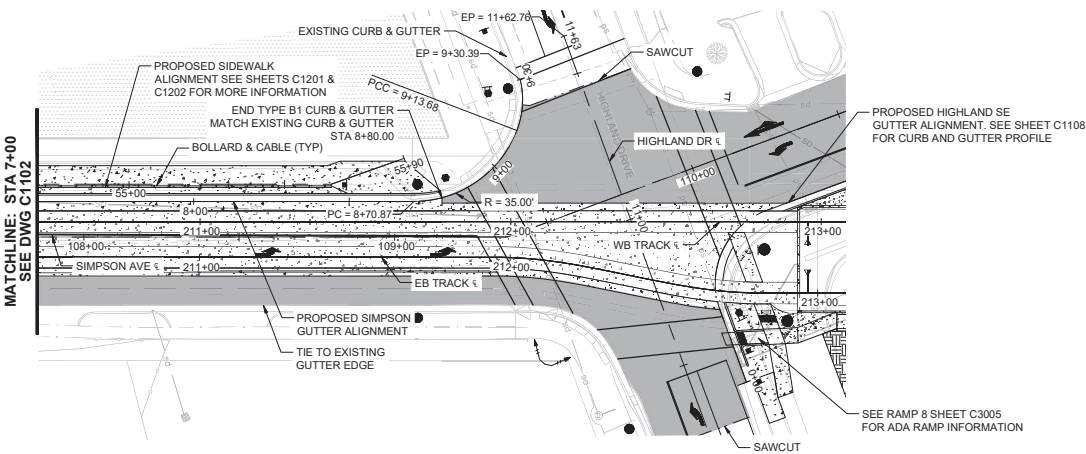
    			
11/12/2018			
REV	DATE	Description	



UTA 
UTAH TRANSIT AUTHORITY

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

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



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

1/15/2028					
REV	DATE				Description

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

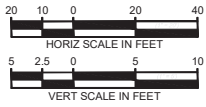
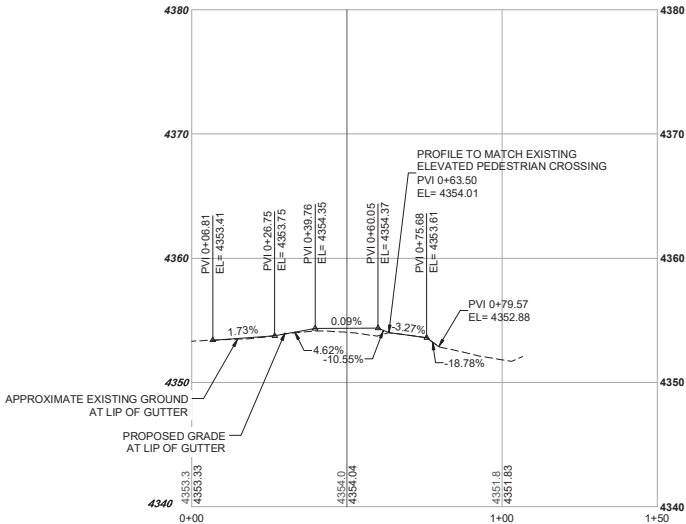
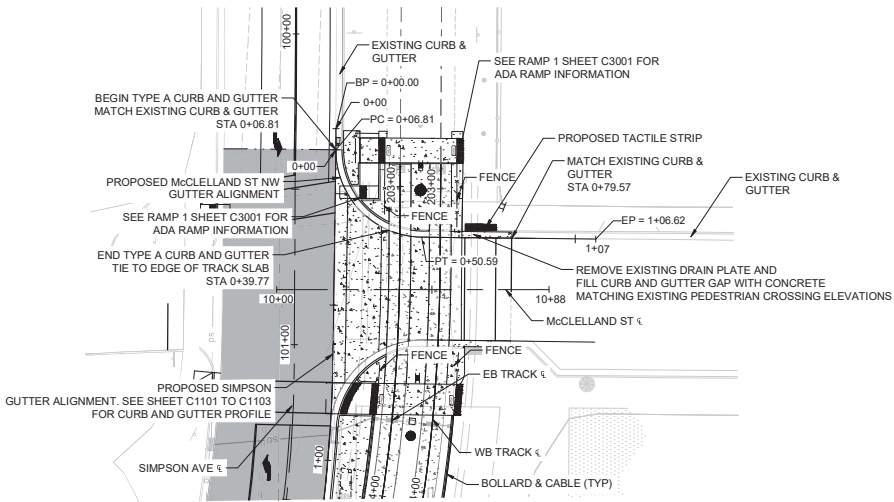
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Submittal Date: 01-16-26

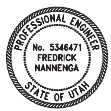
UTA Contract No.: 24-03849

Drawing No.: C1103



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

1/15/2028					
REV	DATE				Description

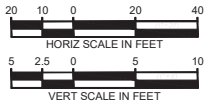
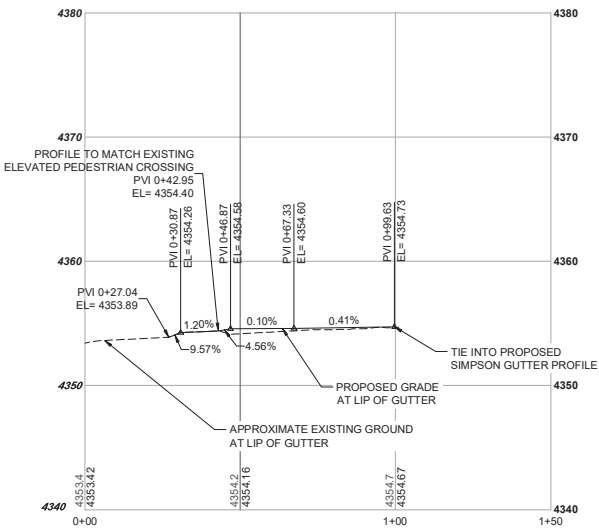
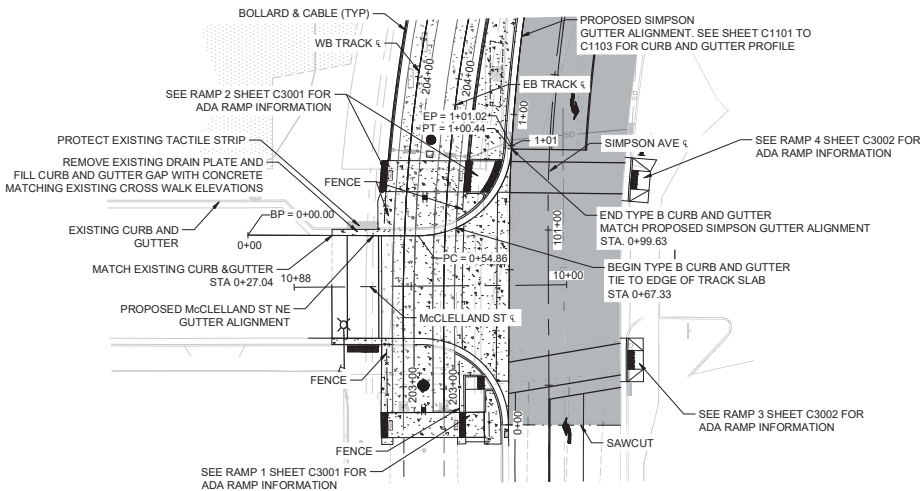


Submitted By: _____ Approved By: _____

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

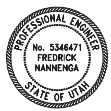
S-LINE EXTENSION PROJECT
McCLELLAND ST NW CURB AND GUTTER
PLAN AND PROFILE
STA 0+00 TO STA 1+00

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CADD Filename:	SL-C-C-1-104.dwg
Submittal Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C1104
Sheet No.:	



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

1/15/2028					
REV	DATE	Description			



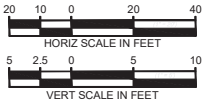
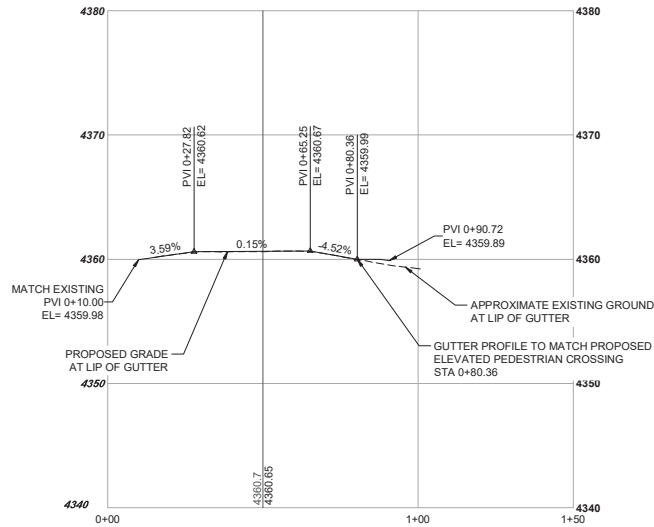
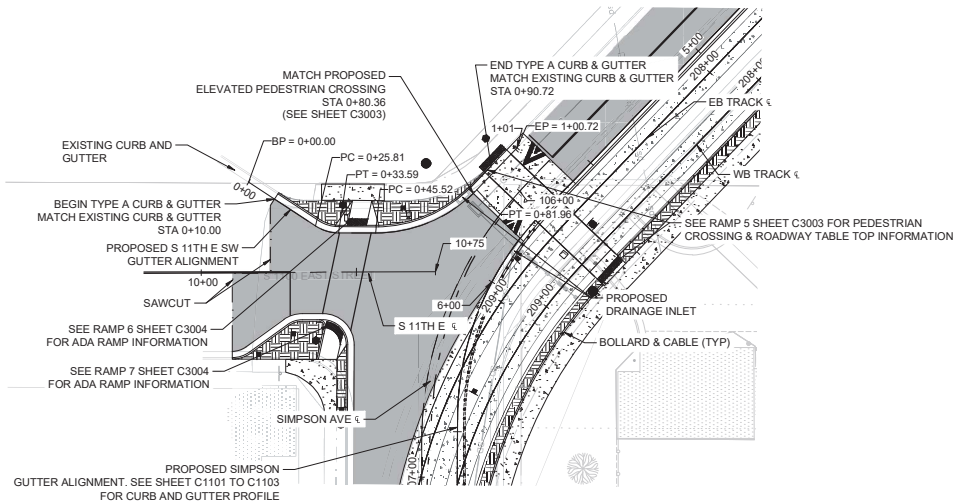
Submitted By: _____ Approved By: _____

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

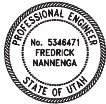
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Submitted Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	C1105
Sheet No.	

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1/15/2028



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

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REV	DATE	Description



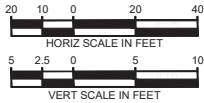
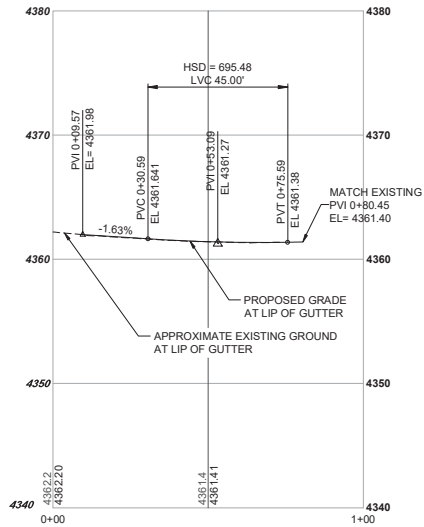
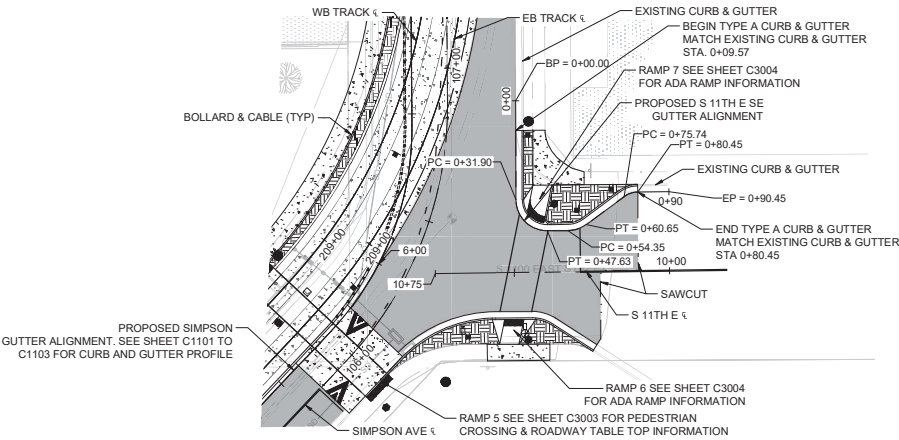
Submitted By: _____ Approved By: _____

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

S-LINE EXTENSION PROJECT

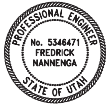
S 11TH E SW CURB AND GUTTER
PLAN AND PROFILE
STA 0+00 TO STA 1+00

Scale	H: 1" = 20' V: 1" = 5'
CADD Filename	SL-C-C-1-106.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	C1106
Sheet No.	



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

1/15/2028					
REV	DATE	Description			



Submitted By: _____ Approved By: _____

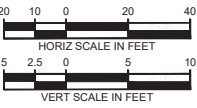
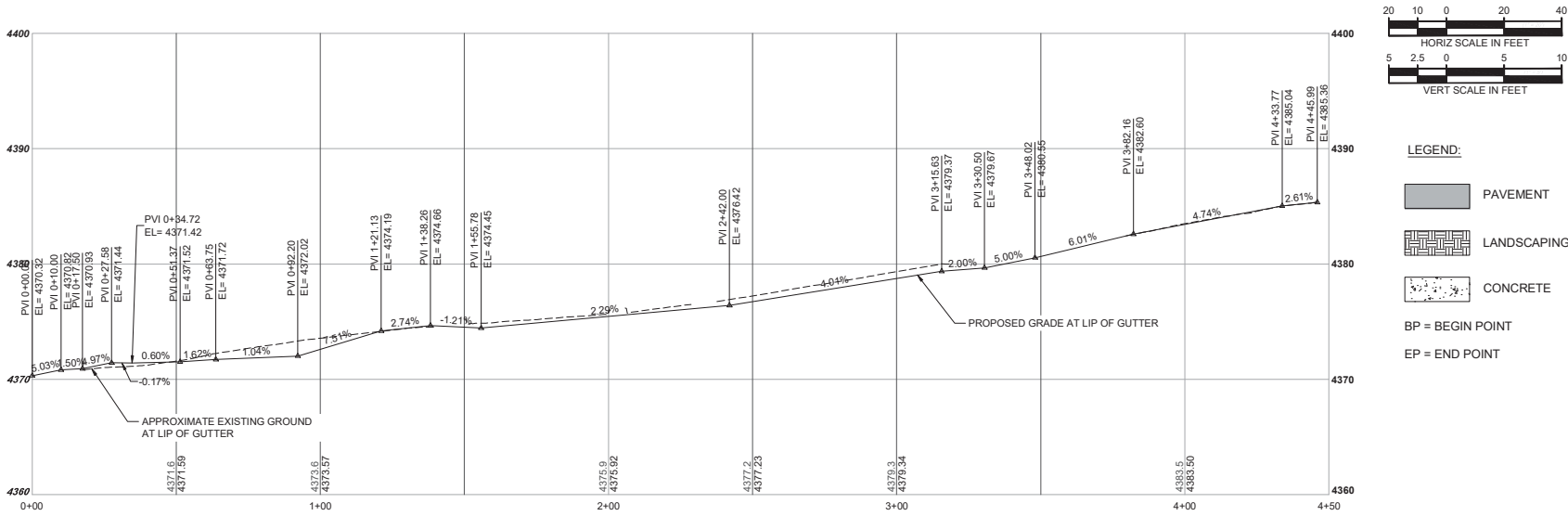
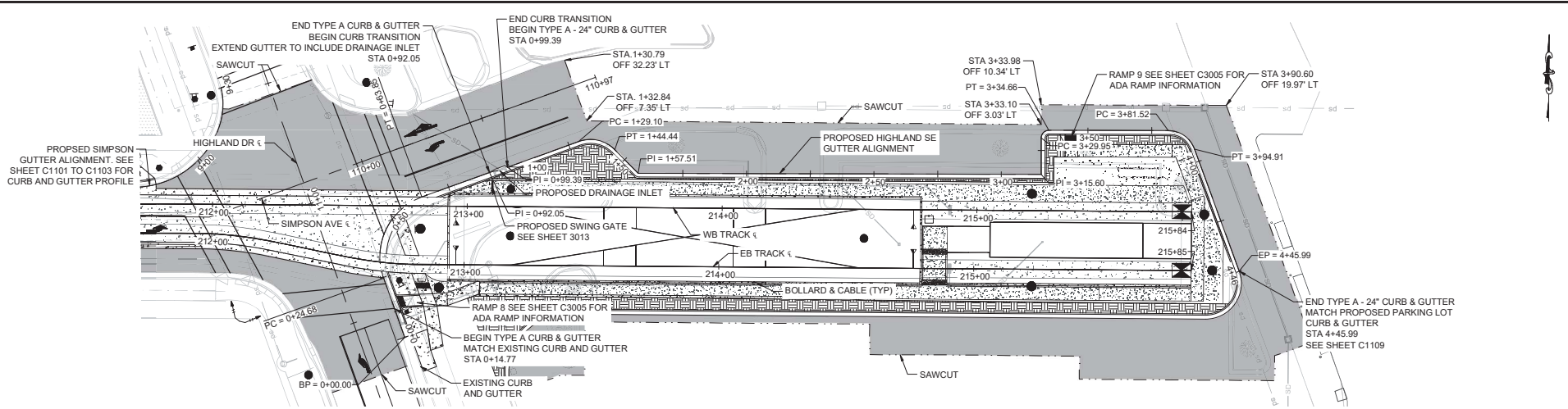
Designed By	M. HARTMANN
Drawn By	M. HARTMANN
Checked By	A. DIGIROLAMO
Approved By	F. NANNENGA

S-LINE EXTENSION PROJECT

S 11TH E 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
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	C1107
Sheet No.	

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

REV	DATE	Description

Designed By
M. HARTMANN

Drawn By
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'

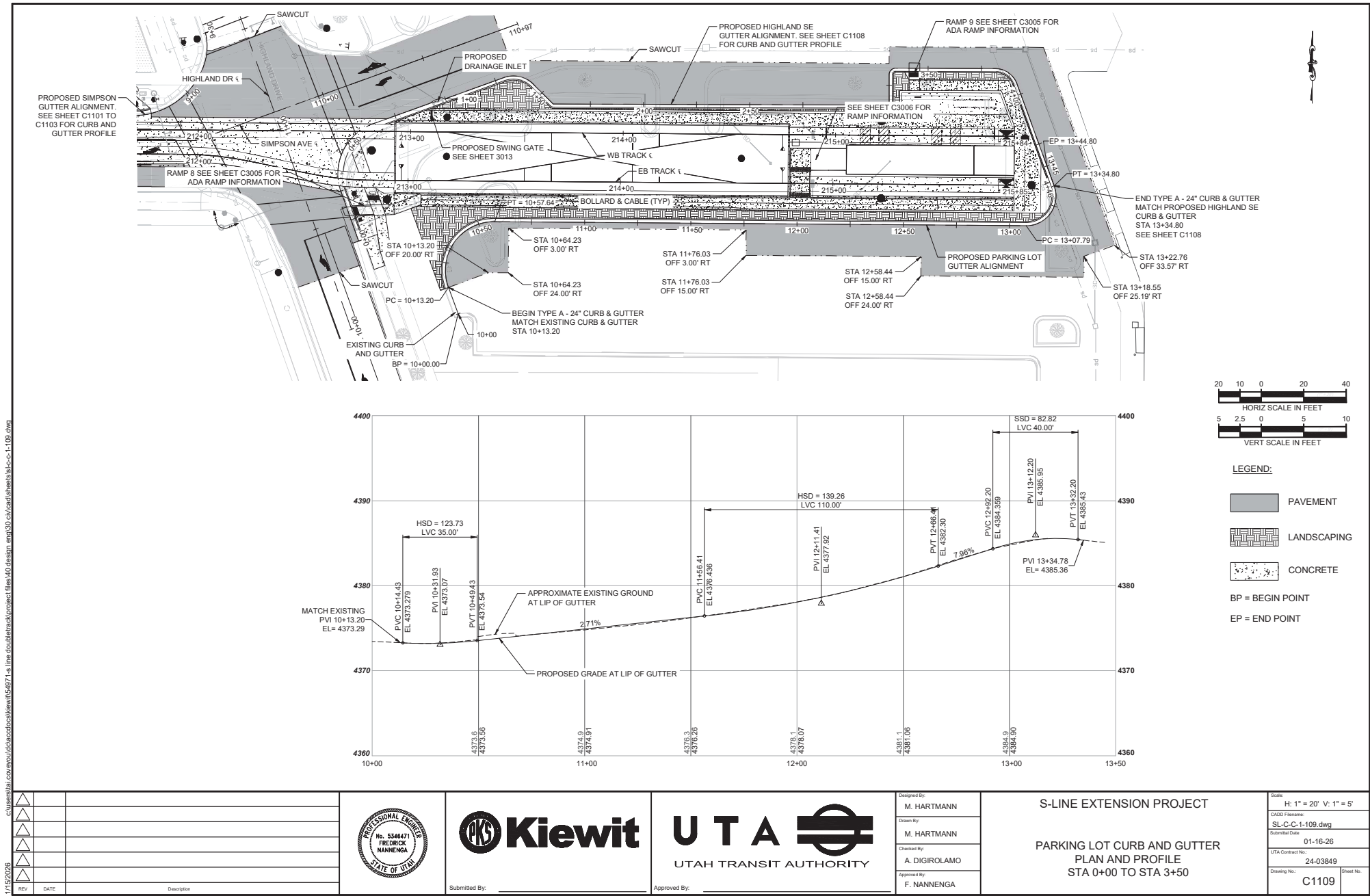
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Submitted Date
01-16-26

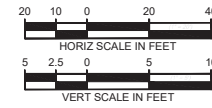
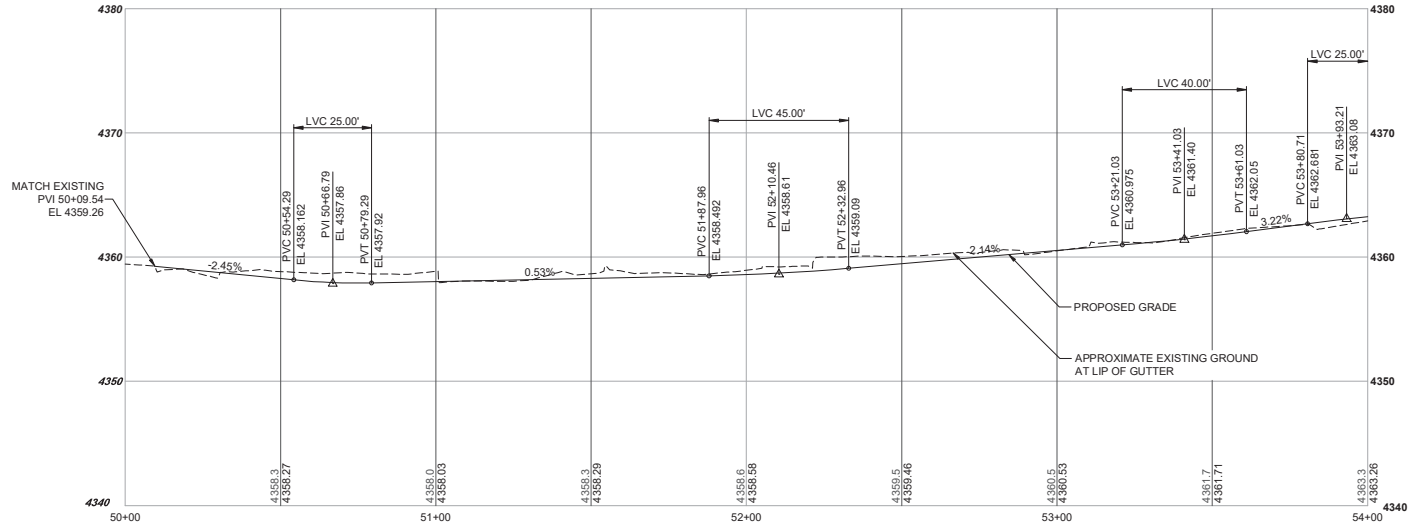
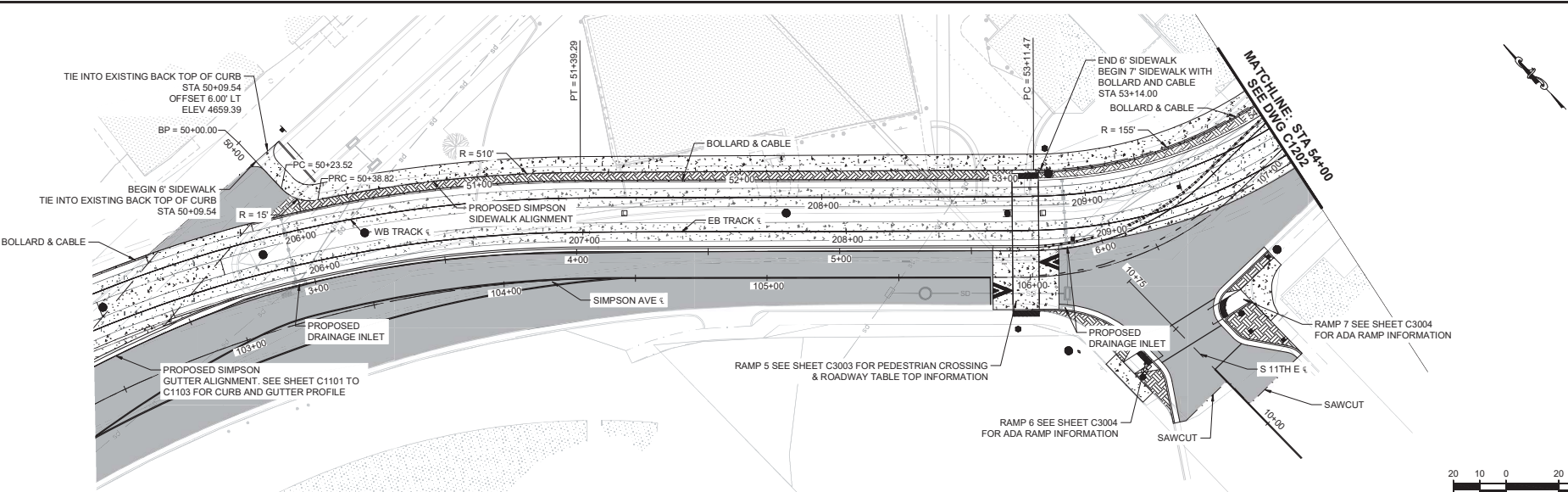
UTA Contract No.
24-03849

Drawing No.
C1108

Sheet No.



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1/15/2028



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

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-C-1-201.dwg

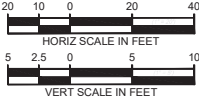
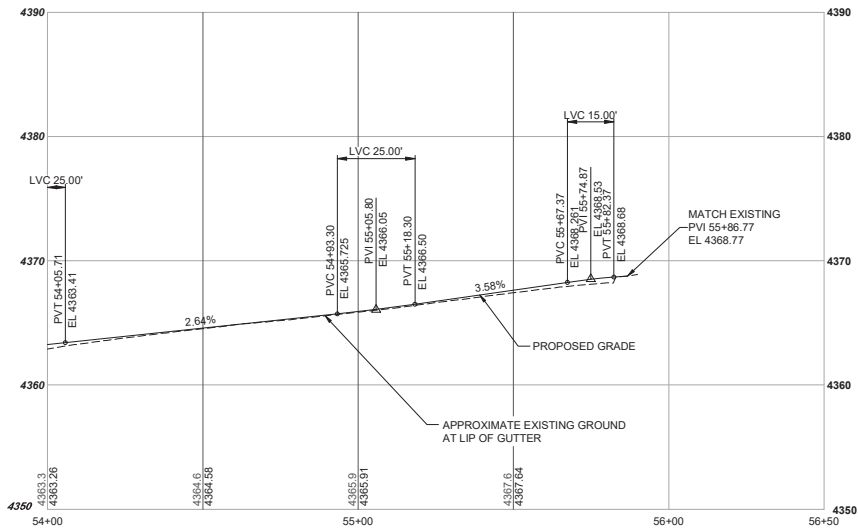
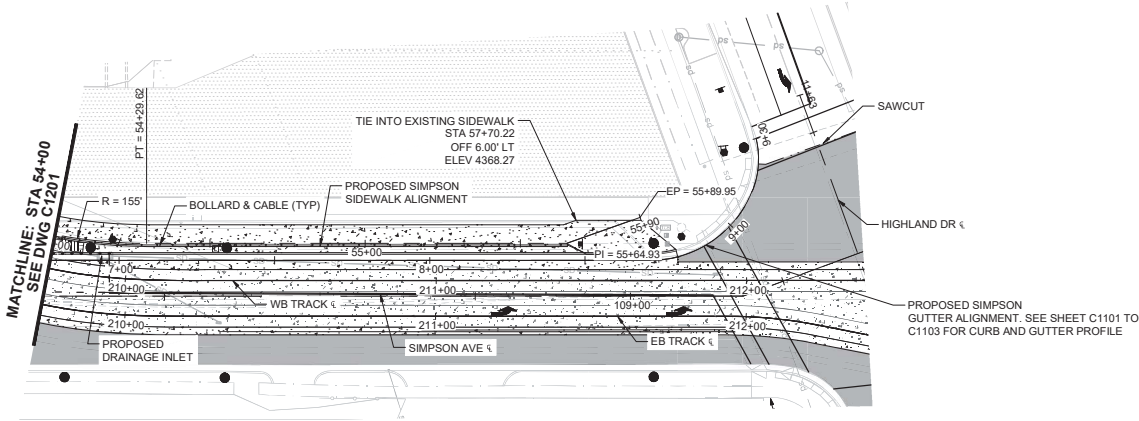
Submitted Date: 01-16-26

UTA Contract No.: 24-03849

Drawing No.: C1201

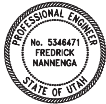
Sheet No.:

Submitted By: _____ Approved By: _____



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

1/15/2028					
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 54+00 TO STA 57+25

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



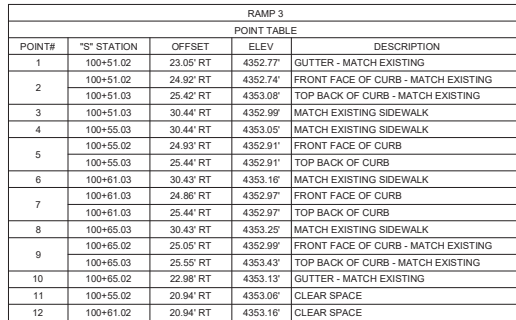
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POINT TABLE				
POINT#	"W" STATION	OFFSET	ELEV	DESCRIPTION
1	0+09.94	2.00' LT	4353.25'	BEGIN TRANSITION FOR GUTTER PAN SLOPE REDUCTION
	0+09.94	2.50' LT	4353.75'	TOP BACK OF CURB
2	0+19.45	2.50' LT	4354.05'	TOP BACK OF CURB
	0+19.79	2.00' LT	4353.55'	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
6	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	0.96' 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+38.67	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

[illegible]

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

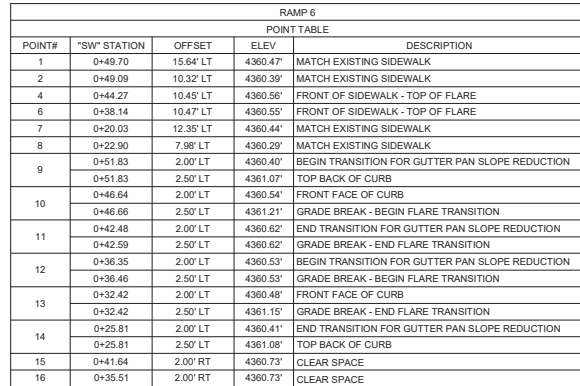
ROADWAY CURB RETURN DETAILS

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



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
5	101+13.70	25.87 RT	4353.72	FRONT FACE OF CURB
	101+13.67	26.37 RT	4353.72	TOP BACK OF CURB
6	101+19.74	32.70 RT	4353.64	MATCH EXISTING SIDEWALK
7	101+20.06	26.23 RT	4353.81	FRONT FACE OF CURB
	101+20.03	26.73 RT	4353.81	TOP BACK OF CURB
8	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
9	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
11	101+13.96	21.87 RT	4353.95	CLEAR SPACE
12	101+20.26	22.24 RT	4353.89	CLEAR SPACE

14-2205				Drawn By: M. HARTMANN	S-LINE EXTENSION PROJECT STANDARD DRAWINGS ROADWAY CURB RETURN DETAILS	State: NTS
				Drawn By: M. HARTMANN		CADD Filename: SL-C-C-3-002.dwg
				Checked By: A. DIGIROLAMO		Submittal Date: 01-16-26
				Approved By: F. NANNENGA		UTA Contract No.: 24-03849
REV	DATE	Description	Submitted By:	Approved By:		Drawing No.: C3002



RAMP 7				
POINT TABLE				
POINT#	"SE" STATION	OFFSET	ELEV	DESCRIPTION
1	0+40.03	2.18' RT	4361.47'	CLEAR SPACE
2	0+45.90	2.21' RT	4361.40'	CLEAR SPACE
3	0+59.28	2.00' LT	4361.16'	BEGIN TRANSITION FOR GUTTER PAN SLOPE REDUCTION
	0+59.28	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

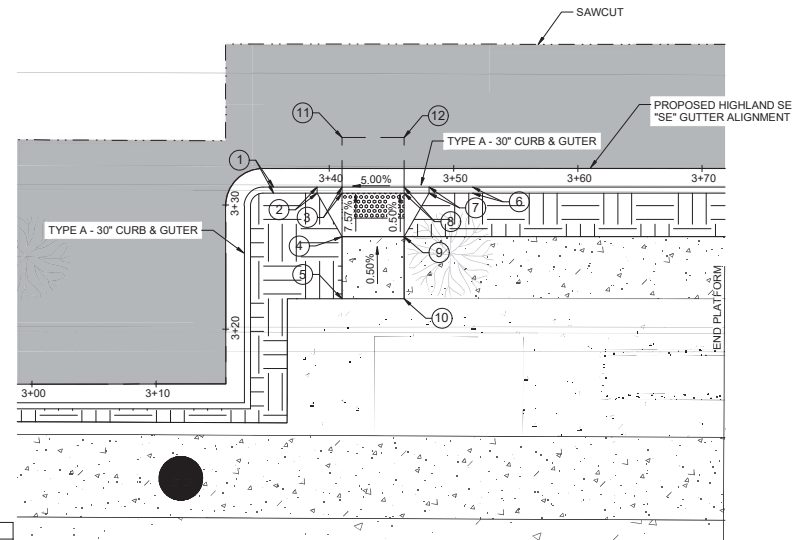
    			
11/2/2018			
REV	DATE	Description	



Approved By: _____

ROADWAY CURB RETURN DETAILS

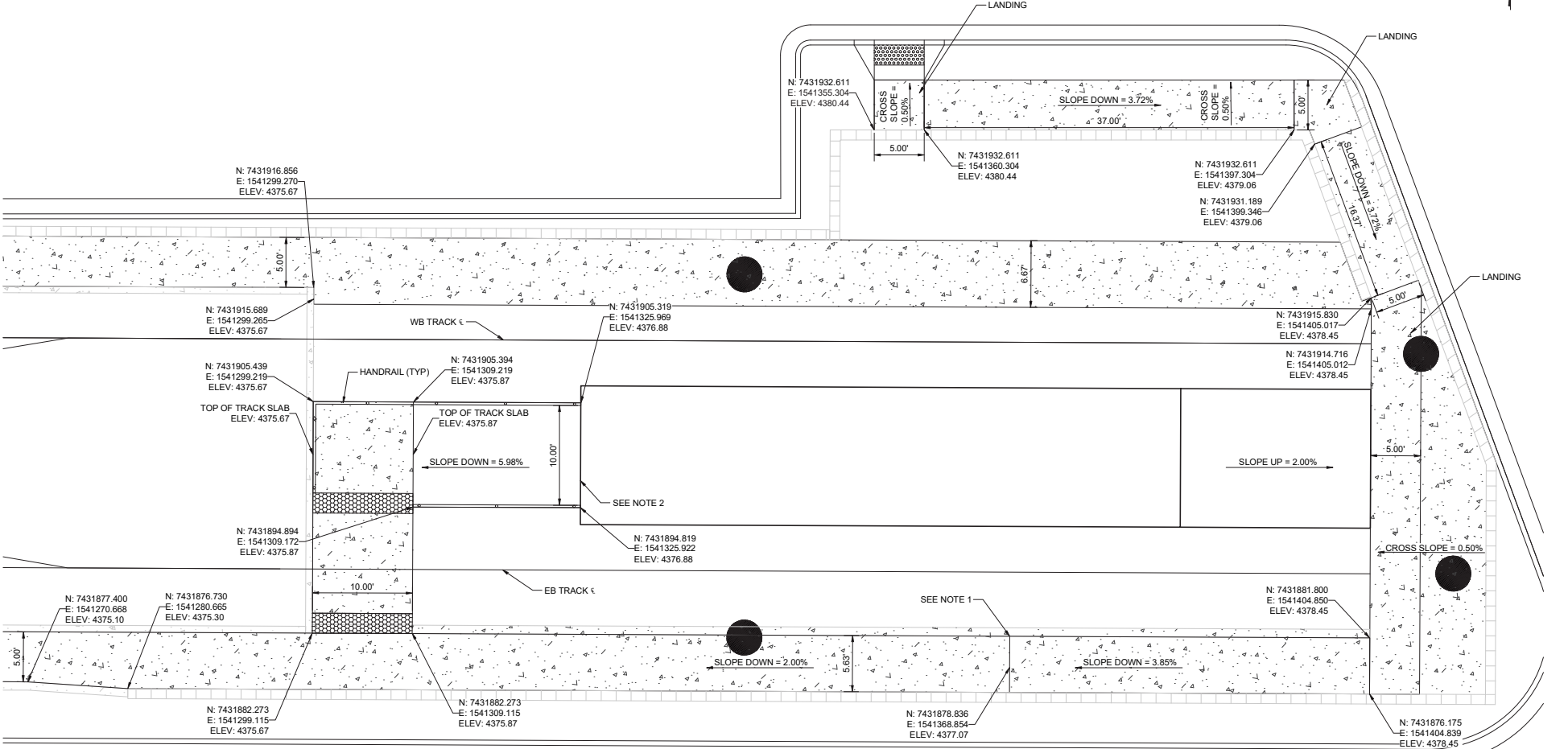
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Submittal Date	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	C3004



RAMP 9				
POINT TABLE				
POINT#	"SE" STATION	OFFSET	ELEV	DESCRIPTION
1	3+35.82	1.50' RT	4379.78'	BEGIN TRANSITION FOR GUTTER PAN SLOPE REDUCTION
	3+35.82	2.00' RT	4380.28'	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	4380.39'	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
12	3+46.02	2.50' LT	4380.56'	CLEAR SPACE

Scale:		NTS	
CADD Filename:		SL-C-C-3-005.dwg	
Submittal 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



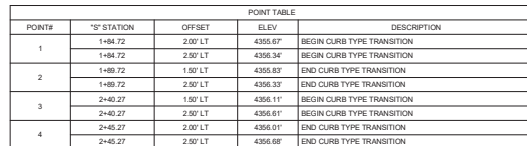
Submitted By: _____ Approved By: _____

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

S-LINE EXTENSION PROJECT

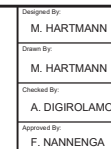
SUGAR HOUSE PLATFORM AREA
PEDESTRIAN RAMP AND SIDEWALK PLAN

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



POINT TABLE				
POINT#	"W" STATION	OFFSET	ELEV	DESCRIPTION
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+68.66	3.50' RT	4357.32'	MATCH TRACK SLAB ELEVATION
15	205+83.48	3.50' LT	4357.40'	MATCH TRACK SLAB ELEVATION
16	205+83.48	6.67' LT	4357.28'	
17	205+88.11	6.67' LT	4357.55'	
18	206+00.14	13.41' LT	4358.56'	MATCH PROPOSED SIDEWALK EDGE
19	206+00.75	29.02' LT	4359.26'	MATCH EXISTING SIDEWALK

    			
REV	DATE	Description	

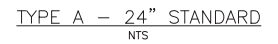
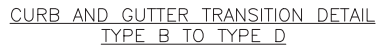
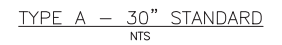
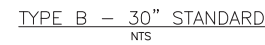
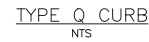


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Submittal Date	01-16-26	
UTA Contract No.:	24-03849	
Drawing No.:	C3007	Sheet No.





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

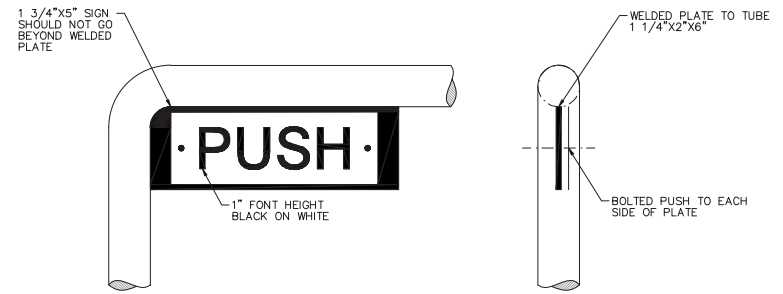


S-LINE EXTENSION PROJECT

CIVIL

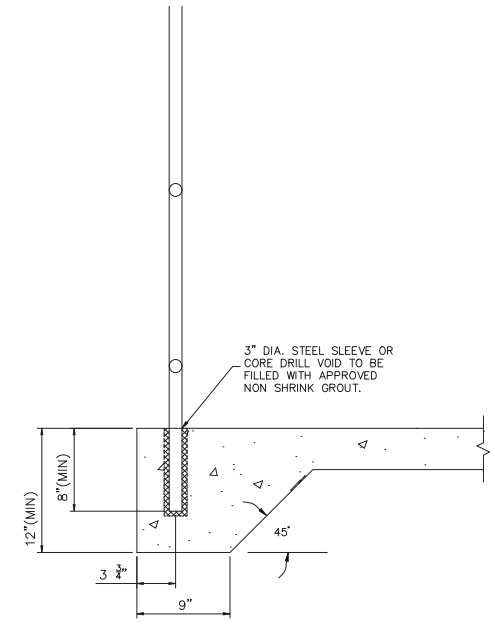
CURB TRANSITIONS AND DETAILS

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UTA Contract No.:		24-03849	
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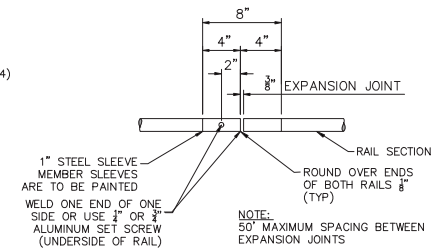
GATE DETAIL

[illegible]



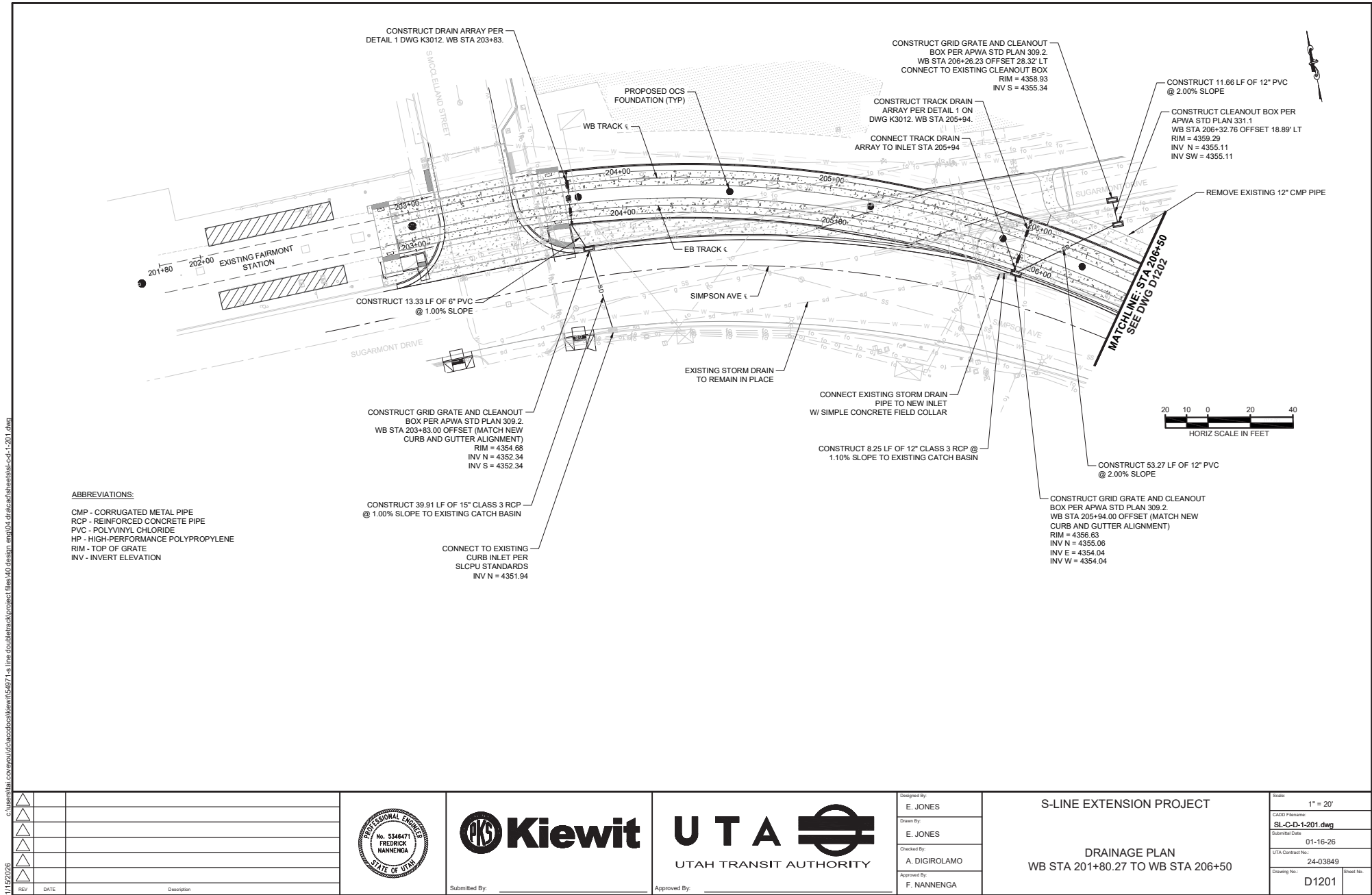
SECTION VIEW

1. CONSTRUCT PROPOSED STEEL PIPE RAIL OF 1 1/2" 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.



RAILING EXPANSION JOINT

[illegible]



1/15/2028					
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 201+80.27 TO WB STA 206+50

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

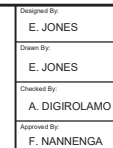


CMP - CORRUGATED METAL PIPE
RCP - REINFORCED CONCRETE PIPE
PVC - POLYVINYL CHLORIDE
HP - HIGH-PERFORMANCE POLYPROPYLENE
RIM - TOP OF GRATE
INV - INVERT ELEVATION

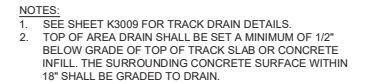
REV	DATE	Description



Approved By: _____



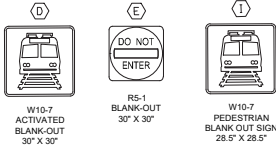
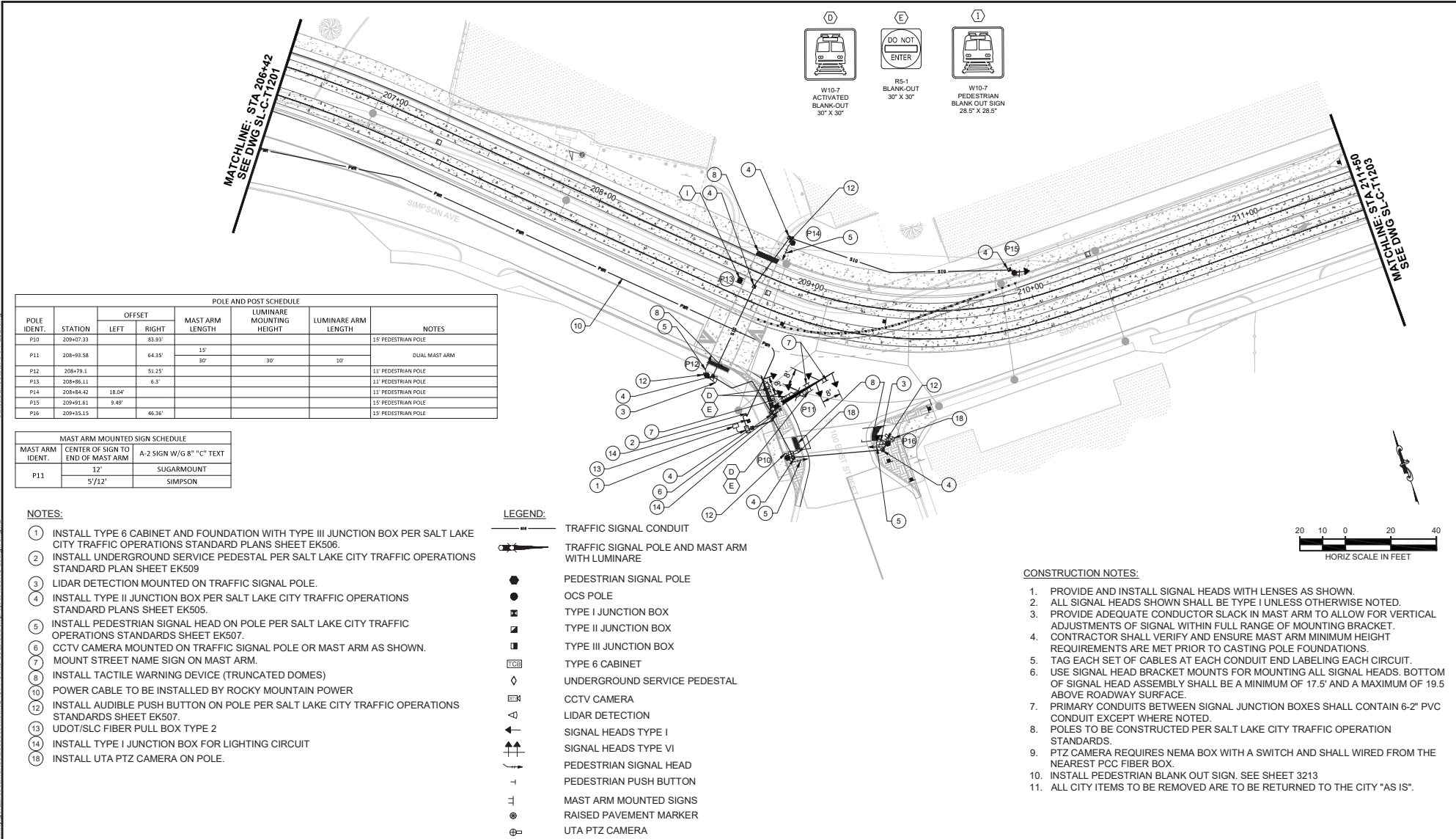
Scale:	1" = 20'
CADD Filename:	SL-C-D-1-202.dwg
Submittal Date	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	D1202

[illegible]



11/16/2023 11:22 AM

11/16/2023 11:22 AM



POLE AND POST SCHEDULE						
POLE IDENT.	STATION	OFFSET		MAST ARM LENGTH	LUMINARE MOUNTING HEIGHT	LUMINARE ARM LENGTH
		LEFT	RIGHT			
P10	209+07.33		83.93'			
P11	208+03.58		64.35'	15'		
P12	208+79.1		51.25'	30'	30'	10'
P13	208+80.11		6.3'			
P14	208+84.42	18.04'				
P15	209+01.61	9.49'				
P16	209+35.15		48.36'			
NOTES						
15' PEDESTRIAN POLE						
DUAL MAST ARM						
11' PEDESTRIAN POLE						
11' PEDESTRIAN POLE						
15' PEDESTRIAN POLE						
15' PEDESTRIAN POLE						

MAST ARM MOUNTED SIGN SCHEDULE		
MAST ARM IDENT.	CENTER OF SIGN TO END OF MAST ARM	A-2 SIGN W/ 6" 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)
 - 9. POWER CABLE TO BE INSTALLED BY ROCKY MOUNTAIN POWER
 - 10. INSTALL AUDIBLE PUSH BUTTON ON POLE PER SALT LAKE CITY TRAFFIC OPERATIONS STANDARDS SHEET EK507.
 - 11. UDOT/SLC FIBER PULL BOX TYPE 2
 - 12. INSTALL TYPE I JUNCTION BOX FOR LIGHTING CIRCUIT
 - 13. 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'

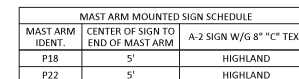
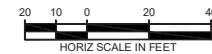
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Submission Date: 1-16-26

UTA Contract No: 24-03849

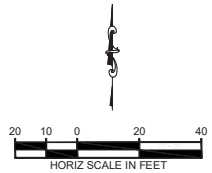
Drawing No: T1202

Sheet No:



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.

11/15/2026	11/16/2026	11/17/2026	11/18/2026	11/19/2026	11/20/2026	11/21/2026	11/22/2026	11/23/2026	11/24/2026	11/25/2026	11/26/2026	11/27/2026	11/28/2026	11/29/2026	11/30/2026	12/1/2026	12/2/2026	12/3/2026	12/4/2026	12/5/2026	12/6/2026	12/7/2026	12/8/2026	12/9/2026	12/10/2026	12/11/2026	12/12/2026	12/13/2026	12/14/2026	12/15/2026	12/16/2026	12/17/2026	12/18/2026	12/19/2026	12/20/2026	12/21/2026	12/22/2026	12/23/2026	12/24/2026	12/25/2026	12/26/2026	12/27/2026	12/28/2026	12/29/2026	12/30/2026	12/31/2026	1/1/2027	1/2/2027	1/3/2027	1/4/2027	1/5/2027	1/6/2027	1/7/2027	1/8/2027	1/9/2027	1/10/2027	1/11/2027	1/12/2027	1/13/2027	1/14/2027	1/15/2027	1/16/2027	1/17/2027	1/18/2027	1/19/2027	1/20/2027	1/21/2027	1/22/2027	1/23/2027	1/24/2027	1/25/2027	1/26/2027	1/27/2027	1/28/2027	1/29/2027	1/30/2027	1/31/2027	2/1/2027	2/2/2027	2/3/2027	2/4/2027	2/5/2027	2/6/2027	2/7/2027	2/8/2027	2/9/2027	2/10/2027	2/11/2027	2/12/2027	2/13/2027	2/14/2027	2/15/2027	2/16/2027	2/17/2027	2/18/2027	2/19/2027	2/20/2027	2/21/2027	2/22/2027	2/23/2027	2/24/2027	2/25/2027	2/26/2027	2/27/2027	2/28/2027	2/29/2027	2/30/2027	3/1/2027	3/2/2027	3/3/2027	3/4/2027	3/5/2027	3/6/2027	3/7/2027	3/8/2027	3/9/2027	3/10/2027	3/11/2027	3/12/2027	3/13/2027	3/14/2027	3/15/2027	3/16/2027	3/17/2027	3/18/2027	3/19/2027	3/20/2027	3/21/2027	3/22/2027	3/23/2027	3/24/2027	3/25/2027	3/26/2027	3/27/2027	3/28/2027	3/29/2027	3/30/2027	3/31/2027	4/1/2027	4/2/2027	4/3/2027	4/4/2027	4/5/2027	4/6/2027	4/7/2027	4/8/2027	4/9/2027	4/10/2027	4/11/2027	4/12/2027	4/13/2027	4/14/2027	4/15/2027	4/16/2027	4/17/2027	4/18/2027	4/19/2027	4/20/2027	4/21/2027	4/22/2027	4/23/2027	4/24/2027	4/25/2027	4/26/2027	4/27/2027	4/28/2027	4/29/2027	4/30/2027	5/1/2027	5/2/2027	5/3/2027	5/4/2027	5/5/2027	5/6/2027	5/7/2027	5/8/2027	5/9/2027	5/10/2027	5/11/2027	5/12/2027	5/13/2027	5/14/2027	5/15/2027	5/16/2027	5/17/2027	5/18/2027	5/19/2027	5/20/2027	5/21/2027	5/22/2027	5/23/2027	5/24/2027	5/25/2027	5/26/2027	5/27/2027	5/28/2027	5/29/2027	5/30/2027	5/31/2027	6/1/2027	6/2/2027	6/3/2027	6/4/2027	6/5/2027	6/6/2027	6/7/2027	6/8/2027	6/9/2027	6/10/2027	6/11/2027	6/12/2027	6/13/2027	6/14/2027	6/15/2027	6/16/2027	6/17/2027	6/18/2027	6/19/2027	6/20/2027	6/21/2027	6/22/2027	6/23/2027	6/24/2027	6/25/2027	6/26/2027	6/27/2027	6/28/2027	6/29/2027	6/30/2027	7/1/2027	7/2/2027	7/3/2027	7/4/2027	7/5/2027	7/6/2027	7/7/2027	7/8/2027	7/9/2027	7/10/2027	7/11/2027	7/12/2027	7/13/2027	7/14/2027	7/15/2027	7/16/2027	7/17/2027	7/18/2027	7/19/2027	7/20/2027	7/21/2027	7/22/2027	7/23/2027	7/24/2027	7/25/2027	7/26/2027	7/27/2027	7/28/2027	7/29/2027	7/30/2027	7/31/2027	8/1/2027	8/2/2027	8/3/2027	8/4/2027	8/5/2027	8/6/2027	8/7/2027	8/8/2027	8/9/2027	8/10/2027	8/11/2027	8/12/2027	8/13/2027	8/14/2027	8/15/2027	8/16/2027	8/17/2027	8/18/2027	8/19/2027	8/20/2027	8/21/2027	8/22/2027	8/23/2027	8/24/2027	8/25/2027	8/26/2027	8/27/2027	8/28/2027	8/29/2027	8/30/2027	8/31/2027	9/1/2027	9/2/2027	9/3/2027	9/4/2027	9/5/2027	9/6/2027	9/7/2027	9/8/2027	9/9/2027	9/10/2027	9/11/2027	9/12/2027	9/13/2027	9/14/2027	9/15/2027	9/16/2027	9/17/2027	9/18/2027	9/19/2027	9/20/2027	9/21/2027	9/22/2027	9/23/2027	9/24/2027	9/25/2027	9/26/2027	9/27/2027	9/28/2027	9/29/2027	9/30/2027	10/1/2027	10/2/2027	10/3/2027	10/4/2027	10/5/2027	10/6/2027	10/7/2027	10/8/2027	10/9/2027	10/10/2027	10/11/2027	10/12/2027	10/13/2027	10/14/2027	10/15/2027	10/16/2027	10/17/2027	10/18/2027	10/19/2027	10/20/2027	10/21/2027	10/22/2027	10/23/2027	10/24/2027	10/25/2027	10/26/2027	10/27/2027	10/28/2027	10/29/2027	10/30/2027	10/31/2027	11/1/2027	11/2/2027	11/3/2027	11/4/2027	11/5/2027	11/6/2027	11/7/2027	11/8/2027	11/9/2027	11/10/2027	11/11/2027	11/12/2027	11/13/2027	11/14/2027	11/15/2027	11/16/2027	11/17/2027	11/18/2027	11/19/2027	11/20/2027	11/21/2027	11/22/2027	11/23/2027	11/24/2027	11/25/2027	11/26/2027	11/27/2027	11/28/2027	11/29/2027	11/30/2027	12/1/2027	12/2/2027	12/3/2027	12/4/2027	12/5/2027	12/6/2027	12/7/2027	12/8/2027	12/9/2027	12/10/2027	12/11/2027	12/12/2027	12/13/2027	12/14/2027	12/15/2027	12/16/2027	12/17/2027	12/18/2027	12/19/2027	12/20/2027	12/21/2027	12/22/2027	12/23/2027	12/24/2027	12/25/2027	12/26/2027	12/27/2027	12/28/2027	12/29/2027	12/30/2027	12/31/2027	1/1/2028	1/2/2028	1/3/2028	1/4/2028	1/5/2028	1/6/2028	1/7/2028	1/8/2028	1/9/2028	1/10/2028	1/11/2028	1/12/2028	1/13/2028	1/14/2028	1/15/2028	1/16/2028	1/17/2028	1/18/2028	1/19/2028	1/20/2028	1/21/2028	1/22/2028	1/23/2028	1/24/2028	1/25/2028	1/26/2028	1/27/2028	1/28/2028	1/29/2028	1/30/2028	1/31/2028	2/1/2028	2/2/2028	2/3/2028	2/4/2028	2/5/2028	2/6/2028	2/7/2028	2/8/2028	2/9/2028	2/10/2028	2/11/2028	2/12/2028	2/13/2028	2/14/2028	2/15/2028	2/16/2028	2/17/2028	2/18/2028	2/19/2028	2/20/2028	2/21/2028	2/22/2028	2/23/2028	2/24/2028	2/25/2028	2/26/2028	2/27/2028	2/28/2028	2/29/2028	2/30/2028	3/1/2028	3/2/2028	3/3/2028	3/4/2028	3/5/2028	3/6/2028	3/7/2028	3/8/2028	3/9/2028	3/10/2028	3/11/2028	3/12/2028	3/13/2028	3/14/2028	3/15/2028	3/16/2028	3/17/2028	3/18/2028	3/19/2028	3/20/2028	3/21/2028	3/22/2028	3/23/2028	3/24/2028	3/25/2028	3/26/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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".

SIGN POST SCHEDULE							
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 TRESSPASSING FIRE DEPARTMENT ACCESS ONLY"

[illegible]

NOTES:

- LEGEND:

- 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".

    		
1/12/2018		
REV	DATE	Description



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

STRIPING & SIGNING PLANS
WB STA 206+42 TO WB STA 211+50

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



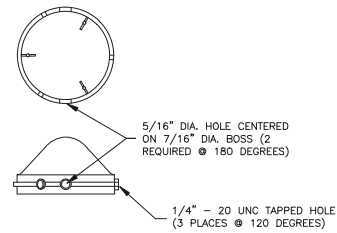


Diagram A5: ARM CONNECTION KEY

Dimensions and Labels:

- Pole Plate: 22" width, 11" height, 3/4" HOLE.
- Arm Plate: 18" width, 20" height, 1" hole, 1/2" DIA. KEY.
- Detail: 2" dimension, ARM PLATE, MAST ARM, KEY.

(FOR ARMS 50" AND LONGER)

A5 SCALE: NTS

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'

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

    		
7/12/2018		
REV	DATE	Description



UTA 
UTAH TRANSIT AUTHORITY

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

Scale:		1" = 40'
CADD Filename:		
SL-C-T-3-201.dwg		
Submittal Date		1-16-26
UTA Contract No.:		
24-03849		
Drawing No.:		Sheet No.
T3201		

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.

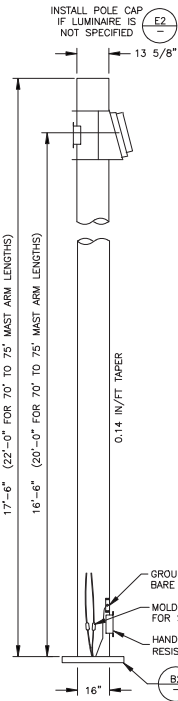
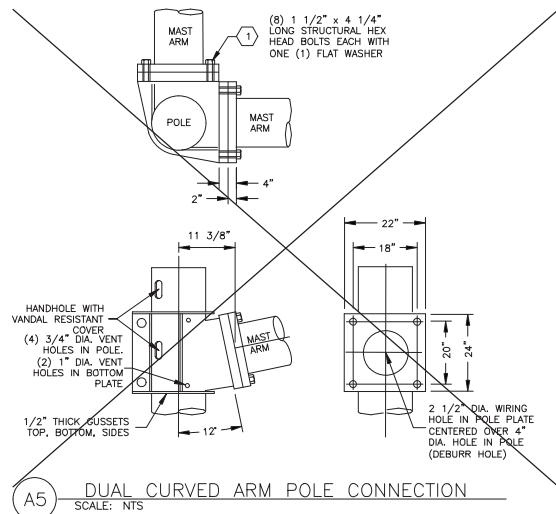
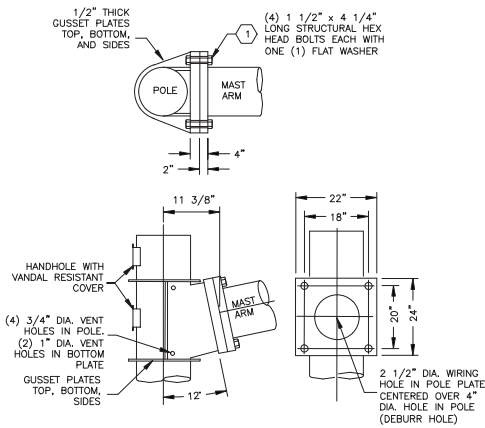
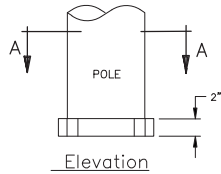
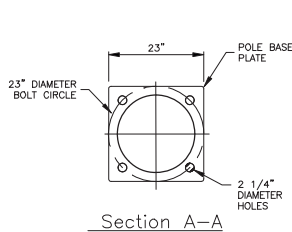
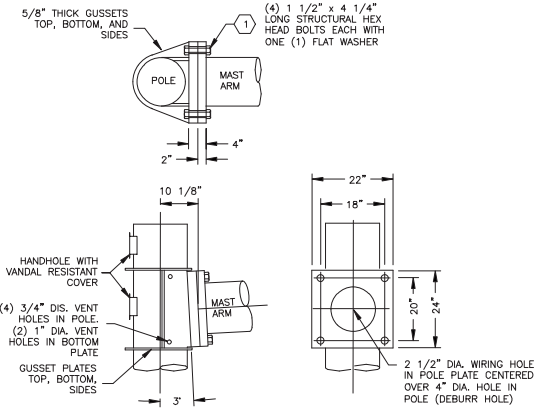
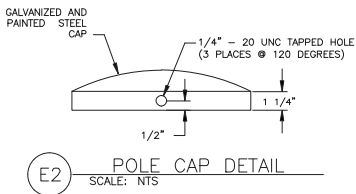
◦DO NOT DAMAGE PAINTED FINISH DURING TRANSPORT OR PLACEMENT.

SHEET KEYNOTES

1BOLTS

◦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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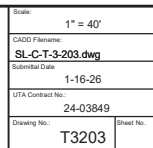
REV	DATE	Description

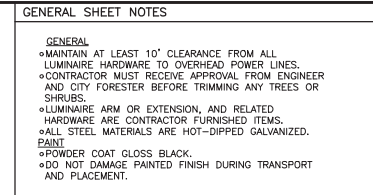


Designed By	J. GONZALES
Drawn By	J. GONZALES
Checked By	B. KHAN
Approved By	F. NANNENGA

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
MAST ARM POLE DETAIL

Scale	1" = 40'
CADD Filename	SL-C-T-3-202.dwg
Submitted Date	1-16-26
UTA Contract No.	24-03849
Drawing No.	T3202
Sheet No.	



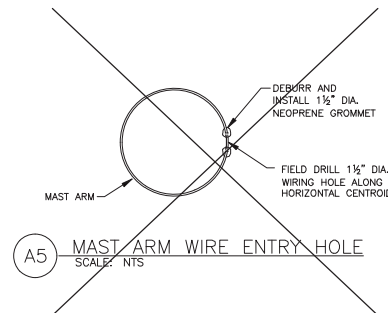
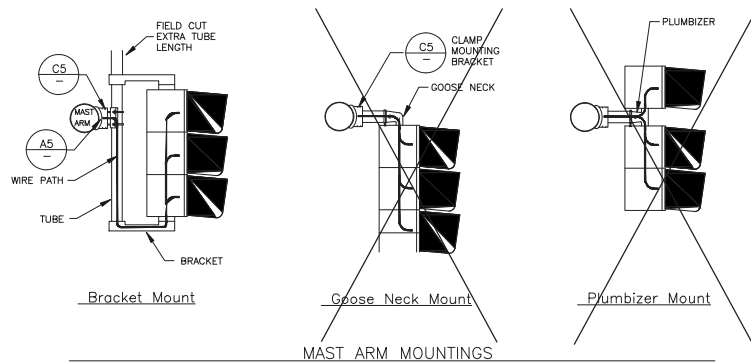
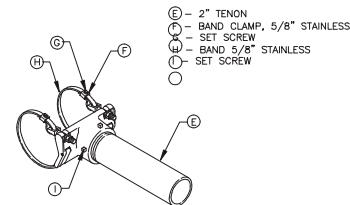
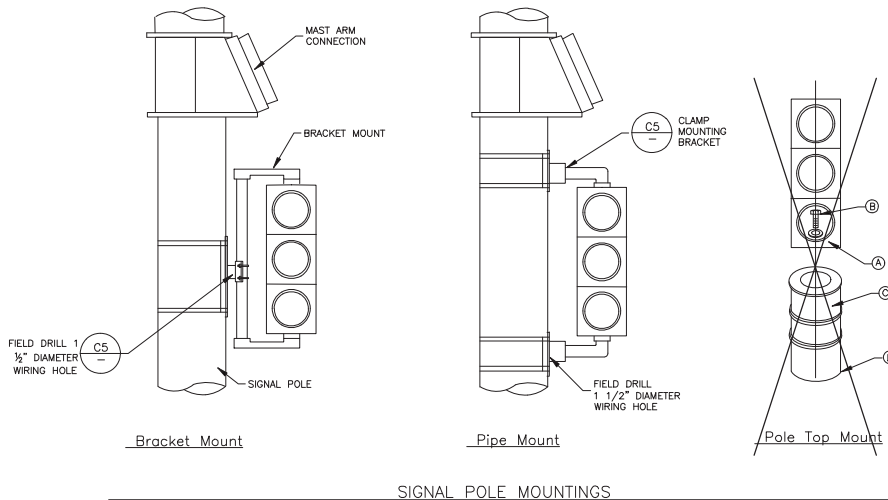


DETAILS PROVIDED ON THIS SHEET ARE
APPLICABLE STANDARD DETAILS
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CITY TRANSPORTATION DIVISION.

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- 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 DAMAGES 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.

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

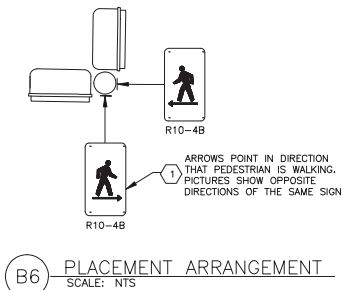
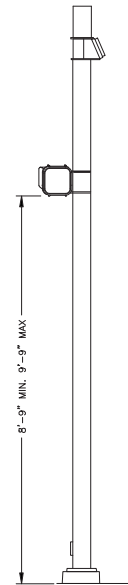
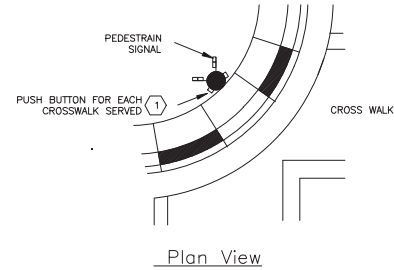
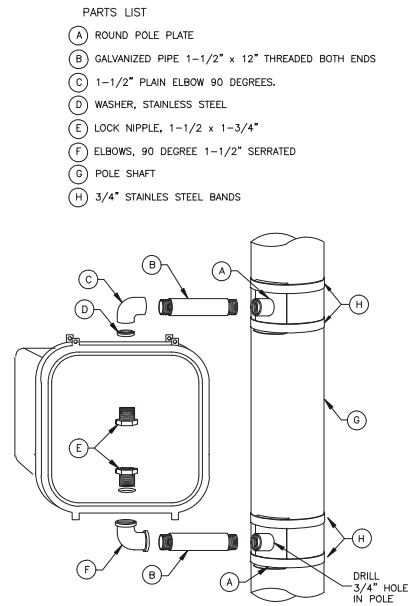
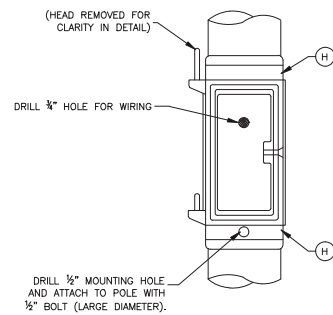
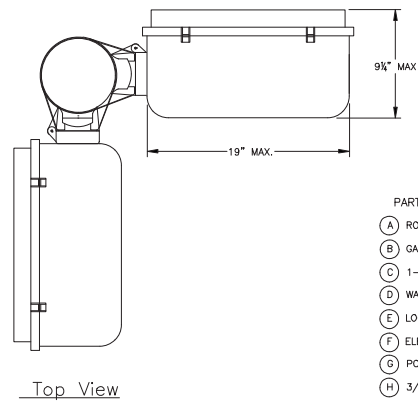
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
SIGNAL HEAD MOUNTING DETAIL

Scale	1" = 40'
CADD Filename	SL-C-T-3-206.dwg
Submittal Date	1-16-26
UTA Contract No.	24-03849
Drawing No.	T3206
Sheet No.	



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

Scale:		1" = 40'
CADD Filename:		
SL-C-T-3-207.dwg		
Submital Date		
1-16-26		
UTA Contract No.:		
24-03849		
Drawing No.:	T3207	Sheet No.



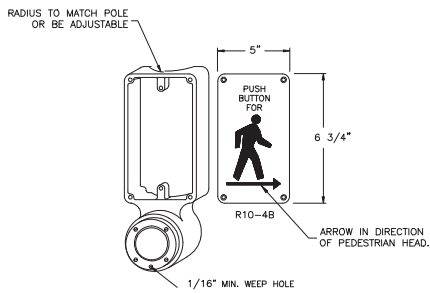
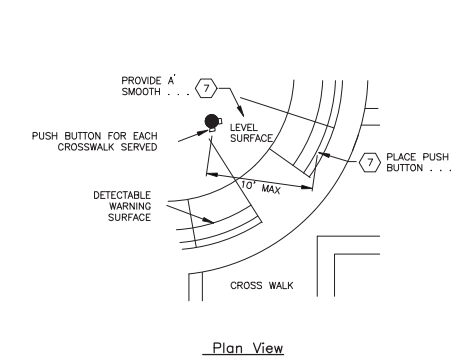
GENERAL SHEET NOTES	
<u>PAIN</u> - o POWDER COAT GLOSS BLACK. - o DO NOT DAMAGE PAINTED FINISH DURING TRANSPORT OR PLACEMENT. <u>SIGNAL HEAD</u> - o WITH LED COUNTDOWN TIMER AND AUDIBLE.	
○ SHEET KEYNOTES	
1 PEDESTRIAN PUSH BUTTON • MOUNT PUSH BUTTONS 42" ABOVE AND WITHIN 12 INCHES OF A SMOOTH WHEEL CHAIR ACCESSIBLE FLAT SURFACE.	

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

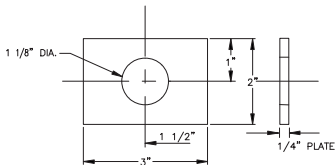
A5 SIGNAL HEAD MOUNTING DETAIL
SCALE: NTS

A2 POLE MOUNTING
SCALE: NTS

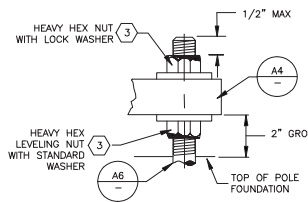
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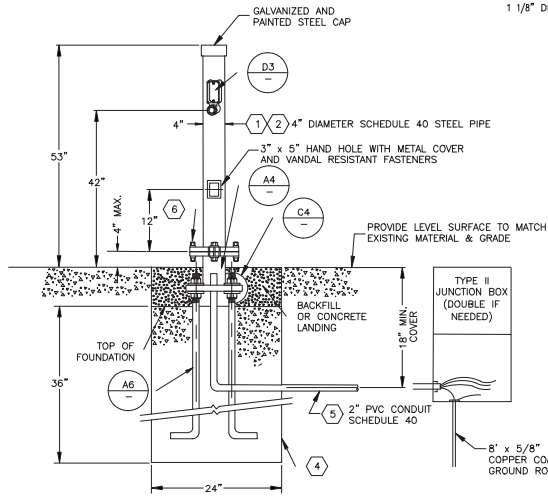
D3 FRAME AND BRACKET ASSEMBLY
SCALE: NTS



C3 SLIP BOLT WASHER
SCALE: NTS

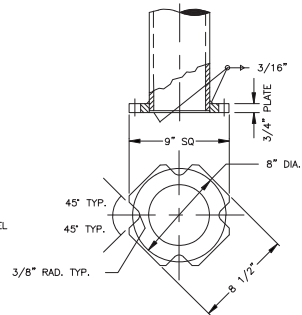


C4 POLE LEVELING
SCALE: NTS

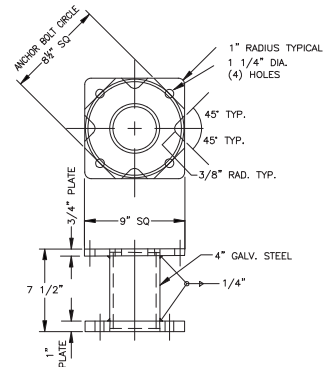


Elevation View

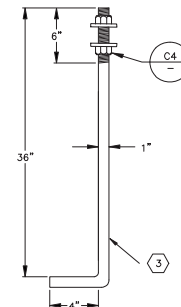
A1 4.5' PEDESTRIAN PUSH BUTTON POLE
SCALE: NTS



A3 POLE BASE
SCALE: NTS



A4 BREAKAWAY SPOOL
SCALE: NTS



A6 ANCHOR BOLT
SCALE: NTS

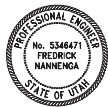
SHEET KEYNOTES

- 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 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.
 - 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



Submitted By: _____ Approved By: _____

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 SLC-T-3209.dwg
Submission Date 1-16-26
UTA Contract No. 24-03849
Drawing No. T3209
Sheet No.

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1/15/2028

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REV	DATE	Description



Submitted By: _____ Approved By: _____

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'
CADD Filename	SL-C-T-3-210.dwg
Submittal Date	1-16-26
UTA Contract No.	24-03849
Drawing No.	T3210
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.

PAVING

◦ 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 GROUND TERMINAL.

◦ IDENTIFY AND LABEL ALL FIELD TERMINALS.

SHEET KEYNOTES

1 CONDUIT

◦ MAINTAIN 1" MINIMUM SPACING BETWEEN CONDUITS IN CABINET BASE.

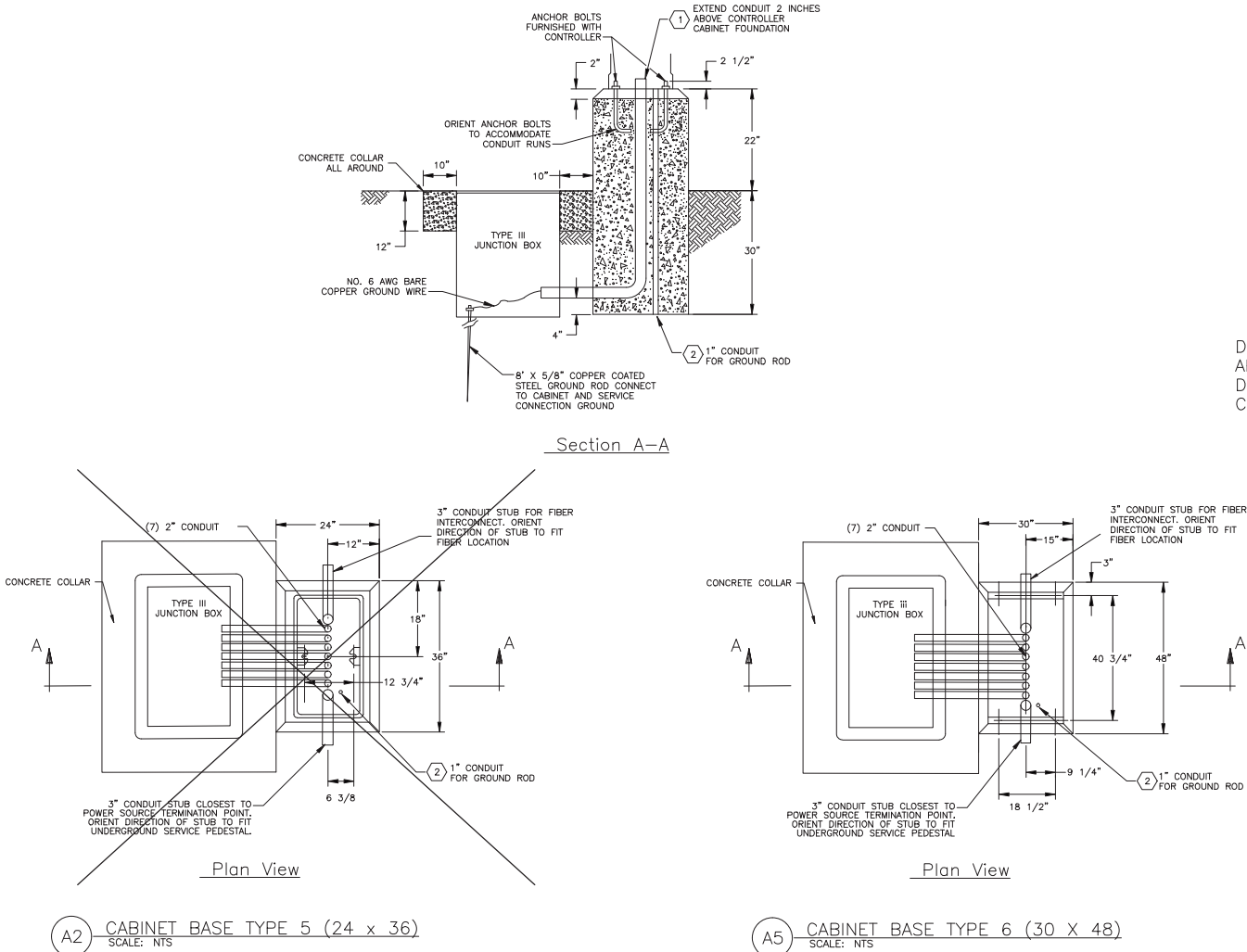
◦ CAP OR PLUG CONDUITS AT BOTH ENDS UNTIL USED.

◦ SEAL ALL CONDUITS INSIDE JUNCTION BOX AND CABINET AFTER WIRING IS COMPLETE.

2 GROUNDING

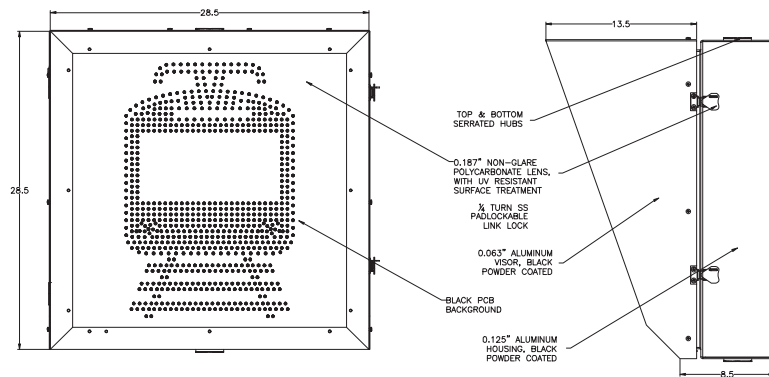
◦ GROUND CABINET WITH A COPPER COATED STEEL GROUND ROD PLACED IN A 1" PVC CONDUIT FOUNDATION SLEEVE.

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



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

C-910			 Kiewit		Designed By: J. GONZALES	S-LINE EXTENSION PROJECT STANDARD DRAWINGS UNDERGROUND SERVICE PEDESTAL DETAIL	Scale: 1" = 40'
					Drawn By: J. GONZALES		CADD File Name: SL-C-T-3-212.dwg
					Checked By: B. KHAN		Submitted Date: 1-16-26
					Approved By: F. NANNENGA		UTTA Contract No.: 24-03849
							Drawing No.: T3212
REV.	DATE	Description	Submitted By: _____		Approved By: _____		

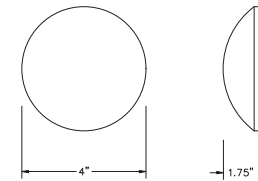


SIGN FEATURES

- * 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

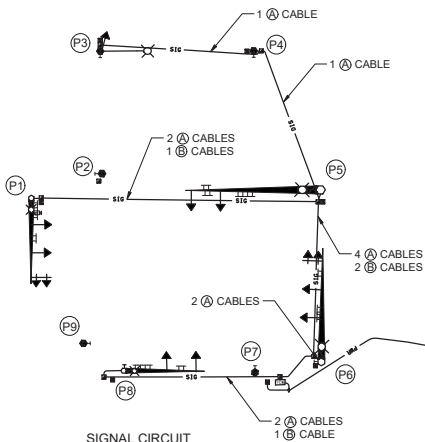
SCALE: NTS

ALL DIMENSIONS IN INCHES

                        	  		Designed By: J. GONZALES	S-LINE EXTENSION PROJECT STANDARD DRAWINGS PEDESTRIAN BLANK OUT SIGN AND RAISED PAVEMENT MARKER DETAILS	Scale: 1" = 40'
			Drawn By: J. GONZALES		CAD Filename: SL-C-T-3-213.dwg
			Checked By: K. KHAN		Submit Date: 1-16-26
			Approved By: F. NANNENGA		UTA Contract No.: 24-03849
	Submitted By: _____		Approved By: _____		Drawing No.: T3213
REV	DATE	Description			

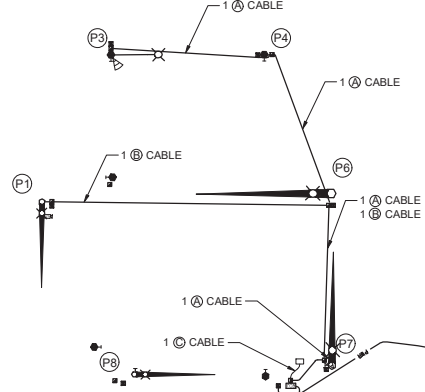
NOTES:
PROVIDE AND INSTALL 3" PVC CONDUIT FROM POWER SOURCE TO UNDERGROUND SERVICE PEDESTAL (USP) WITH UNINTERRUPTABLE POWER SOURCE AS SHOWN. CABLE TO BE INSTALLED BY OTHERS.
COORDINATE POWER SERVICES FROM POWER POLES WITH RMP. SEE UTILITY SERVICES NOTES.
PROVIDE AND INSTALL 120 V POWER SUPPLY FROM USP 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 TCB AND TYPE 3 JUNCTION BOX.
INSTALL PEDESTRIAN PUSH BUTTON CIRCUIT AIN SEPARATE 2" PVC BETWEEN TCB 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 .



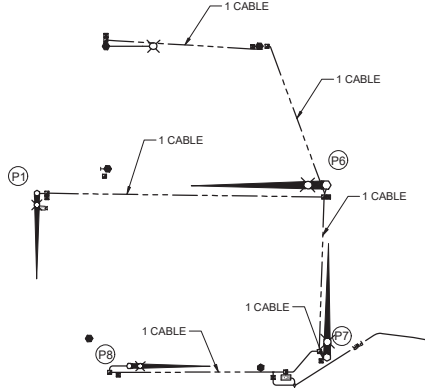
SIGNAL CIRCUIT
A 7-CONDUCTOR NO.14 AWG CABLE WITH NO 6 BARE COPPER WIRE IN CONDUIT AS SHOWN.

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

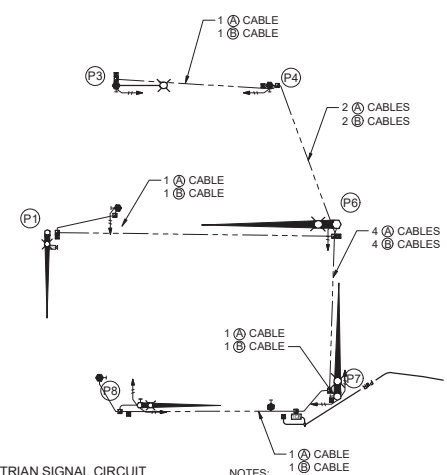


LIDAR DETECTION CIRCUIT
A CAT6 GAME CHANGER ETHERNET CABLE.
CCTV CAMERA CIRCUIT CIRCUIT
B CAT5 ETHERNET PATCH CABLE.

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



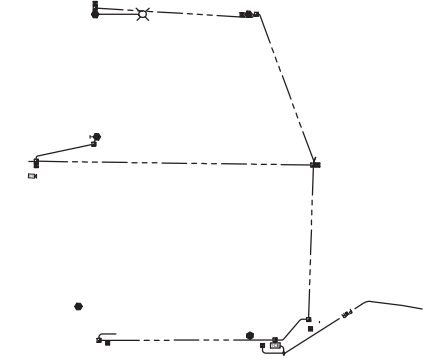
LIGHTING CIRCUIT
2 SINGLE CONDUCTOR NO.6 COPPER CABLE TYPE RH/HUSE2-RHHW WITH BARE COPPER NO 6 GROUND WIRE IN 2" CONDUIT.



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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1/15/2028	REV	DATE	Description



Submitted By: _____ Approved By: _____

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	
Drawing No.	T7001

Scale	1" = 20'
CADD Filename	SL-C-T-7-001.dwg
Submittal Date	1-16-26
UTA Contract No.	24-03849
Sheet No.	

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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.

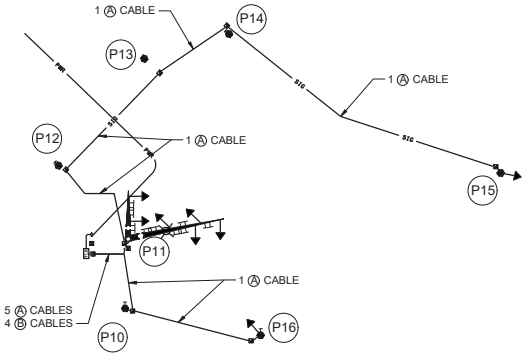
PROVIDE AND INSTALL 120 V POWER SUPPLY FROM USP TO CONTROLLER USING 2 SINGLE-CONDUCTOR NO.10 COPPER CABLES AND NO.6 BARE COPPER GROUND WIRE.

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

INSTALL PEDESTRIAN PUSH BUTTON CIRCUIT AIN SEPARATE 2" PVC BETWEEN TCB 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.

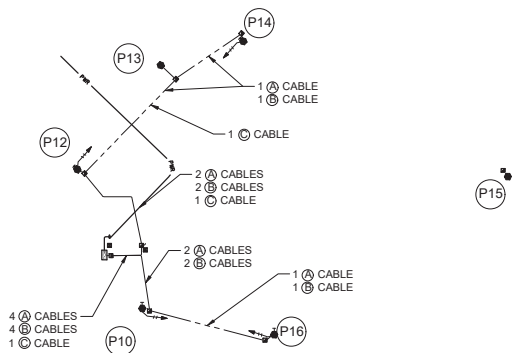


SIGNAL CIRCUIT

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

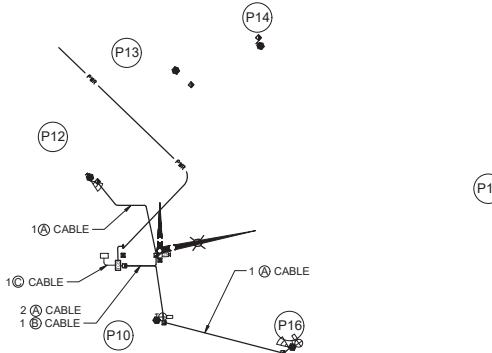
B 4-CONDUCTOR NO.14 AWG. WITH NO.6 BARE COPPER GROUND WIRE.

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

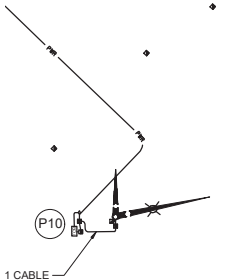
A CAT6 GAME CHANGER ETHERNET CABLE.

CCTV CAMERA CIRCUIT

B CAT5 ETHERNET PATCH CABLE.

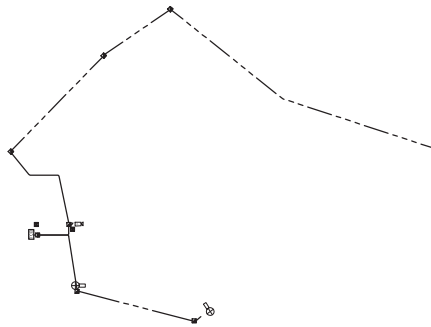
FIBER CONNECTION

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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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
1100 EAST STREET

Scale	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.	

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.

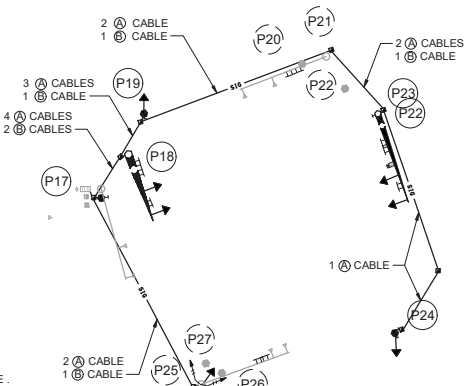
COORDINATE POWER SERVICES FROM POWER POLES WITH RMP. SEE UTILITY SERVICES NOTES.

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 AIN 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 .

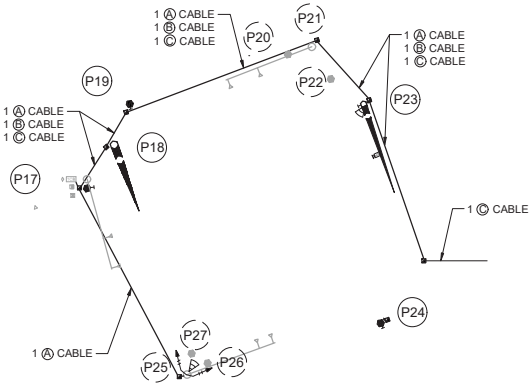


SIGNAL CIRCUIT

Ⓐ 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

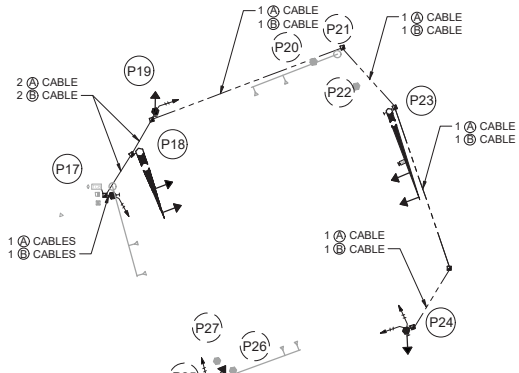
Ⓐ CAT6 GAME CHANGER ETHERNET CABLE.

CCTV CAMERA CIRCUIT

Ⓑ CAT5 ETHERNET PATCH CABLE.

FIBER CONNECTION

Ⓒ 6-STRAND PRE-TERMINATED DROP CABLE.



PEDESTRIAN SIGNAL CIRCUIT

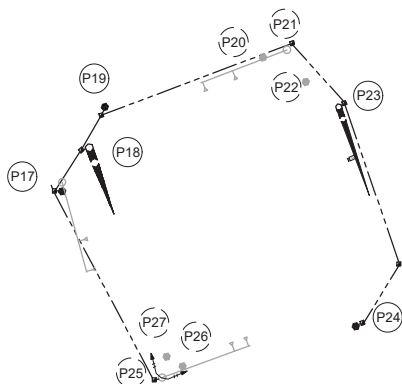
Ⓐ 7-CONDUCTOR NO.14 AWG CABLE IN THE SAME CONDUIT AS SIGNAL CIRCUIT.

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.

1/1/2023 8:11 AM C:\Users\jgonzales\OneDrive\Documents\SL-C-T-7-003.dwg

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
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.	

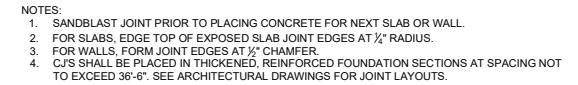
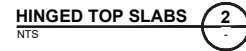
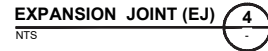
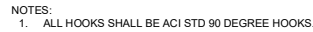
12/31/2025



A horizontal number line with tick marks at -4, -2, 0, 2, 4, and 8. The line is labeled "HORIZ SCALE IN FEET" below it.

Scale:	1/4"=1'-0"	
CADD Filename:	SL-C-P-1-201.dwg	
Submittal Date	01-16-26	
UTA Contract No.:	24-03849	
Drawing No.:	P1201	Sheet

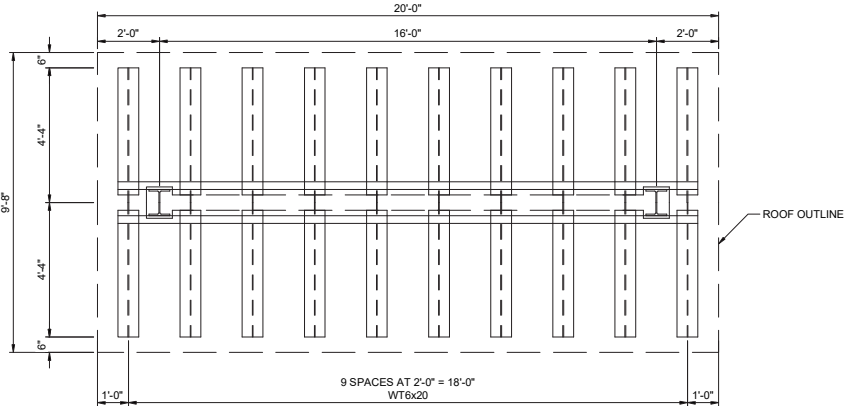
1. SLABS ON GRADE SHALL BE THICKENED TO 12" MIN AT EXPANSION JOINT TO ALLOW SPACE FOR DOWELS.
2. FOR WALLS, FORM ALL JOINT EDGES AT 1/2" CHAMFER.
3. FOR SLABS, PROVIDE 1/2" RADIUS TOOLED EDGES AT TOP SURFACE.
4. "W"=1" WIDE UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
5. USE DETAIL "B" AT UNDERSIDE OF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



3

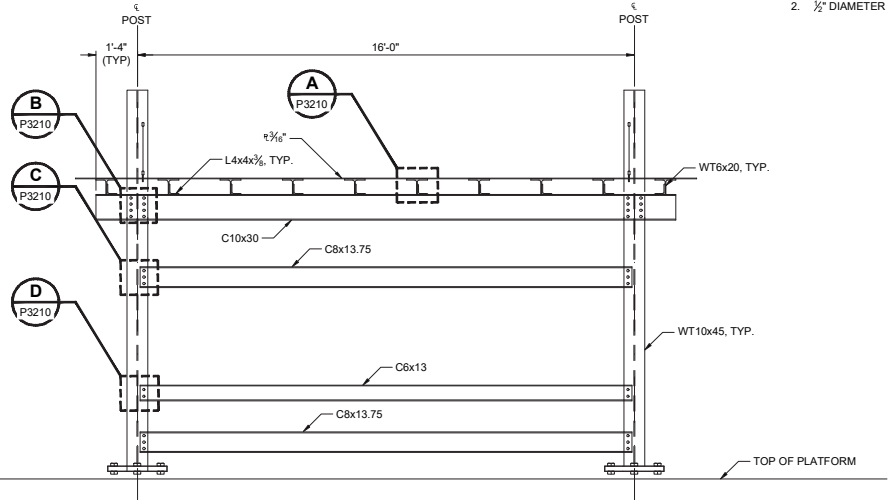
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12/21/2025



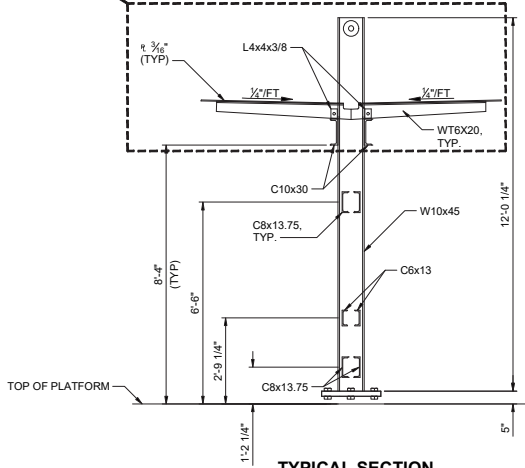
PLAN

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



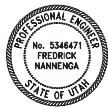
ELEVATION

E
P3210



TYPICAL SECTION

REV	DATE	Description
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5		
6		
7		
8		
9		
10		



Submitted By: _____



Approved By: _____

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
Submittal Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: P3202
Sheet No.:



GENERAL

- 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 BUILT AREA
6. REAL TIME PASSENGER INFORMATION SIGN, TYP. SEE NOTE O.
7. UTA BEACON SIGN TYPE 14A, LOCATION NEAR HIGHLAND DR.
(SEE DWG P3214 DETAIL D).
8. UTA STANDARD TRASH RECEPTACLE
9. ARTWORK INSTALLMENT AREA, TBD
10. TACILE 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. FREEZE-PROOF STOP HYDRANT, SEE DWG P3210
15. RAIL PLATFORM SIGN TYPE 5
16. PLATFORM ADA SYMBOL TYPE SS 1, TYP.
17. PLATFORM BICYCLE SYMBOL TYPE SS 2, TYP.



Submitted By:

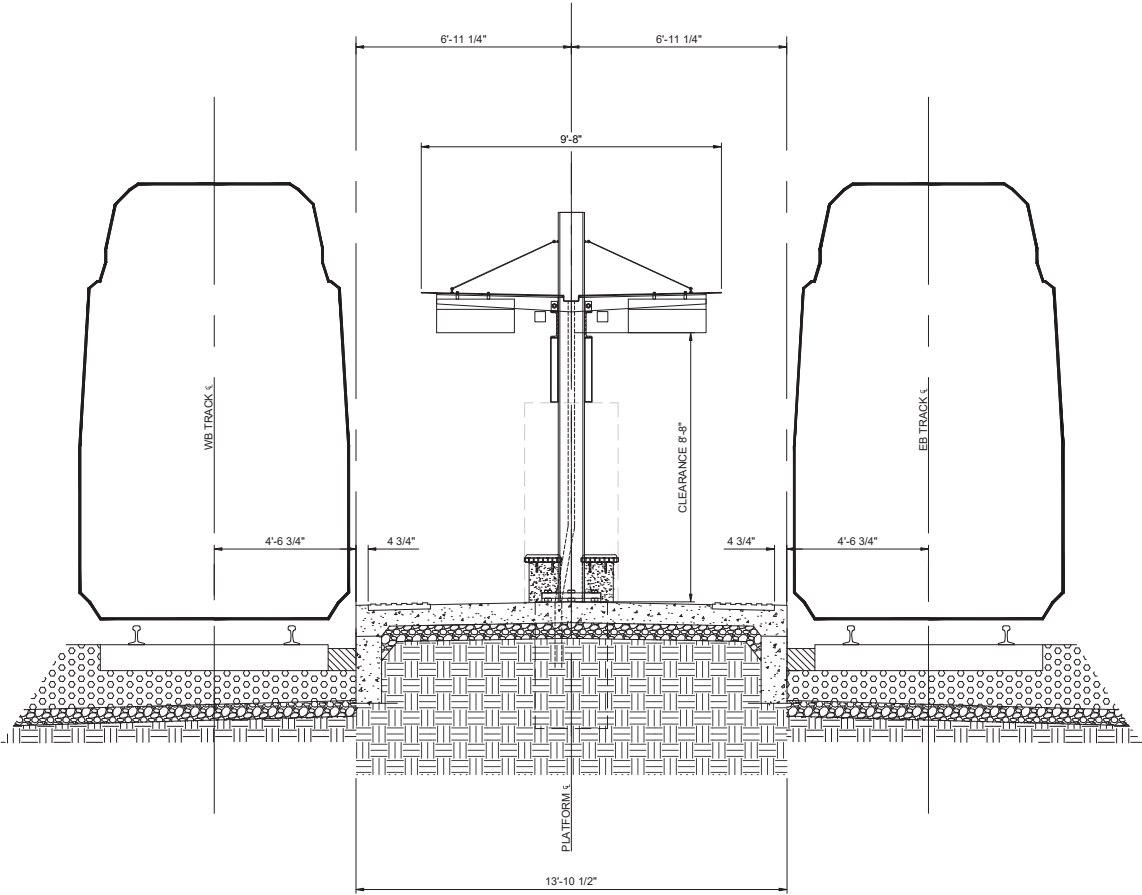
Approved By: _____

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

- 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"

1/2/2023	REV	DATE	DESCRIPTION
1/2/2023			
1/2/2023			
1/2/2023			
1/2/2023			
1/2/2023			



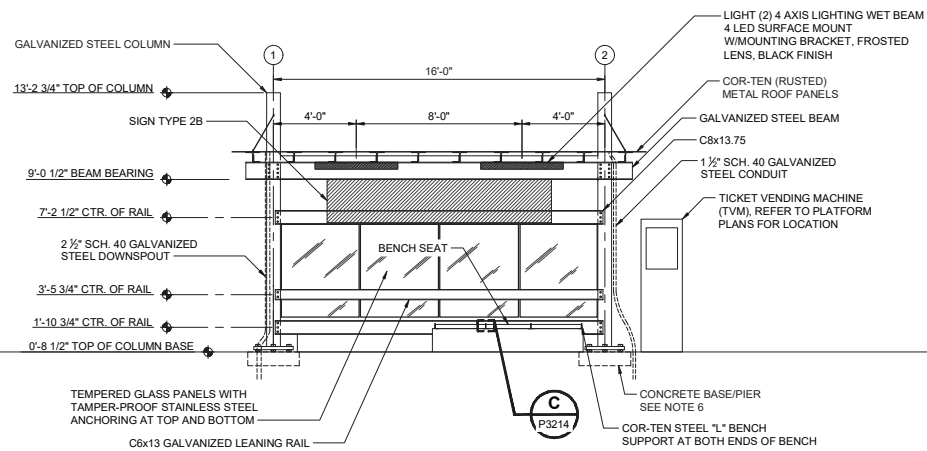
Submitted By: _____ Approved By: _____

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

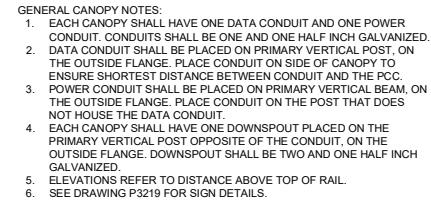
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CADD Filename:	SL-C-P-3-204.dwg
Submitted Date:	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	P3204
Sheet No.:	



20' DBL CANOPY FRONT ELEVATION **A**
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 P.C.C.
 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.

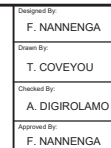
C:\Users\jgarcia\OneDrive\Documents\2025\							Designed By: F. NANNENGA	S-LINE EXTENSION PROJECT STATION 20 FOOT DOUBLE CANOPY ELEVATIONS	Scale: NTS
							Drawn By: T. COVEYOU		CADD Filename: SL-C-P-3-205.dwg
							Checked By: A. DIGIROLAMO		Submittal Date: 01-16-26
							Approved By: F. NANNENGA		UTA Contract No.: 24-03849
									Drawing No.: P3205
REV	DATE	Description	Submitted By: _____			Approved By: _____			



20' DBL SIDE CANOPY SECTION AT BENCH A
NTS

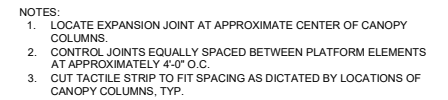
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Approved By: _____



STATION
20 FOOT DOUBLE CANOPY
SECTION

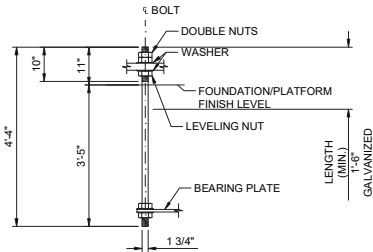
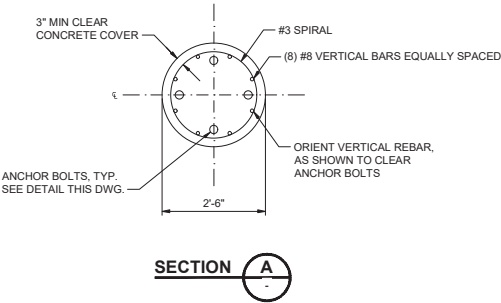
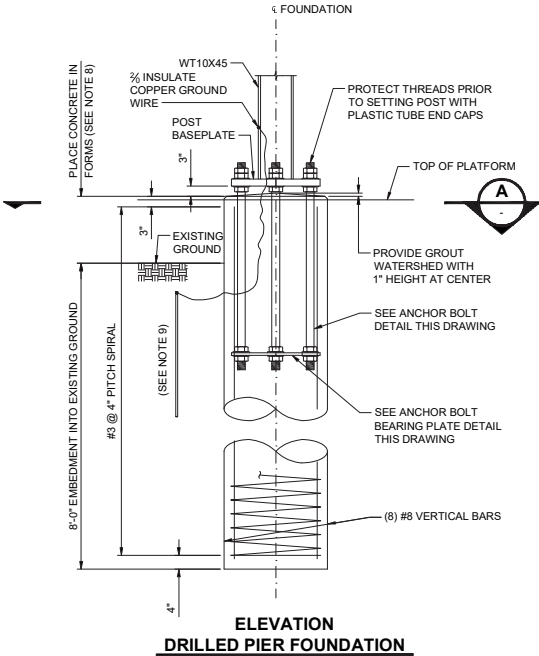
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Submittal Date		01-16-26	
UTA Contract No.:		24-03849	
Drawing No.:		P3206	Sheet No.



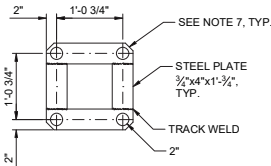
TVM NOTES:

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

[illegible]

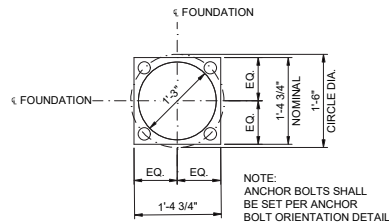


ANCHOR BOLT DETAIL
(TYPICAL)

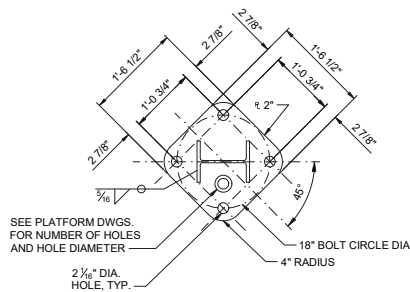


ANCHOR BOLT
BEARING PLATE DETAIL

- NOTES:
1. CONCRETE SHALL DEVELOP A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI.
 2. 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.
 3. REINFORCING BARS SHALL BE ASTM A615 GRADE 60, UNLESS OTHERWISE NOTED.
 4. ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR CONCRETE COVER OF 3 INCHES.
 5. USE STEEL ANCHOR BOLT SETTING TEMPLATE TO ASSURE CORRECT INSTALLATION OF ANCHOR BOLTS AT TOP OF FOUNDATION.
 6. ALL EXPOSED CONCRETE SURFACES SHALL HAVE A 1\"/>



ANCHOR BOLT
SETTING TEMPLATE



POST BASEPLATE

12/21/2025					
REV	DATE	DESCRIPTION			



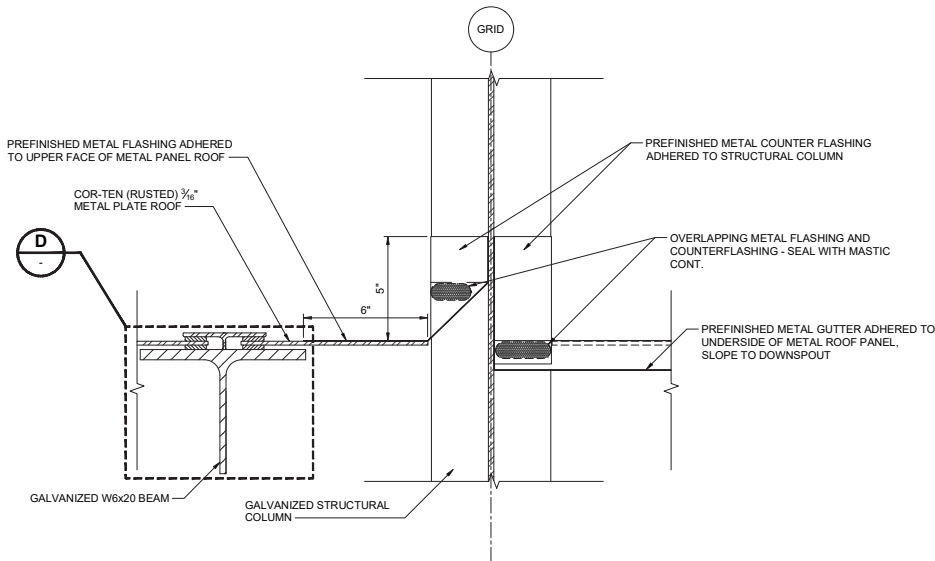
Designed By	F. NANNENGA
Drawn By	T. COVEYOU
Checked By	A. DIGIROLAMO
Approved By	F. NANNENGA

S-LINE EXTENSION PROJECT

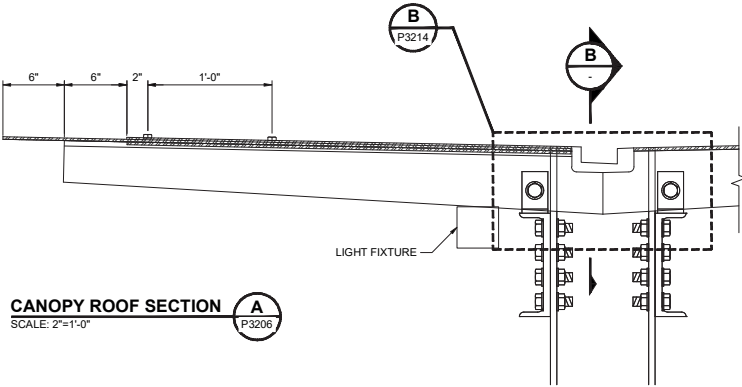
STATION
DRILLED SHAFT FOUNDATION
CANOPY DETAILS

State	NTS
CADD Filename:	SL-C-P-3-208.dwg
Submitted Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	P3208
Sheet No.	

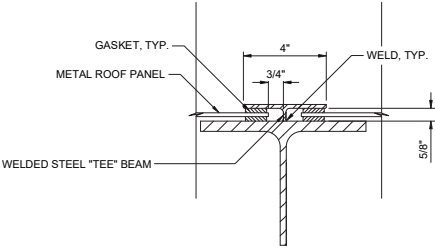
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12/21/2025



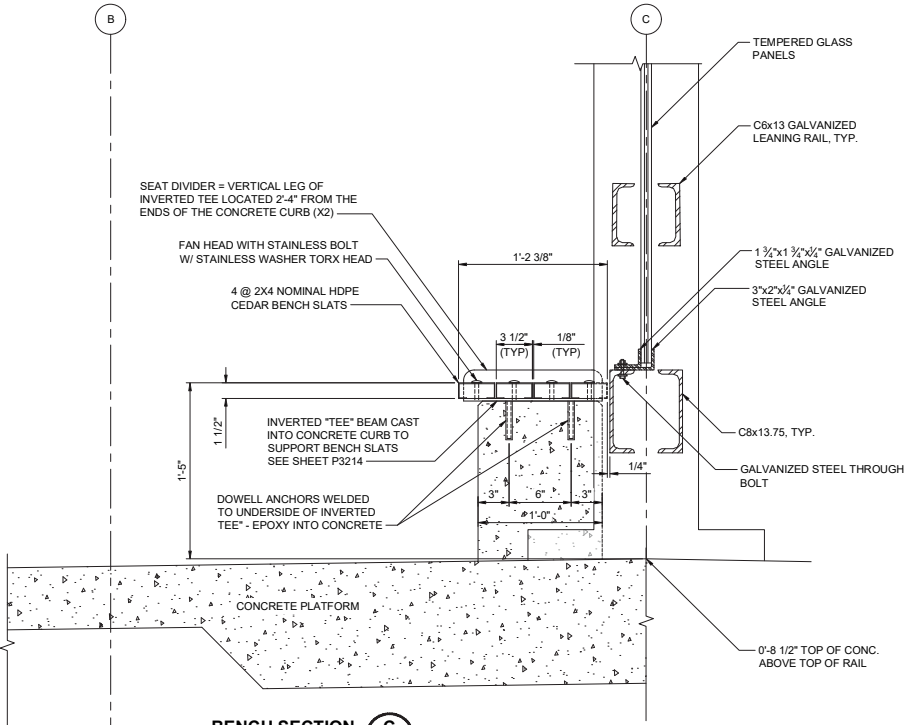
ROOF FLASHING DETAIL B
SCALE: 4"=1'-0"



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



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



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

REV	DATE	Description
1		
2		
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Submitted By: _____ Approved By: _____

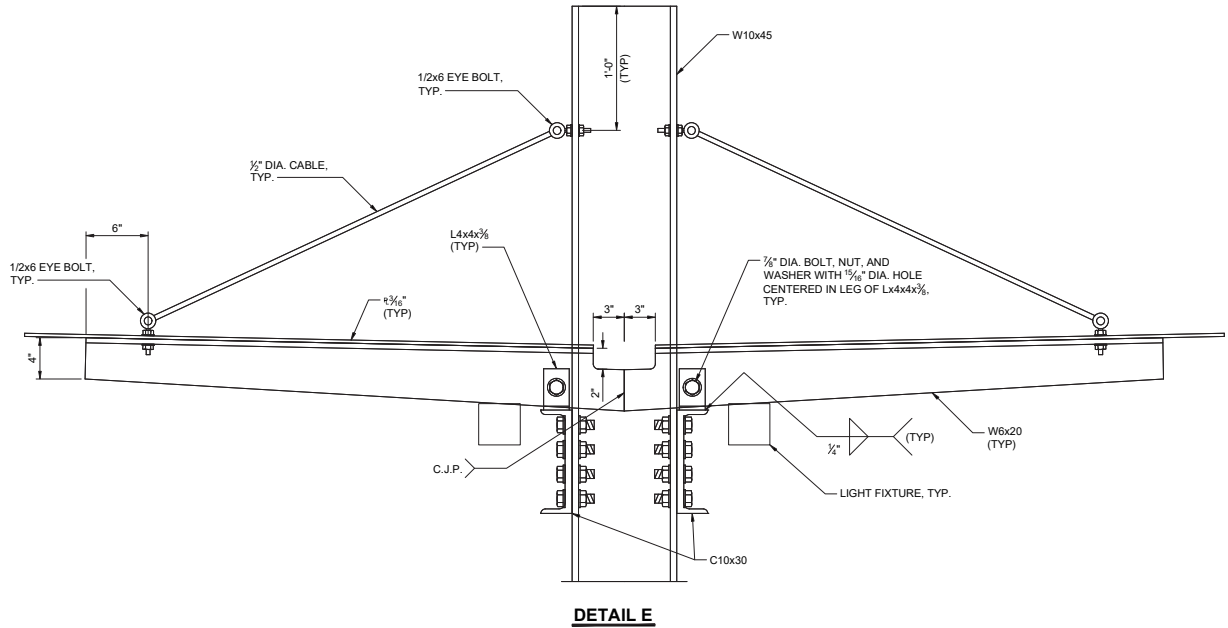
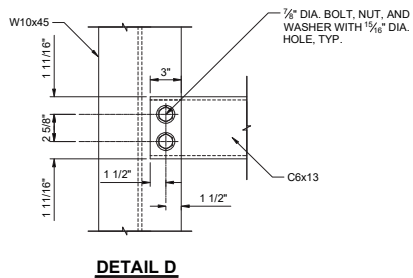
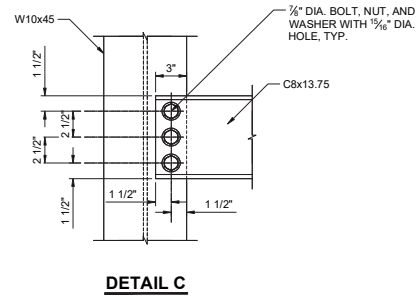
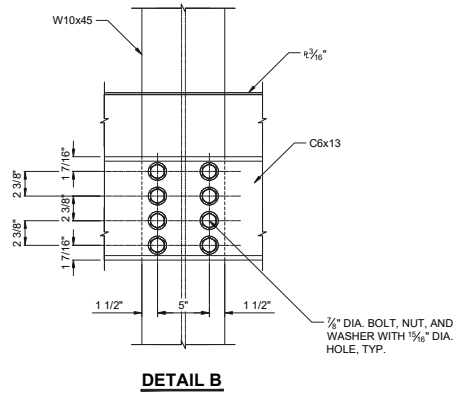
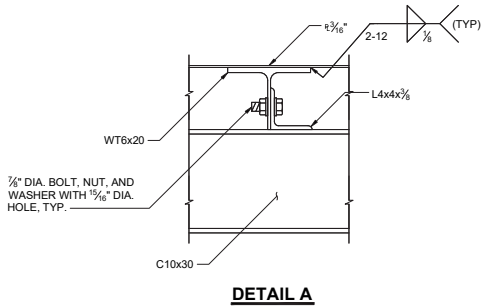
Designed By:	F. NANNENGA
Drawn By:	T. COVEYOU
Checked By:	A. DIGIROLAMO
Approved By:	F. NANNENGA

S-LINE EXTENSION PROJECT

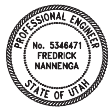
STATION
20 FOOT DOUBLE CANOPY
DETAILS

Issue:	AS NOTED
CADD Filename:	SL-C-P-3-209.dwg
Submittal Date:	01-16-26
UTA Contract No:	24-03849
Drawing No:	P3209
Sheet No:	

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REV	DATE	Description



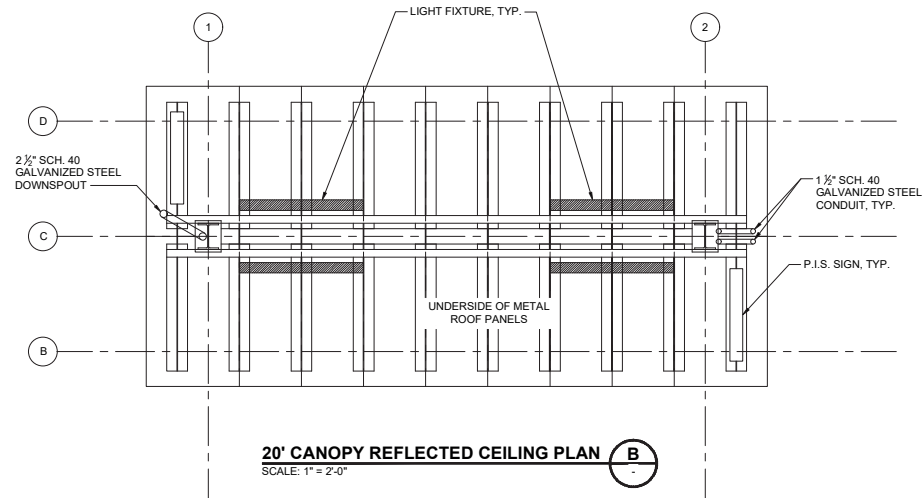
Submitted By: _____ Approved By: _____

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

S-LINE EXTENSION PROJECT

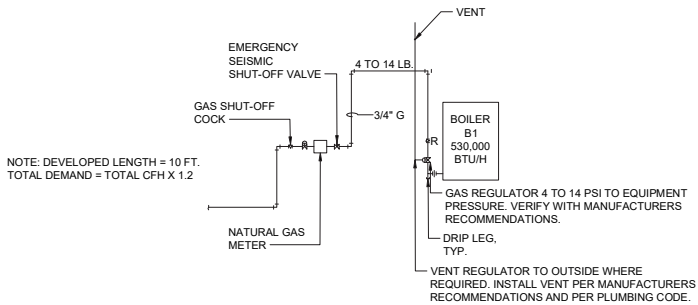
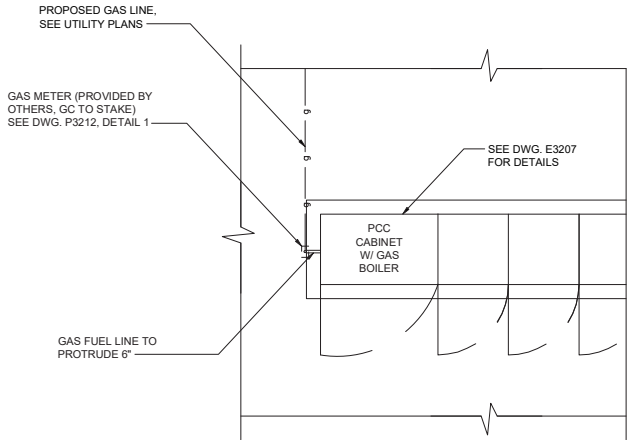
STATION
STRUCTURAL DRAWINGS
CANOPY DETAILS

State: NTS
CADD Filename: SLC-P-3-210.dwg
Submittal Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: P3210
Sheet No.:

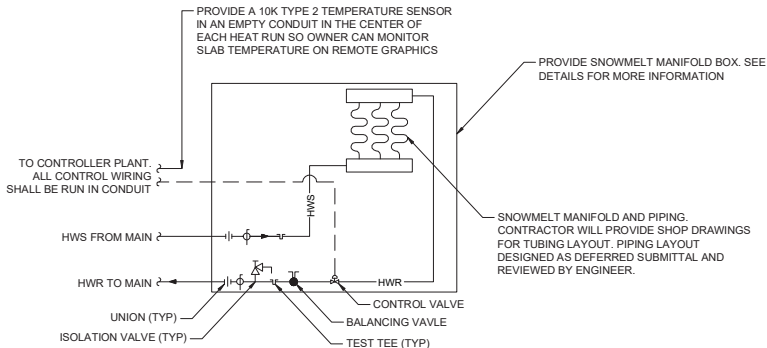
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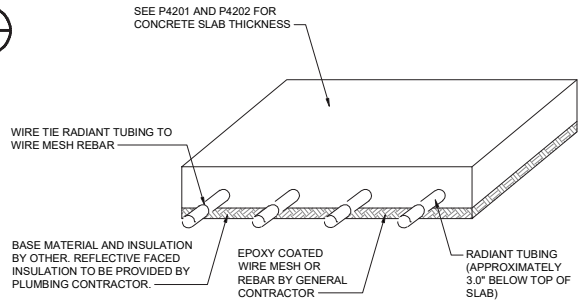
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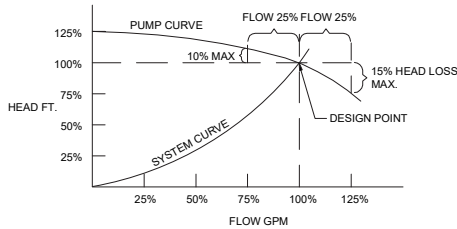
GAS FLOW DIAGRAM 2
NTS



SNOWMELT PIPING DIAGRAM 1
NTS

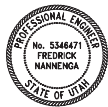


**PLATFORM SLAB ON GRADE
RADIANT TUBING INSTALLATION DETAIL** 4
NTS



PUMP CURVE DETAIL 3
NTS

REV	DATE	Description
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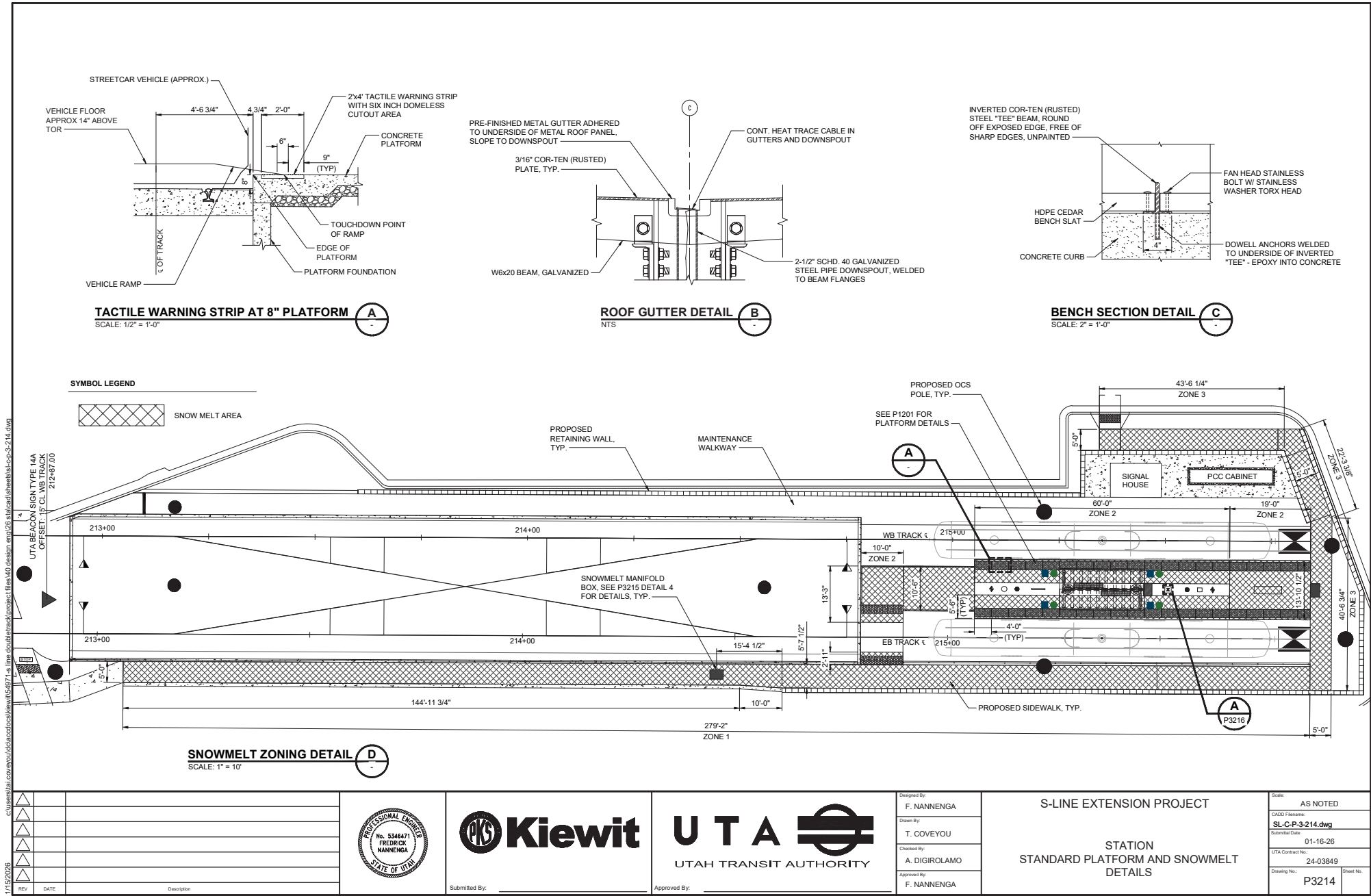
Submitted By: _____ Approved By: _____

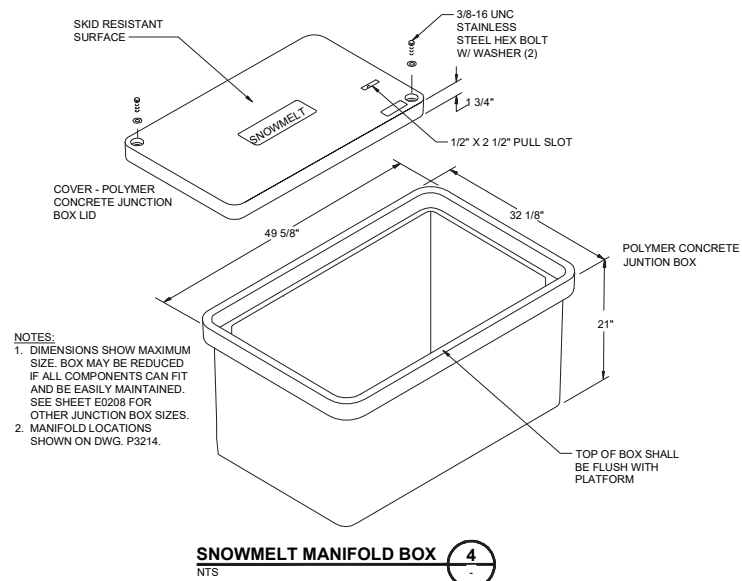
Designed By	F. NANNENGA
Drawn By	T. COVEYOU
Checked By	A. DIGIROLAMO
Approved By	F. NANNENGA

S-LINE EXTENSION PROJECT

STATION
MECHANICAL DETAILS

State	NTS
CADD Filename	SL-C-P-3213.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	P3213
Sheet No.	



[illegible]



	DESIGNED BY F. NANNENGA				S-LINE EXTENSION PROJECT FREEZELESS POST HYDRANT DETAIL	State: NTS CADW File Name: SL-C-P-3-216.dwg Submitted Date: 01-16-26 UTA Contract No.: 24-03849 Drawing No.: P3216
	DRAWN BY T. COVEYOU					
	CHECKED BY A. DIGIROLAMO					
	APPROVED BY F. NANNENGA					
	Submitted By: _____ Approved By: _____					

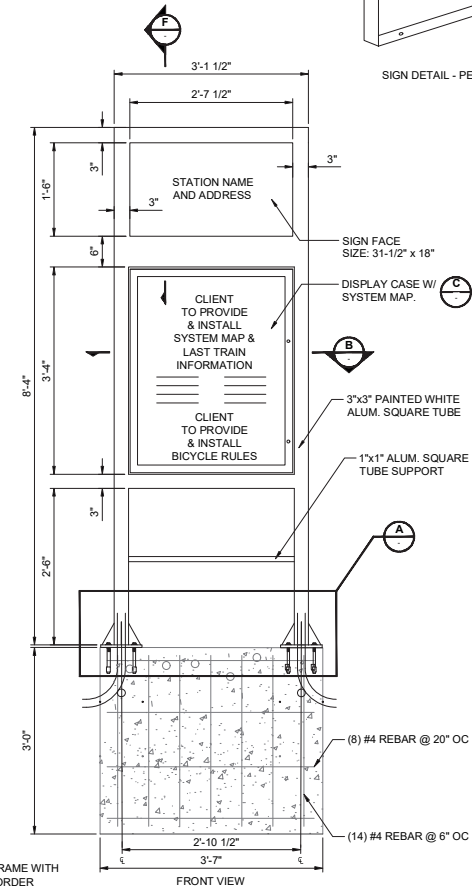


(2) 3/16" DIA. HOLES
DRILLED IN TOP
RETURN OF PAN

1" DEEP PAN WITH INSIDE
WELDED CORNERS

(2) 3/16" DIA. HOLES DRILLED
IN BOTTOM
RETURN OF PAN

SIGN DETAIL - PERSPECTIVE



3"

3" MIN.
(TYP)

1'-0"

SIDE VIEW

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

    		
REV	DATE	Description



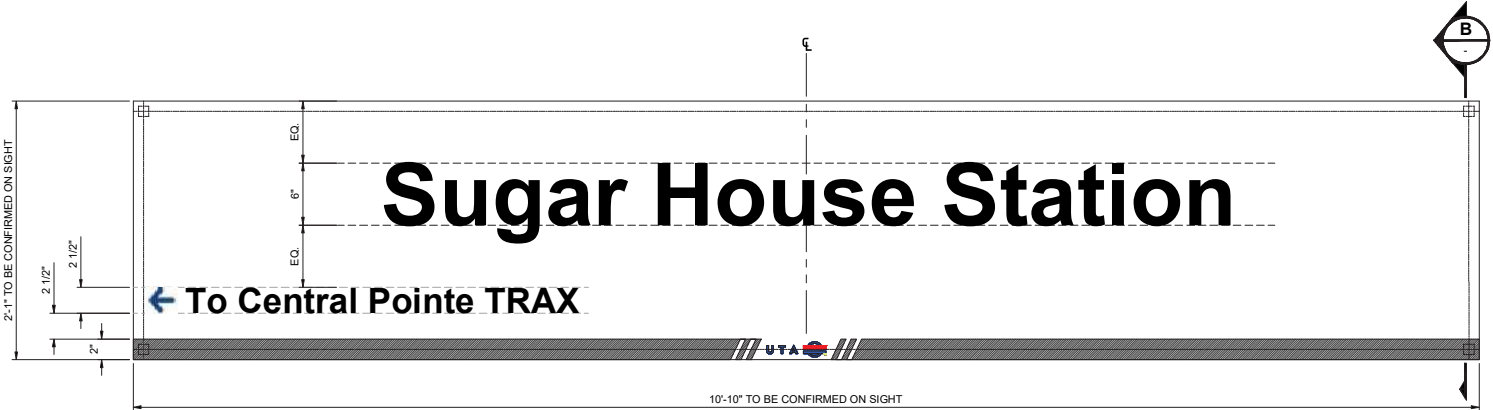
Approved By: _____



S-LINE EXTENSION PROJECT

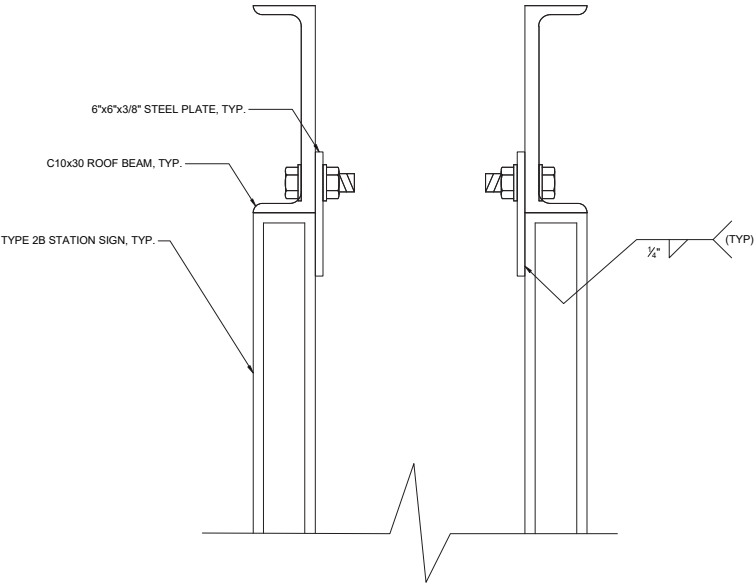
GRAPHIC SIGN STANDARDS
TYPE 4 - RAIL PLATFORM
SIGN DETAILS

Scale:	AS NOTED	
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Submittal Date	01-16-26	
UTA Contract No.:	24-03849	
Drawing No.:	P3218	Sheet



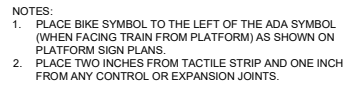
STATION IDENTIFICATION SIGN A
SCALE: 2" = 1'-0"

- NOTES:
- 1. CONFIRM STATION NAMES WITH OWNER.
 - 2. SEE PLATFORM DRAWINGS FOR SIGN LOCATIONS.
 - 3. REFER TO UTA WAYFINDING & SIGNAGE SIGN SCHEDULE AND DRAWING PACKAGE, SIGN TYPE 2B FOR EXACT STREETCAR STATION IDENTIFICATION SIGN DETAILS.



STATION IDENTIFICATION SIGN DETAIL B
SCALE: NTS

12/21/2025	△						Designed By: F. NANNENGA	S-LINE EXTENSION PROJECT	Status: AS NOTED	
	△						CADD File name: SL-C-P-3-219.dwg			
	△						Drawn By: T. COVEYOU			
	△						Submitted Date: 01-16-26			
	△						Checked By: A. DIGIROLAMO			
△			Approved By: F. NANNENGA		GRAPHIC SIGN STANDARDS TYPE 2B STATION IDENTIFICATION SIGN DETAILS	UTA Contract No.: 24-03849	Drawing No.: P3219			Sheet No.
REV	DATE	Description				Submitted By:				

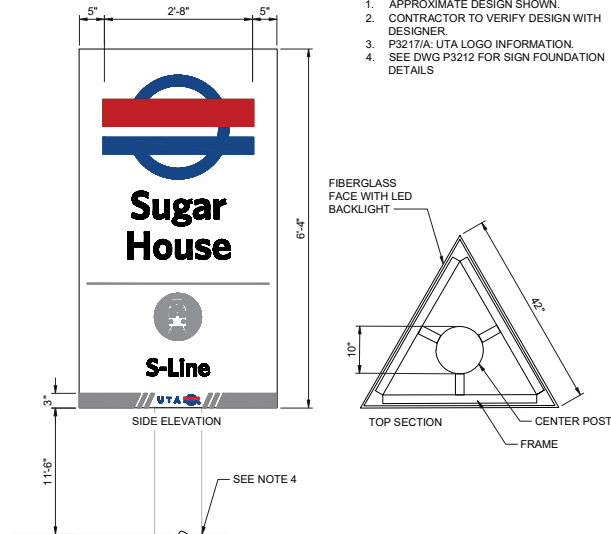
[illegible]

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.

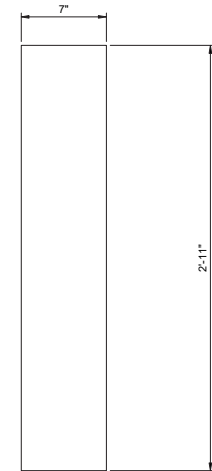
GENERAL NOTES:

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. CONTRACTOR TO VERIFY DESIGN WITH DESIGNER.
3. P3217/A: UTA LOGO INFORMATION.
4. SEE DWG P3212 FOR SIGN FOUNDATION DETAILS



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

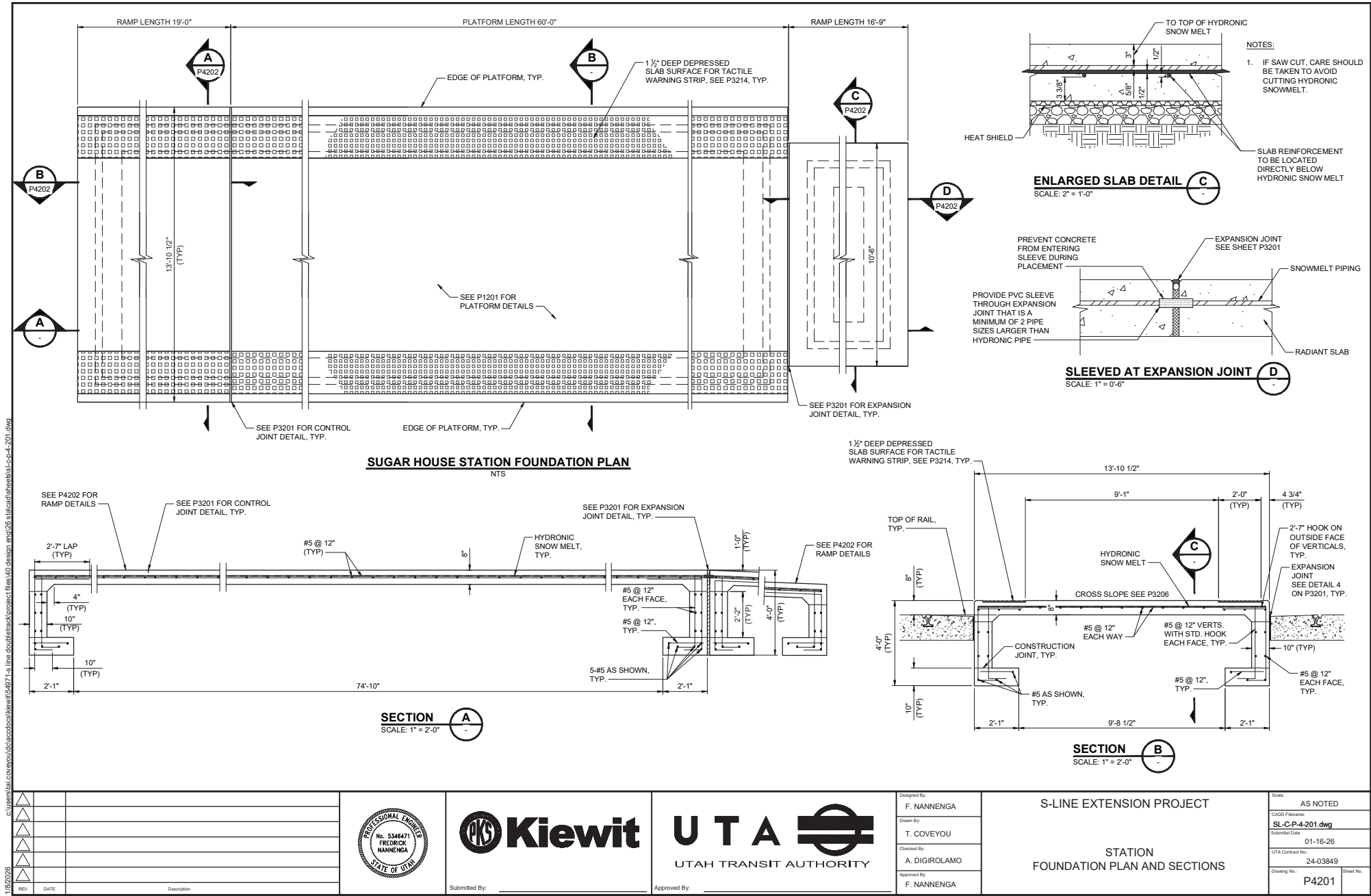
GRAPHIC SIGN STANDARDS
PAVEMENT MARKINGS AND PRISM

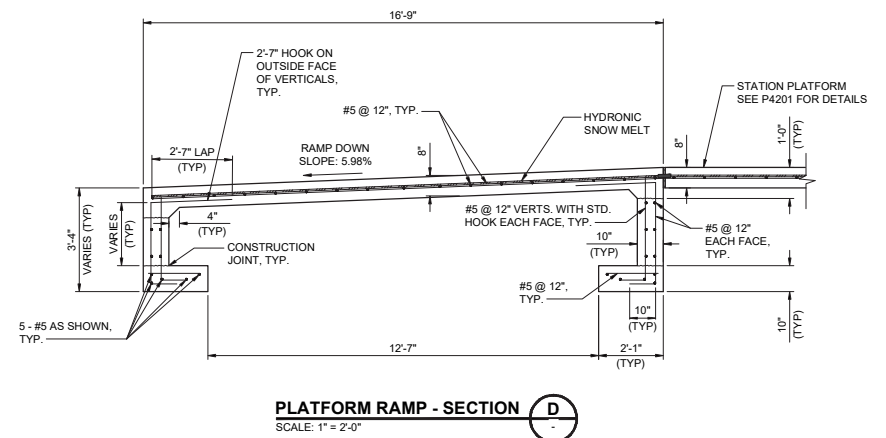
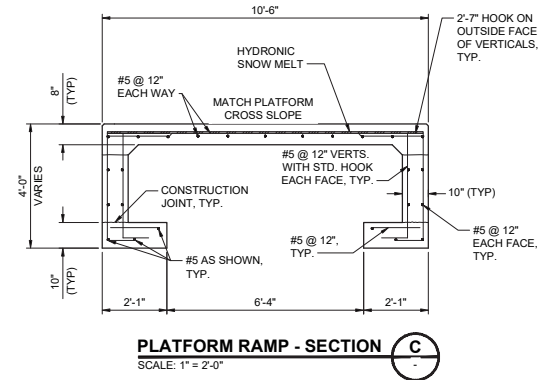
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Submittal Date	01-16-26
UTA Contract No.:	24-03849
Drawing No.:	P3220



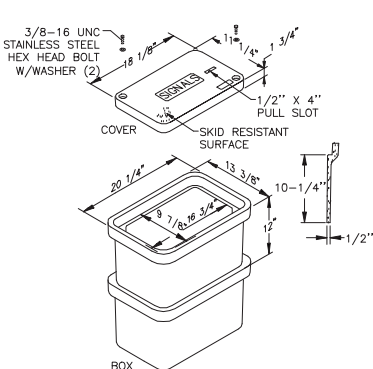
Submitted By:

Approved By: _____

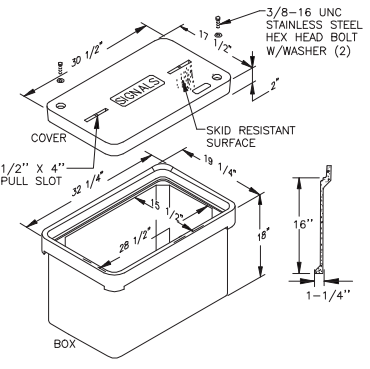


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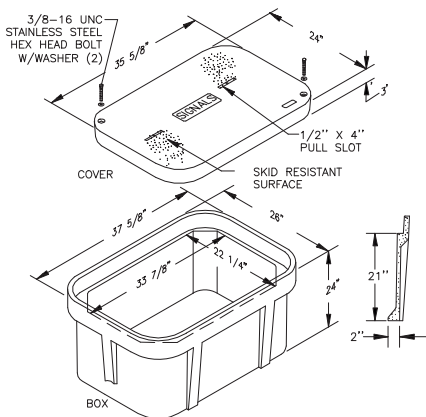
C:\Users\jain_aj\Desktop				 	Designed By: A.JAIN Drawn By: A. JAIN Checked By: D.DUZAN Approved By: Y.LIU	S-LINE EXTENSION PROJECT GENERAL PLATFORM ELECTRICAL LEGENDS, NOTES AND ABBREVIATIONS	Scale: NTS CADIS File Name: SL-C-E-0-202.dwg Submitted Date: 01-16-26 UTA Contract No.: 24-03849 Drawing No.: E0202
	REV	DATE	Description				



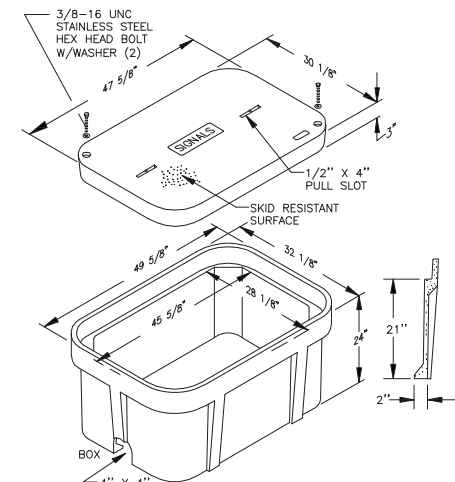
TYPE I DOUBLE JUNCTION BOX



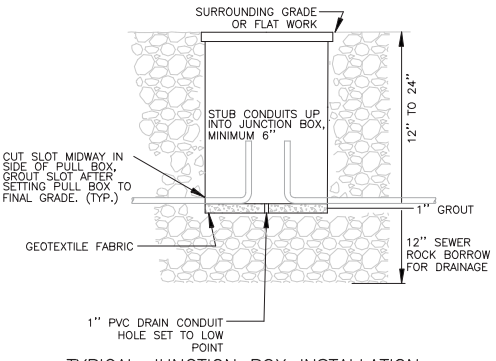
TYPE II JUNCTION BOX



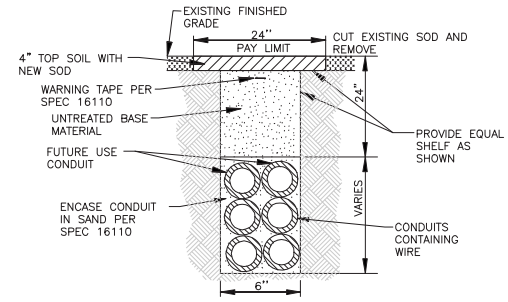
TYPE III JUNCTION BOX



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:
- PROPERTIES ASTMPOLYMER
- TENSILE STRENGTH C-496 1,700 PSI
FLEXURAL STRENGTH D-790 7,500 PSI
IMPACT RESISTANCE D-2444 72 FT./LBS.
COMPRESSIVE STRENGTH C-1091 11,000 PSI
EFFECT OF ACIDS D543 VERY RESISTANT
EFFECT OF ALKALIES D543 VERY RESISTANT

1/2/2023	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 JUNCTION BOX AND TRENCH DETAILS

State: NTS

CADD Filename: SL-C-E-0-208.dwg

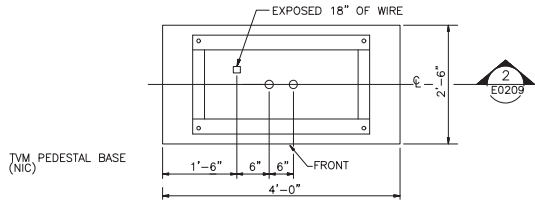
Submitted Date: 01-16-26

UTA Contract No.: 24-03849

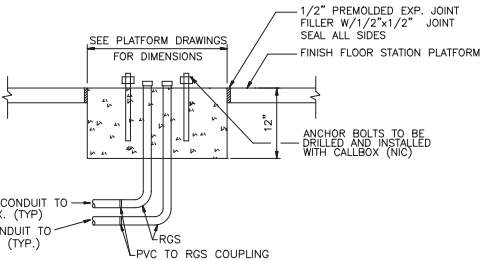
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Sheet No.:

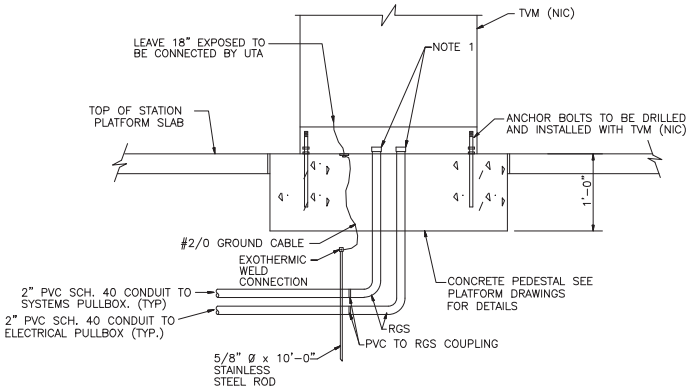
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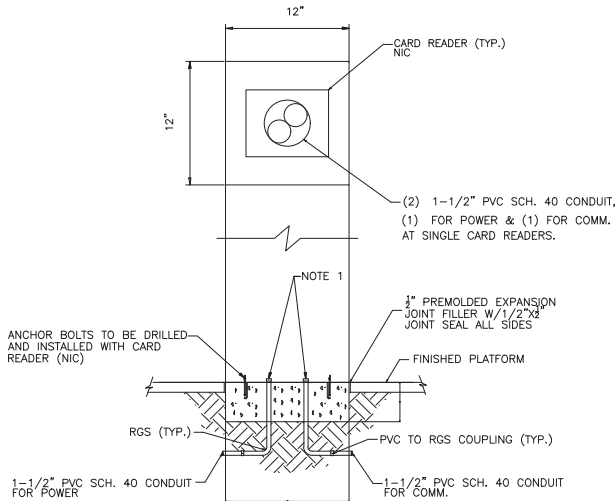
TICKET VENDING MACHINE FOUNDATION AND BASE
SCALE: NTS



CALL BOX CONCRETE BASE
SCALE: NTS



TICKET VENDING MACHINE BASE SECTION
SCALE: NTS



SINGLE CARD READER BASE
SCALE: NTS

NOTE:
1. STUB UP 2" ABOVE PLATFORM

1/10/2024
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REV	DATE	Description



Submitted By: _____

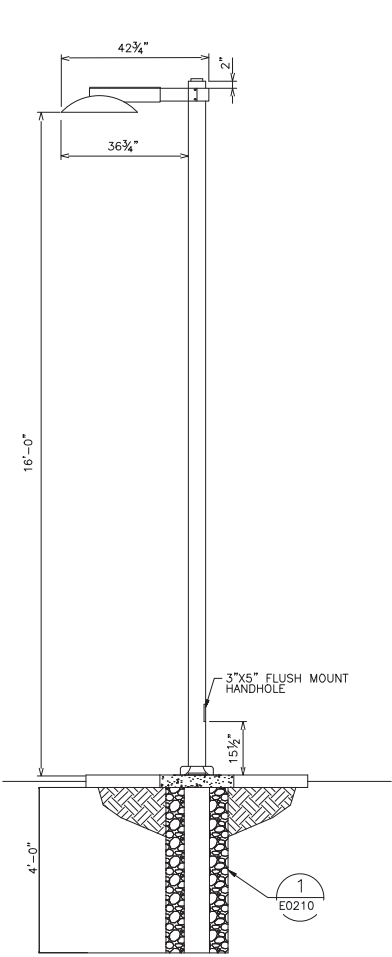


Approved By: _____

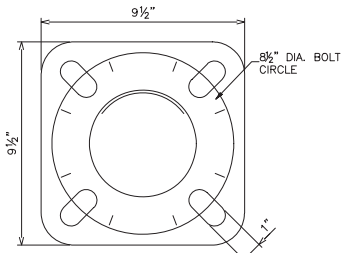
Designed By A.JAIN
Drawn By A.JAIN
Checked By D.DUZAN
Approved By Y.LIU

S-LINE EXTENSION PROJECT
PLATFORM ELECTRICAL SUGAR HOUSE STATION PLATFORM TVM BASE, CALL BOX, AND CARD READER DETAILS

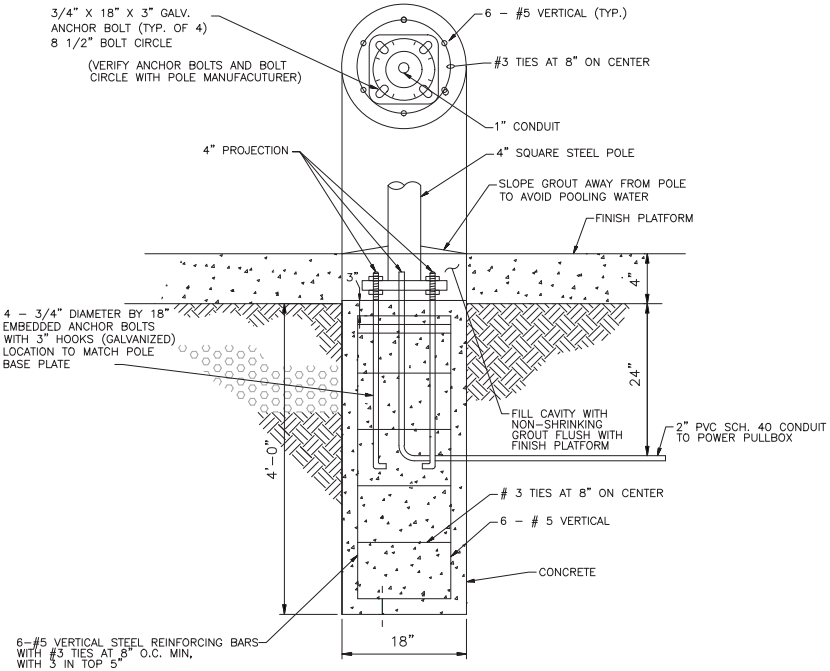
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PLATFORM LIGHT SECTION
SCALE: NTS



BASE PLATE DETAIL
SCALE: NTS



1 LIGHT POLE FOUNDATION
SCALE: NTS

1/2/2023	REVISION	DATE	DESCRIPTION
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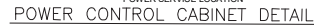


Designed By	A.JAIN
Drawn By	A.JAIN
Checked By	D.DUZAN
Approved By	Y.LIU

S-LINE EXTENSION PROJECT

PLATFORM ELECTRICAL
PLATFORM LIGHT INSTALLATION AND
POLE FOUNDATION DETAILS

Scale	NTS
CADD Filename	SL-C-E-0210.dwg
Submitted Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	E0210
Sheet No.	



18/2026 △ △ △ △ △			
	REV	DATE	Description



Approved By: _____

Scale: 1"=10'	
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Submittal Date: 01-16-26	
UTA Contract No.: 24-03849	
Drawing No.: E1205	Sheet No.:

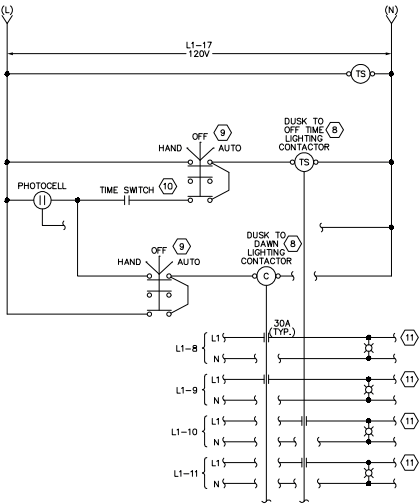
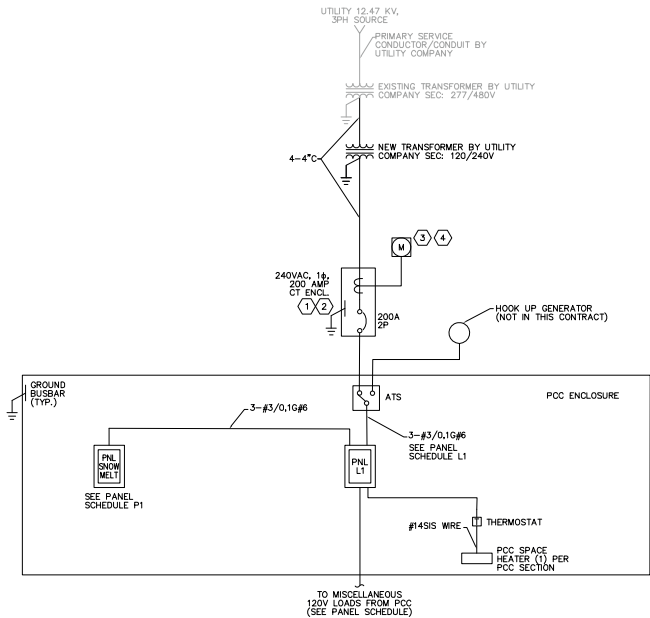
1. STATION PLATFORM IS PROVIDED WITH HYDRONIC SNOW MELTER SYSTEM. CANOPY ROOF HAS HEAT TRACE SYSTEM.



⊗ GROUND ROD (3/4" X 10' COPPER COATED STEEL)
 □ BOLTED GROUND CONNECTION (ABOVE GROUND)
 — GROUND CONDUCTOR (2/0 BARE COPPER)



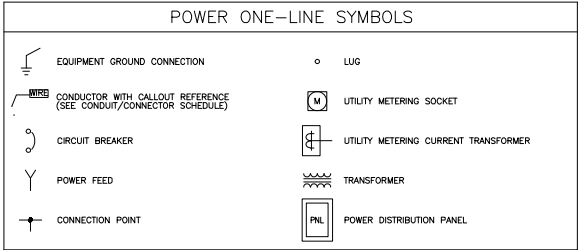
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CADD Filename:		SL-C-E-3-207.dwg
Submital Date		01-16-26
UTA Contract No.:		24-03849
Drawing No.:	E3207	Sheet



- NOTES:
- 1 CONDUIT BY CONTRACTOR, CONDUCTORS BY ROCKY MOUNTAIN POWER, VERIFY SIZE AND QUANTITY WITH ROCKY MOUNTAIN POWER BEFORE INSTALLATION.
 - 2 CONTRACTOR TO COORDINATE WITH MANUFACTURER THE WIRING TO BE PROVIDED AND INSTALLED BY PCC MANUFACTURER.
 - 3 120/240V, 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.
 - 4 LABEL AS "MAIN SERVICE DISCONNECT".
 - 5 NOT USED
 - 6 NOT USED
 - 7 NOT USED
 - 8 PROVIDE CONTACTORS AS REQUIRED FOR CIRCUITS.
 - 9 PROVIDE MAINTAINED CONTACT, THREE POSITION SELECTOR SWITCH WITH HAND-OFF-AUTO LEGEND PLATE. INSTALL SWITCH INSIDE PCC, PROVIDE APPROPRIATE MOUNTING BOX FOR SWITCH.
 - 10 TIME SWITCH SHALL BE TORK E101P OR APPROVED EQUAL, 24 HOUR TIMER.
 - 11 TO ADDITIONAL LIGHTS AS REQUIRED.

TYPICAL LIGHTING CONTROL DIAGRAM (IN PCC ENCLOSURE)

POWER DISTRIBUTION ONE-LINE DIAGRAM



1/9/2023	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 ONE-LINE AND LIGHTING CONTROL DIAGRAMS	Scale: NTS CADD Filename: SL-C-E-7-203.dwg Submitted Date: 01-16-26 UTA Contract No.: 24-03849 Drawing No.: E7203
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- NOTES:
- 1. LOADS SHOWN ON SNOW MELT PANEL ARE INDICATIVE. COORDINATE WITH SNOW MELT SYSTEM SUPPLIER FOR FINAL LOADS.
 - 2. STATION PLATFORM IS PROVIDED WITH HYDRONIC SNOW MELTER SYSTEM. CANOPY ROOF HAS HEAT TRACE SYSTEM
 - 3. CIRCUIT BREAKER SUPPLYING POWER TO HEAT TRACING SHALL BE EQUIPPED WITH 30A MINIMUM GROUND-FAULT EQUIPMENT PROTECTION.

SUGAR HOUSE STATION PLATFORM ELECTRICAL PANEL SCHEDULE									
Panel No.	Panel Description	Panel Type	Panel Voltage	Panel Amperage	Panel Breaker	Panel Breaker Size	Panel Breaker Type	Panel Breaker Location	Panel Breaker Notes
1	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
2	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
3	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
4	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
5	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
6	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
7	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
8	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
9	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
10	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy

SUGAR HOUSE STATION PLATFORM ELECTRICAL PANEL SCHEDULE									
Panel No.	Panel Description	Panel Type	Panel Voltage	Panel Amperage	Panel Breaker	Panel Breaker Size	Panel Breaker Type	Panel Breaker Location	Panel Breaker Notes
1	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
2	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
3	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
4	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
5	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
6	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
7	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
8	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
9	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
10	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy

1	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
2	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
3	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
4	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
5	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
6	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
7	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
8	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
9	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy
10	Platform Canopy	Hydronic	240V	30A	30A	30A	30A	Platform Canopy	Platform Canopy

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1/10/2023	REV	DATE	Description
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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		State	NTS
PLATFORM ELECTRICAL SUGAR HOUSE STATION PLATFORM PANEL SCHEDULE		CADD Filename:	SL-C-E-8-204.dwg
		Submittal Date	01-16-26
		UTA Contract No.	24-03849
		Drawing No.	E8204
		Sheet No.	

GN GENERAL REQUIREMENTS:

- NOTES:

1. DESIGN SPECIFICATIONS:

- FOUNDATION NOTES:

- 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

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

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.

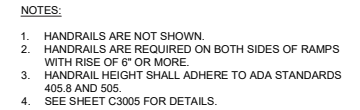
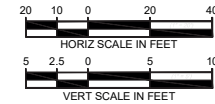
RE-9. PROVIDE MECHANICAL SPLICES FOR BARS LARGER THAN #11 OR WHERE INDICATED. ALL MECHANICAL SPLICES SHALL BE APPROVED BY THE ENGINEER OF RECORD.

RE-10. PROVIDE MIN CONCRETE COVER OVER REINFORCING STEEL AS FOLLOWS UNLESS NOTED OTHERWISE:

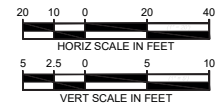
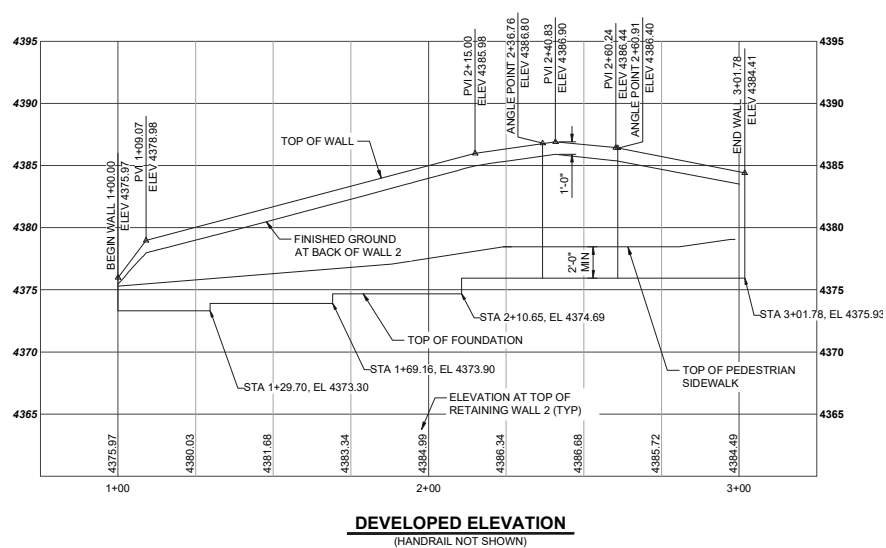
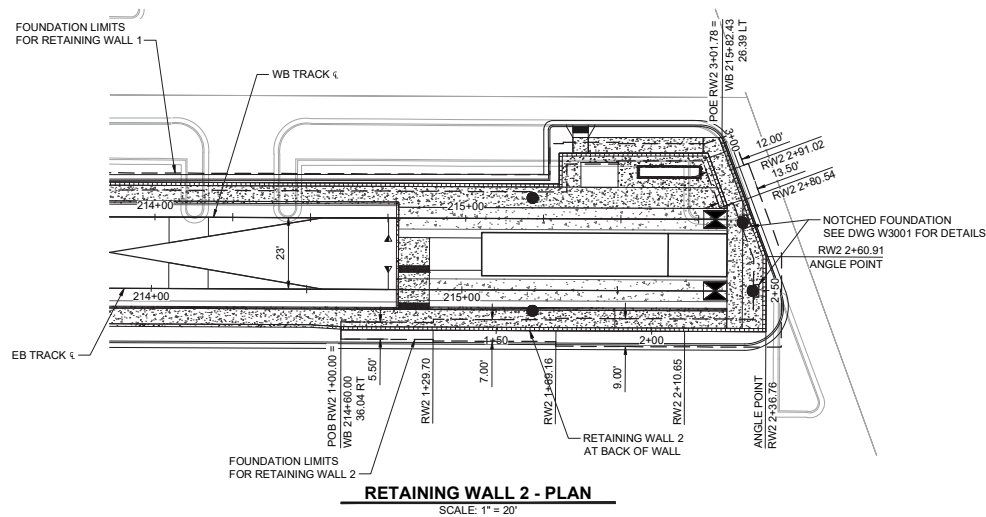
CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	SPECIFIED COVER, IN.
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	#6 THROUGH #18 BARS	2
		#5 BAR, W31 OR D31 WIRE AND SMALLER	1-1/2
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	SLABS, JOISTS,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

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"

[illegible]



01/16/26 REV DATE Description	PROFESSIONAL ENGINEER No. 14249446 WASEEM ABBASSI STATE OF UTAH		PKS Kiewit		U T A UTAH TRANSIT AUTHORITY		Designed By: S. JOSHI	S-LINE EXTENSION PROJECT RETAINING WALL 1 SITUATION AND LAYOUT	Sheet: AS SHOWN
					Drawn By: S. JOSHI	CADD Filename: SL-C-W-1-201.dwg			
					Checked By: W. ABBASSI	Submitted Date: 01-16-26			
					Approved By: W. ABBASSI	UTA Contract No.: 24-03849			
							Drawing No.: W1201		



- 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.

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RETAINING WALL - DIMENSIONS



    		
1/8/2028		
REV	DATE	Description



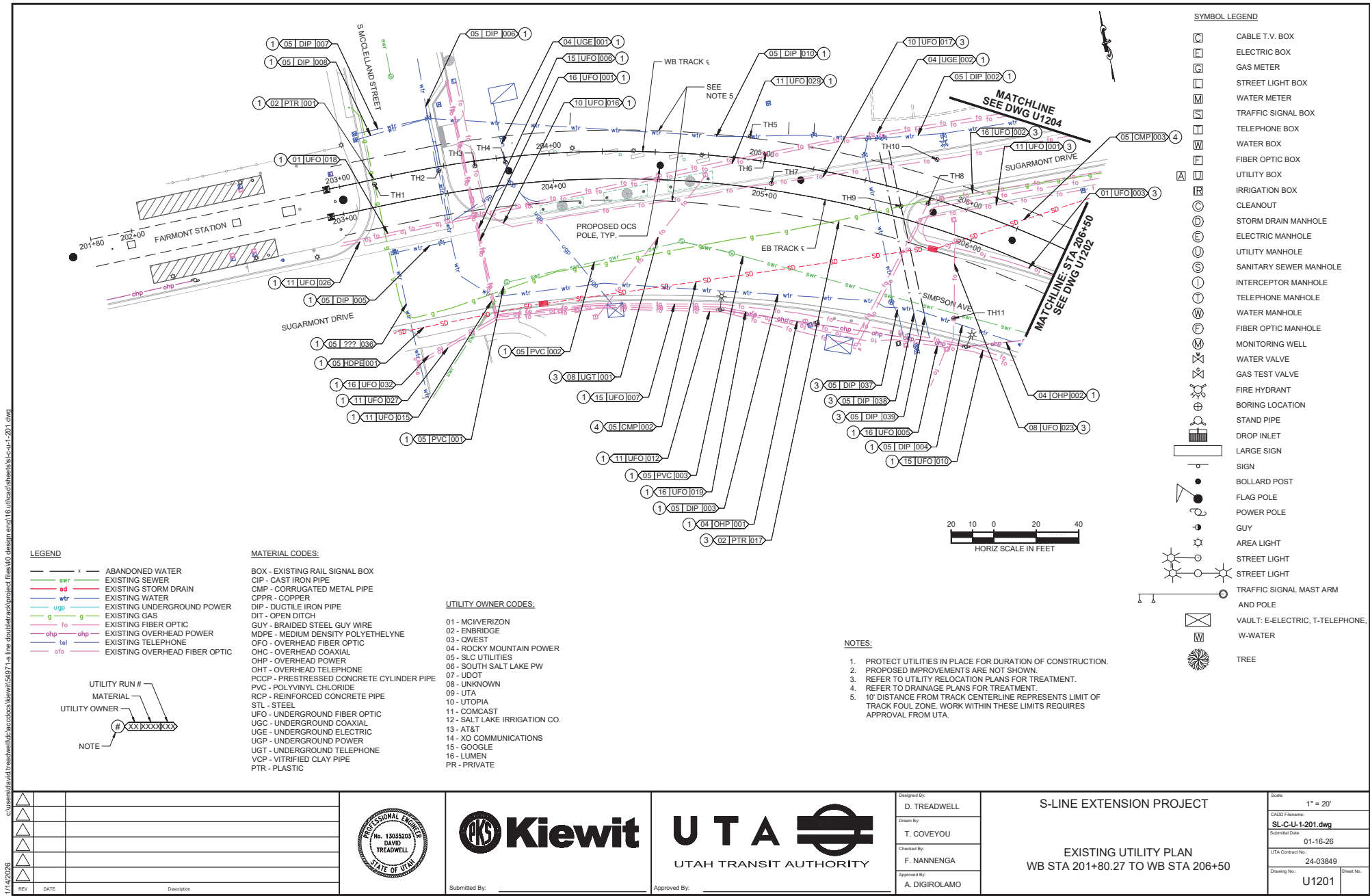
UTA 
UTAH TRANSIT AUTHORITY

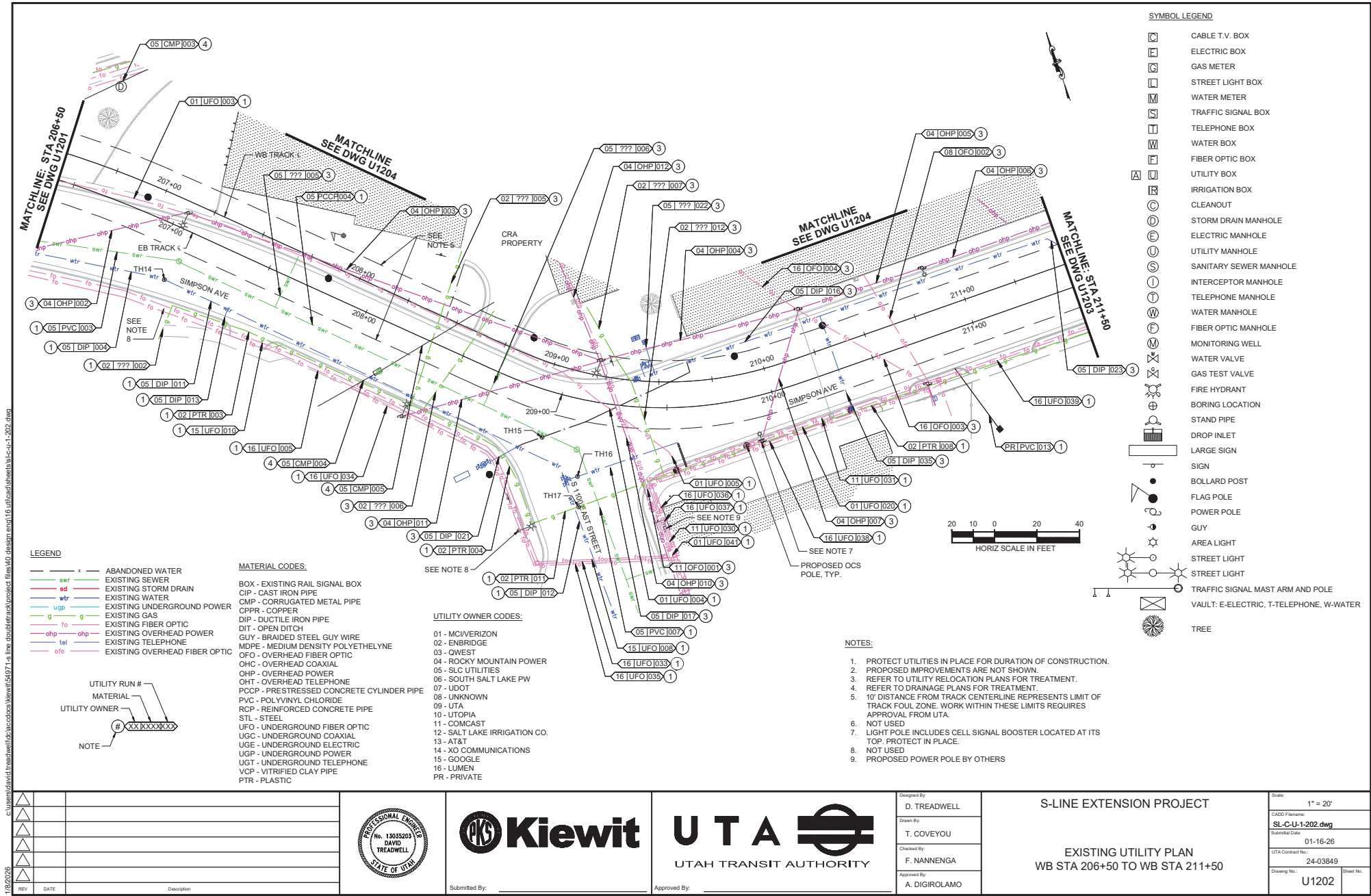
Designed By:	A. ALY
Drawn By:	S. JOSHI
Checked By:	W. ABBASSI
Approved By:	W. ABBASSI

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

2. UTILITIES TO BE INSTALLED PER APWA STANDARDS AND SPECIFICATIONS
3. EXISTING UTILITIES SHOWN IN PLANS AND PROFILES ARE BASED ON AS-BUILT INFORMATION, INFORMATION FROM 3RD PARTY SURVEYORS, RECORD DRAWINGS, AND TEST LOGS. ALL UTILITIES SHALL BE TO BE VERIFIED LOCATIONS AND ELEVATIONS PRIOR TO WORK.
4. 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. ANY FUTURE WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.
5. REFER TO MAINTENANCE AGREEMENT BETWEEN UTA AND CITY IN CASE FUTURE MAINTENANCE OF UTILITIES TO REMAIN IS REQUIRED.
6. BUILDING, DRAINAGE, HIGHWAYS, UTILITY SERVICES, AND LANDSCAPING ON THE GRA 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.
7. 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.
8. 1" WATER METER AND VALVE(S) TO BE INSTALLED PER APWA STANDARD PLAN 521
9. 2" WATER METER AND VALVE(S) TO BE INSTALLED PER APWA STANDARD PLAN 522
10. BACKFLOW PREVENTER(S) TO BE INSTALLED PER APWA STANDARD PLAN 631.1
11. FIRE HYDRANT(S) TO BE INSTALLED PER APWA STANDARD PLAN 511
12. DUCTILE IRON PIPE MECHANICAL JOINTS PER ANSI C110, C150, AND C51. PROVIDE PIPE IN 18" LENGTHS. MAXIMUM DEFLECTION OF 4 DEG 16" 48" (PIR 16" 18" LENGTH) PER AWWA M1, FIGURE 4.21
13. TRENCH FOR DIP AND HDPE PIPE TO BE PER AWWA M51, FIGURE 4.2. UNSTRAINED BASE COURSE FOR HAUNCHING AND BEDDING TO BE PER APWA PLAN 362
14. A MINIMUM OF 5' COVER TO TOP OF PIPE IS REQUIRED
15. ALL HDPE PIPE TO BE SDR11
16. 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.
17. CARRIER PIPE IS TO BE CENTERED WITHIN CASING
18. NO ANNULAR FILL WITHIN CASINGS
19. CASINGS SHALL INCLUDE AMCE MOLDED CONE END SEALS FROM ADVANCE PRODUCTS AND SYSTEMS OR APPROVED EQUAL

C:\Users\jgarcia\OneDrive\Documents\Drawings\2025\10/20/25	△								Designed By: D. TREADWELL	S-LINE EXTENSION PROJECT	Scale: NTS
	△								Drawn By: D. TREADWELL		CADD Filename: SL-C-U-100.dwg
	△								Checked By: R. NANNENGA		Submittal Date: 01-16-26
	△								Approved By: D. TREADWELL		UTA Contract No.: 24-03849
	△										Drawing No.: U0100
	REV	DATE	Description			Submitted By: _____	Approved By: _____				Sheet No.:









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 #9. 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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1/9/2024	REV	DATE	Description
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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 1 OF 4

State: NTS
CADD Filename: SL-C-U-1-205.dwg
Submitted Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: U1205
Sheet No.:

[illegible]

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
05-777-022	WATER	05	SLC UTILITIES	UNKNOWN	022	HIGH	UNKNOWN	U1202				TO BE REMOVED BY OTHERS	QLB
05-DIP-035	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	035	HIGH	1"	U1202				REMOVE AND RELOCATE	QLD
11-UFO-031	FIBER OPTIC	11	COMCAST	UNDERGROUND FIBER OPTIC	031	LOW		U1202, U1203				PROTECT IN PLACE	QLD
16-UFO-039	FIBER OPTIC	16	LUMEN	UNDERGROUND FIBER OPTIC	039	LOW		U1202, U1203				PROTECT IN PLACE	QLD
02-PTR-008	GAS	02	ENBRIDGE	PLASTIC	008	LOW	2"	U1202, U1203				ASSUMED PLASTIC PER TEST HOLE #17. RELOCATE	QLB
04-OHP-006	OVERHEAD POWER	04	ROCKY MOUNTAIN POWER	OVERHEAD POWER	006	HIGH		U1202, U1203				POLES AND WIRE TO BE RELOCATED BY OTHERS	QLB
05-DIP-023	WATER	05	SLC UTILITIES	DUCTILE IRON PIPE	023	HIGH	12"	U1202, U1203				ABANDON	QLC
16-OFO-004	OVERHEAD FIBER OPTIC	16	LUMEN	OVERHEAD FIBER OPTIC	004	HIGH		U1202, U1204				RELOCATE	QLC
15-UFO-009	FIBER OPTIC	15	GOOGLE	UNDERGROUND FIBER OPTIC	009	LOW		U1203				TEST HOLE #23. PROTECT IN PLACE	QLC
08-UFO-011	FIBER OPTIC	08	UNKNOWN	UNDERGROUND FIBER OPTIC	011	LOW		U1203				PROTECT IN PLACE	QLC
11-UFO-013	FIBER OPTIC	11	COMCAST	UNDERGROUND FIBER OPTIC	013	LOW		U1203				TEST HOLE #23. PROTECT IN PLACE	QLD
16-UFO-021	FIBER OPTIC	16	LUMEN	UNDERGROUND FIBER OPTIC	021	LOW		U1203				PROTECT IN PLACE	QLD
16-UFO-022	FIBER OPTIC	16	LUMEN	UNDERGROUND FIBER OPTIC	022	LOW		U1203				PROTECT IN PLACE	QLD
08-UFO-024	FIBER OPTIC	08	UNKNOWN	UNDERGROUND FIBER OPTIC	024	LOW		U1203				TEST HOLE #23. PROTECT IN PLACE	
08-UFO-025	FIBER OPTIC	08	UNKNOWN	UNDERGROUND FIBER OPTIC	025	LOW		U1203				TEST HOLE #23. PROTECT IN PLACE	
16-UFO-040	FIBER OPTIC	16	LUMEN	UNDERGROUND FIBER OPTIC	040	LOW		U1203				PROTECT IN PLACE	QLD
01-UFO-041	FIBER OPTIC	01	MCI/VERIZON	UNDERGROUND FIBER OPTIC	041	LOW		U1203				PROTECT IN PLACE	QLD
01-UFO-042	FIBER OPTIC	01	MCI/VERIZON	UNDERGROUND FIBER OPTIC	042	LOW		U1203				TEST HOLE #23. PROTECT IN PLACE	QLC
08-UFO-043	FIBER OPTIC	08	UNKNOWN	UNDERGROUND FIBER OPTIC	043	LOW		U1203				TEST HOLE #23. PROTECT IN PLACE	
02-STL-009	GAS	02	ENBRIDGE	STEEL	009	HIGH	6"	U1203				TEST HOLE #19. CASING PROPOSED	QLB
02-STL-010	GAS	02	ENBRIDGE	STEEL	010	LOW	6"	U1203				PROTECT IN PLACE	QLC
02-STL-013	GAS	02	ENBRIDGE	STEEL	013	LOW	3"	U1203				PROTECT IN PLACE	QLD
02-STL-014	GAS	02	ENBRIDGE	STEEL	014	LOW	3"	U1203				PROTECT IN PLACE	QLD
02-STL-015	GAS	02	ENBRIDGE	STEEL	015	LOW	3"	U1203				PROTECT IN PLACE	QLD
02-STL-016	GAS	02	ENBRIDGE	STEEL	016	LOW	4"	U1203				PROTECT IN PLACE	QLD
05-PVC-008	SEWER	05	SLC UTILITIES	POLYVINYL CHLORIDE	008	LOW	15"	U1203				PROTECT IN PLACE	QLC
05-777-009	SEWER	05	SLC UTILITIES	UNKNOWN	009	LOW	UNKNOWN	U1203				???	QLD
PR-VCP-010	SEWER	PR	PRIVATE	VITRIFIED CLAY PIPE	010	LOW	8"	U1203				PROTECT IN PLACE	QLD
PR-777-011	SEWER	PR	PRIVATE	UNKNOWN	011	LOW	UNKNOWN	U1203				PROTECT IN PLACE	QLD
PR-777-012	SEWER	PR	PRIVATE	UNKNOWN	012	LOW	UNKNOWN	U1203				PROTECT IN PLACE	QLD
05-777-013	SEWER	05	SLC UTILITIES	UNKNOWN	013	LOW	UNKNOWN	U1203				PROTECT IN PLACE	QLD
PR-777-014	SEWER	PR	PRIVATE	UNKNOWN	014	LOW	UNKNOWN	U1203				PROTECT IN PLACE	QLC
PR-777-015	SEWER	PR	PRIVATE	UNKNOWN	015	LOW	UNKNOWN	U1203				PROTECT IN PLACE	QLC

1/20/2024

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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 3 OF 4

State: NTS

CADD Filename: SL-C-U-1-207.dwg

Submittal Date: 01-16-26

UTA Contract No.: 24-03849

Drawing No.: U1207

Sheet No.: _____

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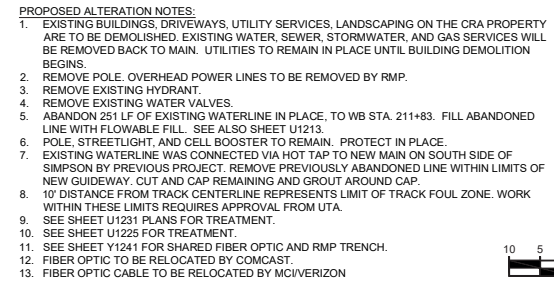
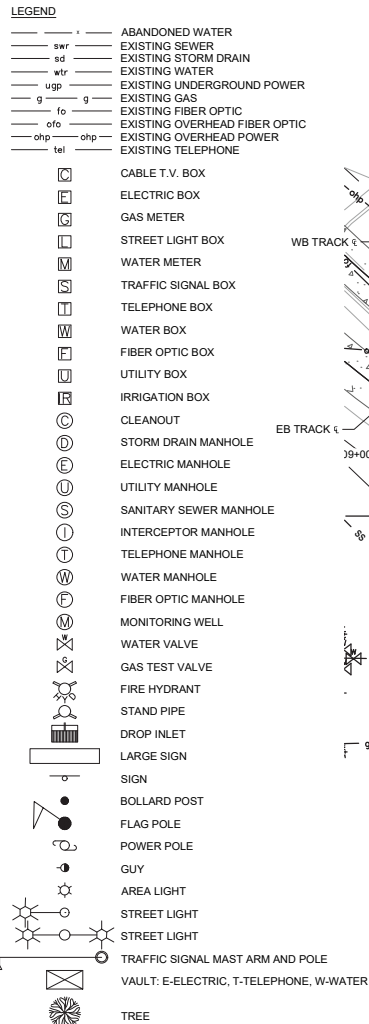
Test Hole	Easting	Northing	Size	Type	Material	Owner	Depth (ft)
1	7432219.908	1540234.769	6"	Gas	Plastic	Enbridge	9.93
2	7432219.569	1540265.707	21"	Water	Metal	SLCPU	5.29
3	7432218.131	1540282.691	6"	Fiber Optic	Metal	Utopia	5.3
4	7432216.787	1540297.086	20" Wide	Electric	Duct Bank	Rocky Mountain Power	2.5
5	7432203.856	1540412.282	12"	Water	Metal	SLCPU	4.65
6	7432194.027	1540417.641	4" / 6" / Unk	Electric	Plastic	Rocky Mountain Power	6.09
7	7432179.984	1540417.244	2"	Fiber Optic	Plastic	Utopia	5.42
8	7432154.915	1540487.288	1.75"	Fiber Optic	Plastic	Lumen	1.01
9	7432156.342	1540474.426	5"	Gas	Plastic	Enbridge	6.45
10	7432174.151	1540495.819	2"	Fiber Optic	Plastic	Utopia	7.86
11	7432099.526	1540487.391	(2) 2"	Cable TV	Plastic	Comcast	3.18
12	7432178.09	1540632.203	6"	Water	Plastic	SLCPU	3.82
13	7432176.641	1540695.336	6"	Water	Metal	SLCPU	3.86
14	7432048.368	1540569.147	12"	Water	Metal	SLCPU	4.24
15	7431918.965	1540711.723	4"	Water	Metal	SLCPU	3.49
16	7431896.016	1540721.138	12"	Water	Metal	SLCPU	4.75
17	7431882.383	1540716.91	2"	Gas	Plastic	Enbridge	3.61
18	7431913.324	1541001.673	Not Found				
19	7431911.369	1541020.229	6"	Gas	Metal	Enbridge	4.53
20	7431915.279	1541015.509	Not Found				
21	7431883.298	1541071.055	12"	Water	Metal	SLCPU	7.42
22	7431904.009	1541102.65	Not Found				
23	7431898.443	1541098.459	(6) 2"	Fiber Optic	Plastic	Varies	2.79
24	7431900.971	1541424.024	Not Found				
24A	7431863.508	1541440.199	6"	Water	Metal	SLCPU	4.99
25	7431936.11	1541028.331	(2) 2" / (3) 4"	Fiber Optic	Plastic	Lumen	2.27
26	7431886.134	1541074.488	>29" Wide	Electric	Concrete	Rocky Mountain Power	3.94
27	7431990.535	1541402.849	4"	Gas	Metal	Enbridge	4.16

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			PROFESSIONAL ENGINEER No. 13035203 DAVID TREADWELL STATE OF UTAH PKS Kiewit	U T A UTAH TRANSIT AUTHORITY	Designed By D. TREADWELL	S-LINE EXTENSION PROJECT EXISTING UTILITY TEST HOLE DATA	Issue NTS
	Drawn By T. COVEYOU	CADD Filename: SLC-U-1-209.dwg					
	Checked By F. NANNENGA	Submittal Date 01-16-26					
	Approved By D. TREADWELL	UTA Contract No. 24-03849					
		Drawing No. U1209					
REV	DATE	Description	Submitted By:	Approved By:			Sheet No.

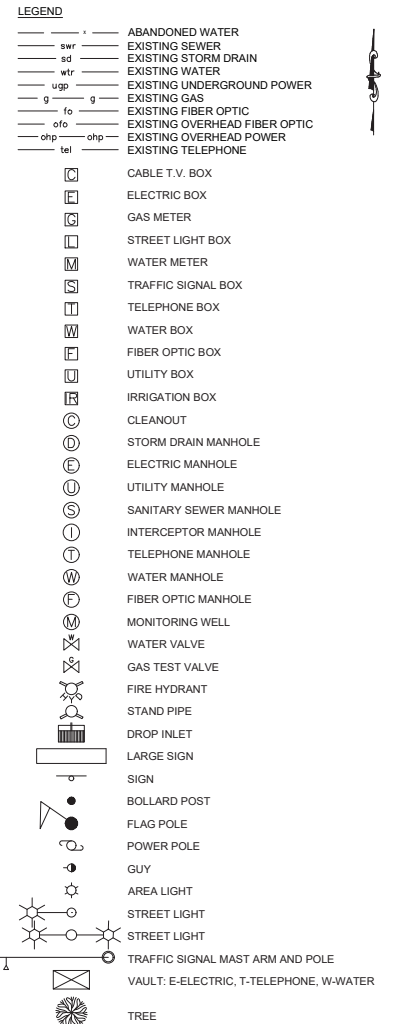






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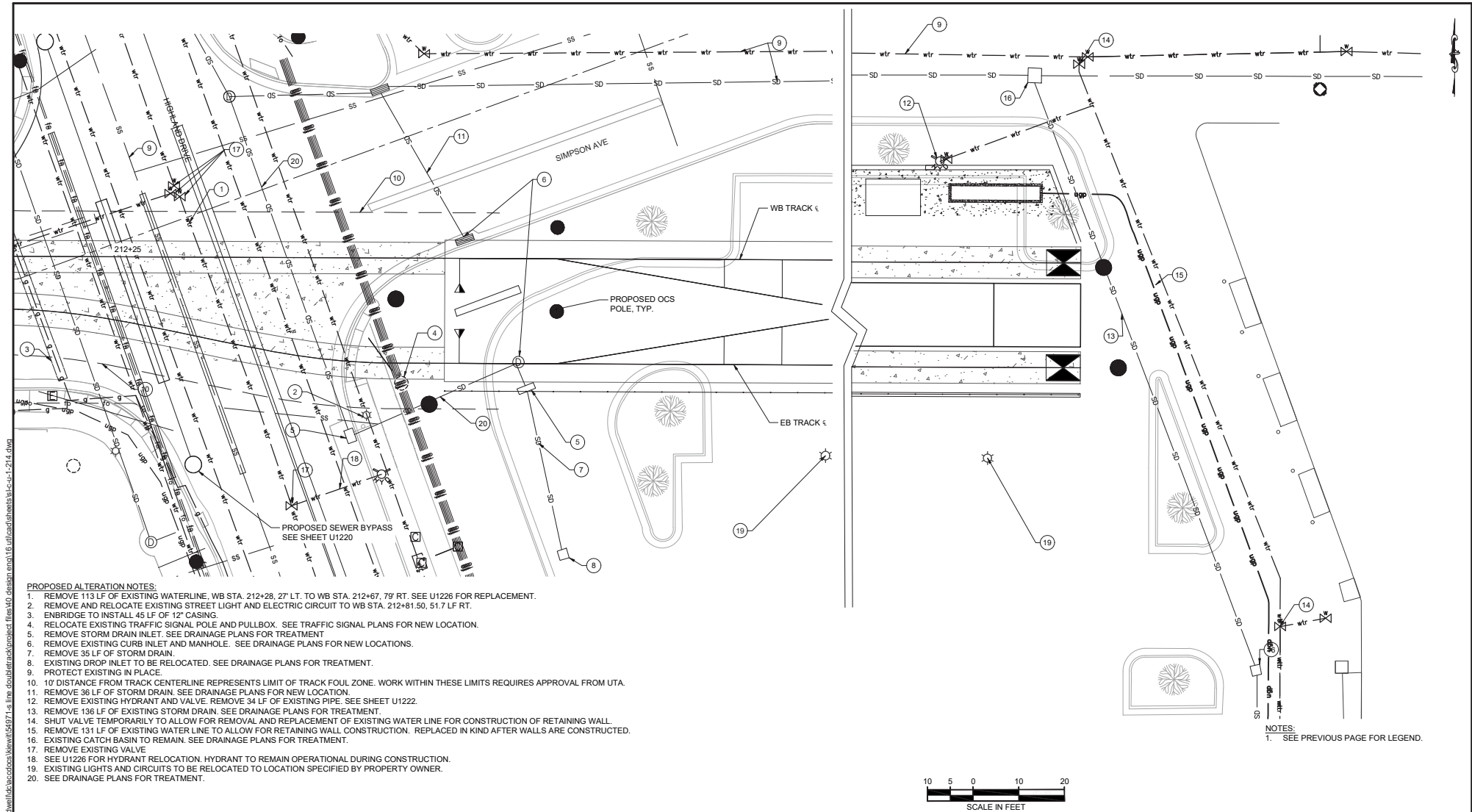


1. REMOVE POLE/ OVERHEAD POWER LINE TO BE REMOVED BY RMP.
2. PROTECT EXISTING JORDAN AND SALT LAKE CANAL IN PLACE. NO WORK IS ALLOWED WITHIN 33 LF OF CANAL CENTERLINE FROM MARCH 1ST TO OCTOBER 1ST.
3. EXISTING BUILDINGS, DRIVEWAYS, UTILITY SERVICES, LANDSCAPING ON THE CRA PROPERTY ARE TO BE DEMOLISHED. EXISTING WATER, SEWER, GAS, AND WATER, 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 251 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

10 5 0 10 20

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- S-LINE EXTENSION PROJECT
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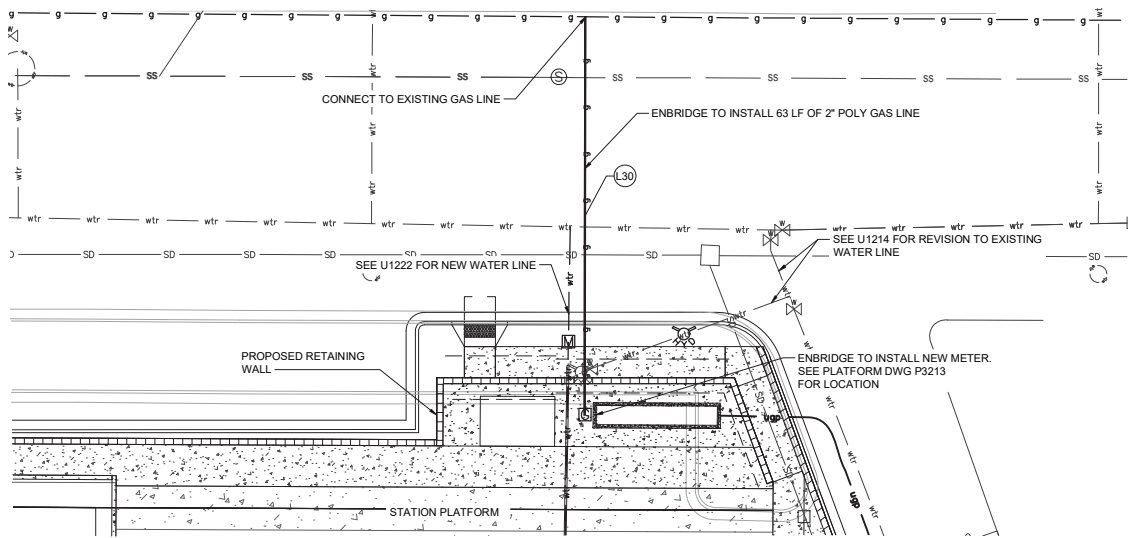
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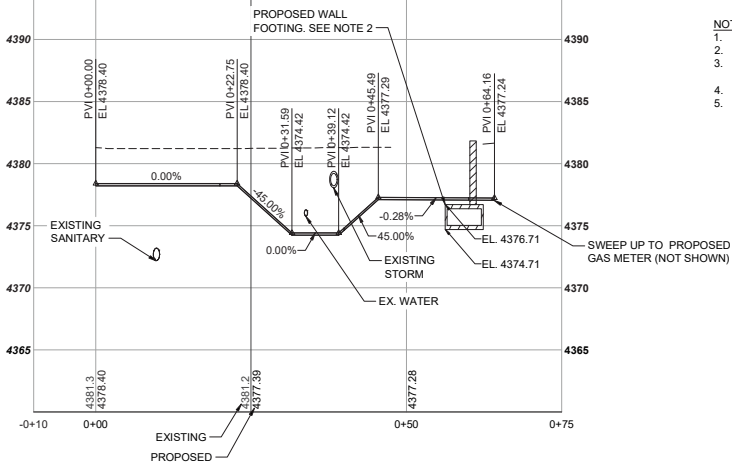
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UTAH TRANSIT AUTHORITY

Designed By:	D. TREADWELL
Drawn By:	A. LEWIS
Checked By:	F. NANNENGA
Approved By:	D. TREADWELL

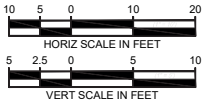
Scale:		AS SHOWN
CADD Filename:		SL-C-U-1-220.dwg
Submittal Date		01-16-26
UTA Contract No.:		24-03849
Drawing No.:	U1220	
	Sheet No.	



Line Table				
Line #	Length	Direction	Start Point (N,E)	End Point (N,E)
L30	64.16	S00° 04' 52\"W	(7431990.69,1541374.78)	(7431926.52,1541374.69)



- NOTES:
1. ACTUAL GAS SERVICE PROFILE TO BE DETERMINED BY ENBRIDGE IN THE FIELD
 2. PROVIDE 4" COVER BETWEEN GAS LINE AND FOOTING MIN. SEE W3001 FOR WALL PENETRATION DETAIL.
 3. EXISTING GAS LINE IS PRIVATE. PERMISSION FROM PRIVATE PROPERTY OWNER IS REQUIRED BEFORE CONNECTION CAN BE MADE.
 4. ELEVATIONS SHOWN ARE TO TOP OF PIPE UNLESS OTHERWISE NOTED
 5. MAINTAIN 1' HORIZONTAL AND VERTICAL SEPARATION BETWEEN PROPOSED GAS LINE AND EXISTING UTILITIES



REV	DATE	Description



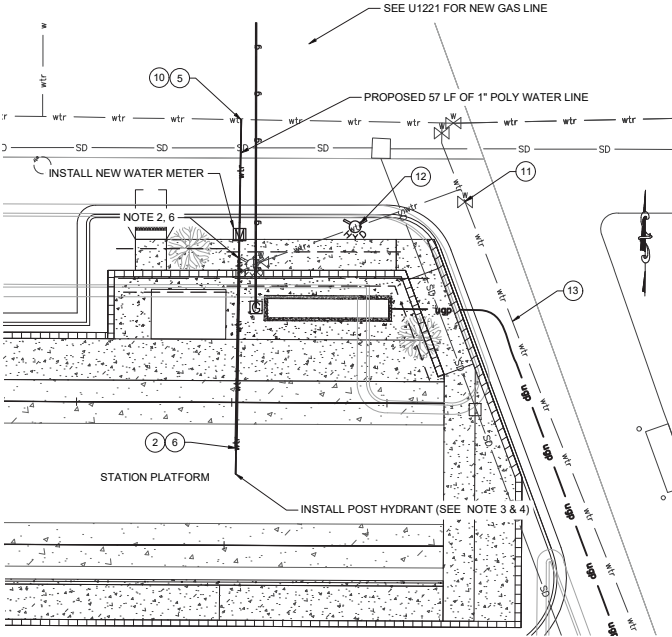
Submitted By: _____ Approved By: _____

Designed By	D. TREADWELL
Drawn By	A. LEWIS
Checked By	F. NANNENGA
Approved By	D. TREADWELL

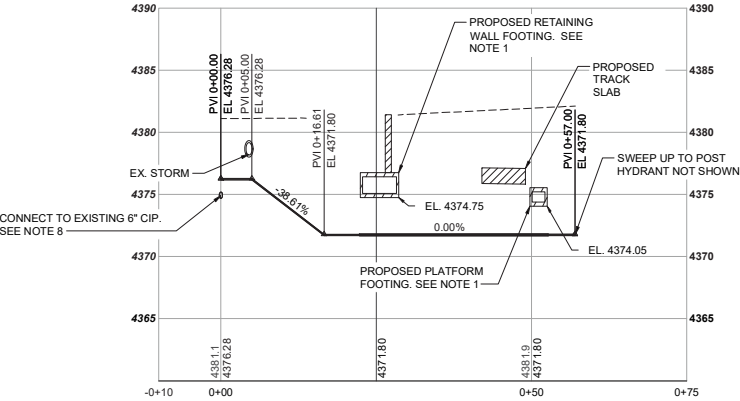
S-LINE EXTENSION PROJECT

PROPOSED GAS LINE
SUGAR HOUSE STATION

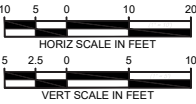
Scale	H: 1" = 20' V: 1" = 5'
CADD Filename	SL-C-U-1-221.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	U1221
Sheet No.	



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. 1/2" SHOE 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



1/12/2023

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REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER

No. 13035203

DAVID TREADWELL

STATE OF UTAH

PKS

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U T A

UTAH TRANSIT AUTHORITY

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 WATER LINE
HIGHLAND DRIVE STATION

Scale

PLAN: 1" = 10'

CADD Filename

SL-C-U-1-222.dwg

Submitted Date

01-16-26

UTA Contract No.

24-03849

Drawing No.

U1222

Sheet No.



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 FOOTING. THESE LIMITS REQUIRES APPROVAL FROM UTA.
8. SEE U1242

7. 10' DISTANCE FROM TRACK CENTERLINE REPRESENTS LIMIT OF TRACK FOUL ZONE. FUTURE WORK WITHIN THESE LIMITS REQUIRES APPROVAL FROM UTA.



C:\Users\j... 1/9/2026			
	REV	DATE	Description



Submitted By:

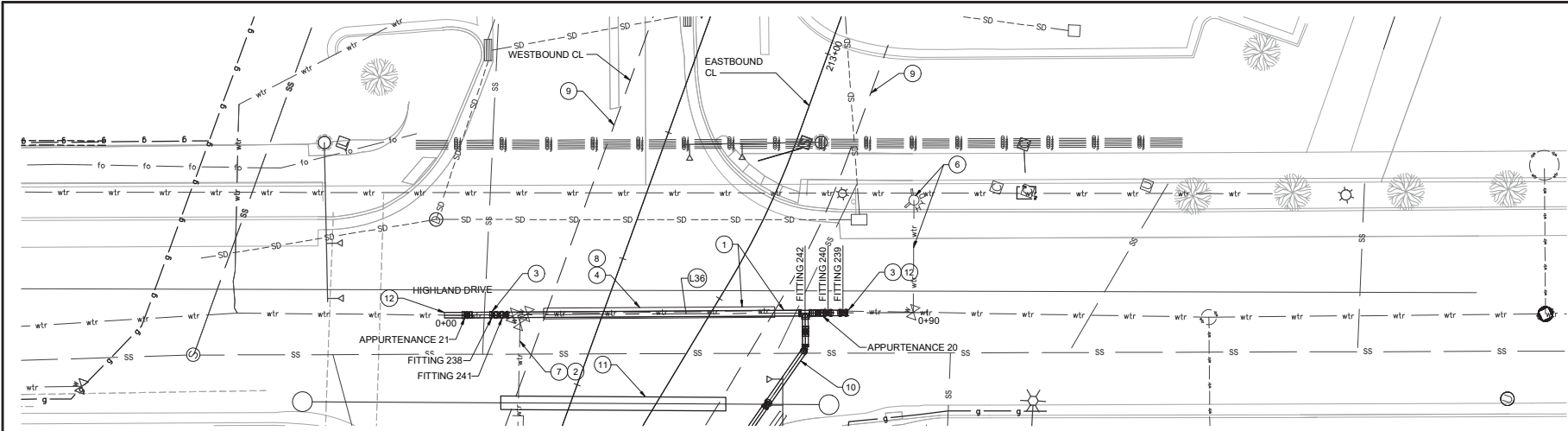
Approved By: _____

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	
Submittal 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	S 19° 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



1/23/2028

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REV

DATE

Description

PROFESSIONAL ENGINEER

No. 13035203

DAVID TREADWELL

STATE OF UTAH

PKS

Kiewit

U T A

UTAH TRANSIT AUTHORITY

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 WATER LINE PLAN

HIGHLAND DRIVE

Sheet

1"=10'

CADD Filename:

SL-C-U-1-226.dwg

Submittal Date

01-16-26

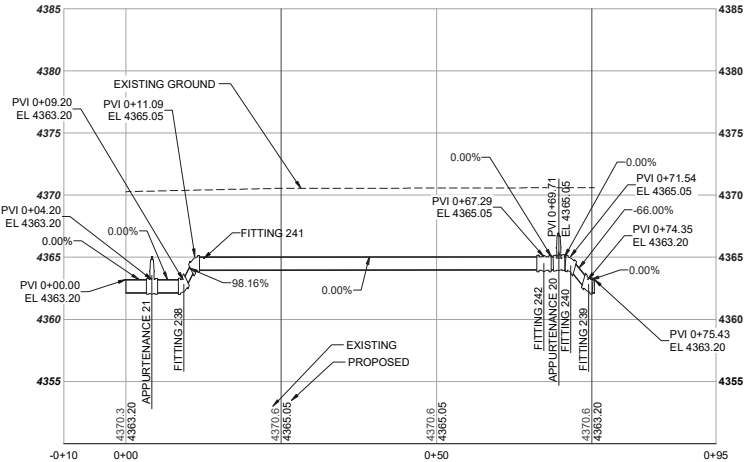
UTA Contract No.

24-03849

Drawing No.

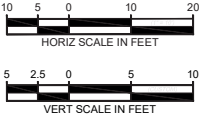
U1226

Sheet No.



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.



1/23/2028			
REV	DATE	Description	

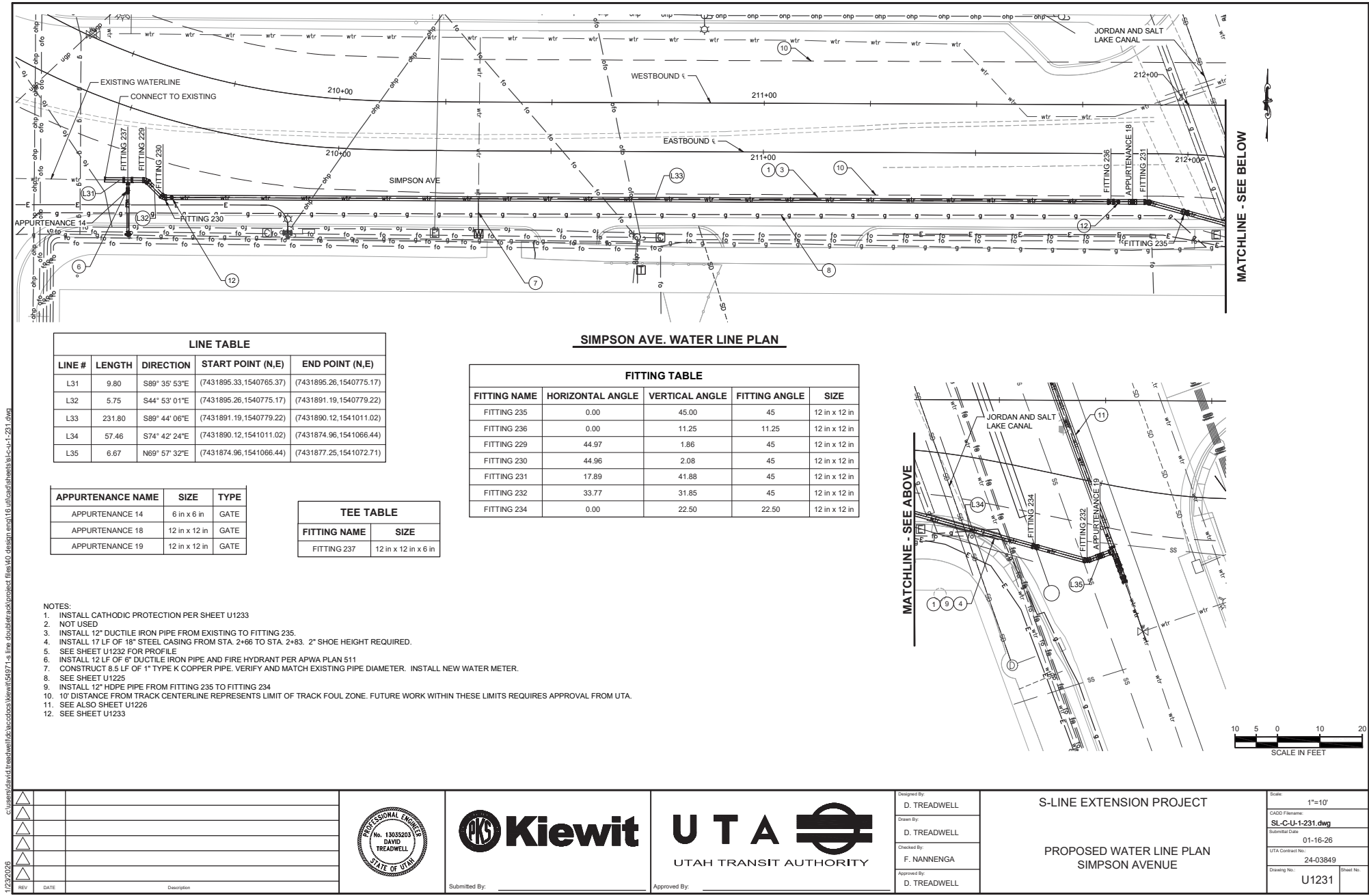


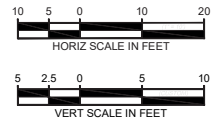
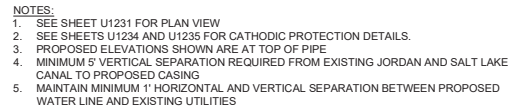
Submitted By: _____ Approved By: _____

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

S-LINE EXTENSION PROJECT
PROPOSED WATER LINE PROFILE HIGHLAND DRIVE

Scale: H: 1" = 10' V: 1" = 5'
CADD Filename: SL-C-U-1-227.dwg
Submittal Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: U1227
Sheet No.:





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REV	DATE	Description



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

PROPOSED WATER LINE PROFILE SIMPSON AVENUE

Scale: H: 1" = 10' V: 1" = 2.5'	
CADD Filename: SL-C-U-1-232.dwg	
Submittal Date 01-16-26	
UTA Contract No.: 24-03849	
Drawing No.: U1232	Sheet No.

GENERAL NOTES:

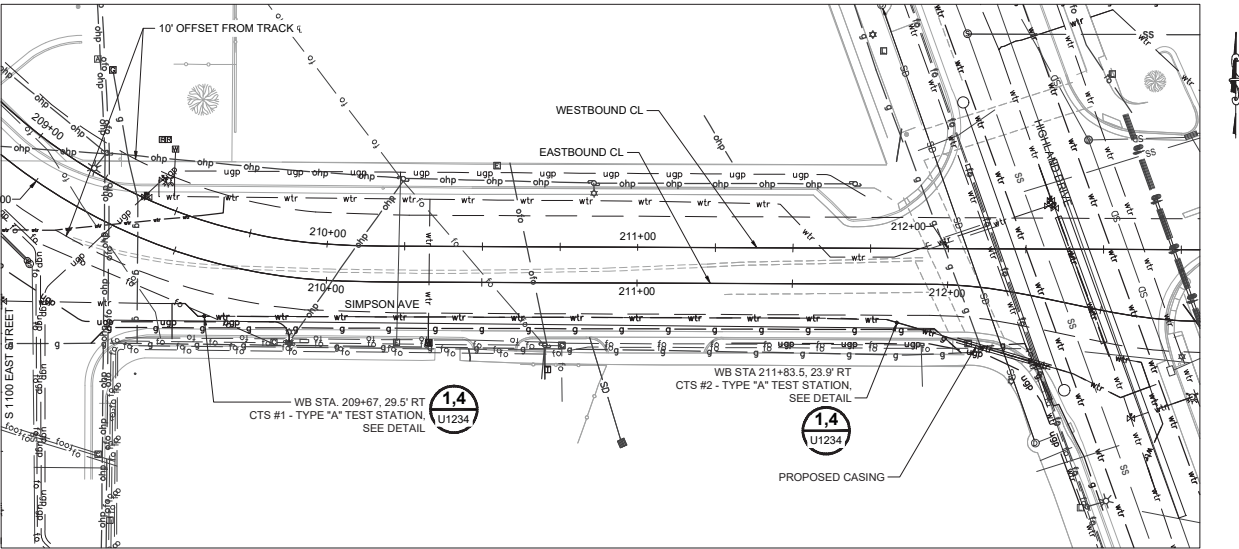
1. KEEP WORK SITE NEAT AND ORDERLY AT ALL TIMES. REMOVE EXCESS EQUIPMENT AND MATERIALS WHEN REQUIRED BY PREVAILING CONDITIONS. CONFINE OPERATIONS TO CONSTRUCTION EASEMENTS AND WORK AREAS. SITE SHALL BE RESTORED TO CONDITION EQUIVALENT TO THE ORIGINAL CONDITION AND TO THE SATISFACTION OF THE ENGINEER 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 COPPER SIZED 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 STELT 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'



11/2/2023 8:41 AM C:\Users\mtdavid\OneDrive\Documents\SLCDPU\SLCDPU-SIMPSON-AVE-WATERLINE\U1233.dwg User: mtdavid Date: 11/2/2023 Time: 8:41 AM Plot: 11/2/2023 8:41 AM Plotter: HP DesignJet T1300e

REV	DATE	Description



Submitted By: _____ Approved By: _____

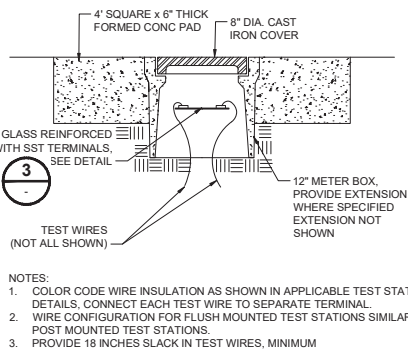
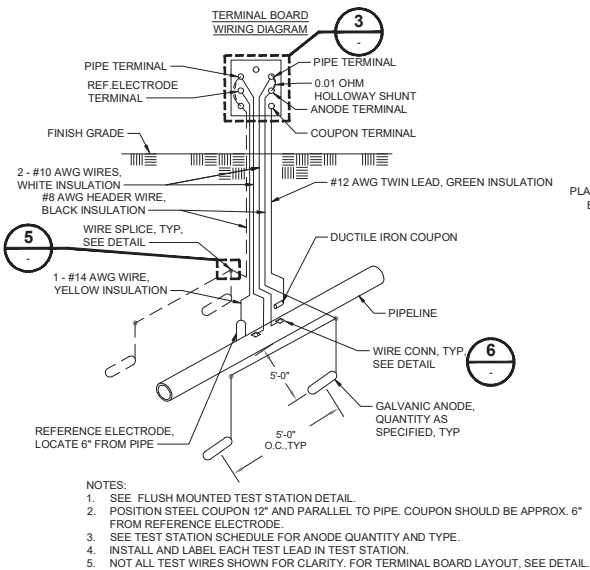
Designed By: D. TREADWELL
Drawn By: A. LEWIS
Checked By: F. NANNENGA
Approved By: D. TREADWELL

S-LINE EXTENSION PROJECT

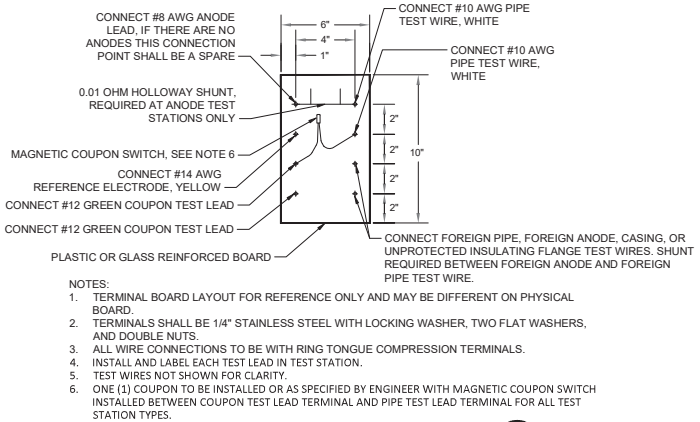
WATERLINE
CATHODIC PROTECTION

Scale: 1"=20'
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Submittal Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: U1233
Sheet No.:

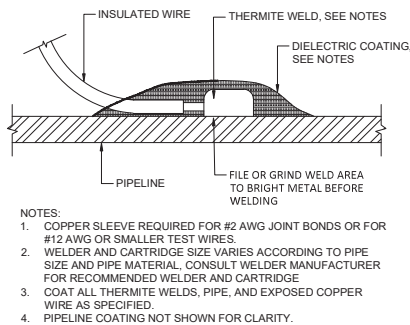
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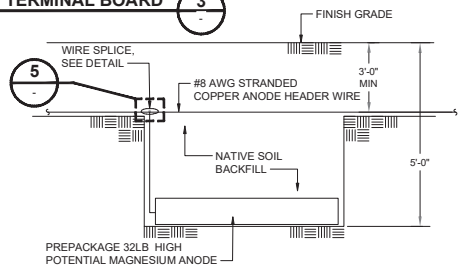
FLUSH MOUNT TEST STATION (2)
SCALE: NTS



TEST STATION TERMINAL BOARD (3)
SCALE: NTS

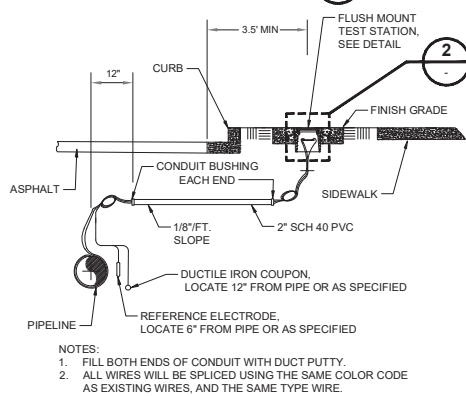


STEEL AND DUCTILE IRON PIPE WIRE CONNECTION (6)
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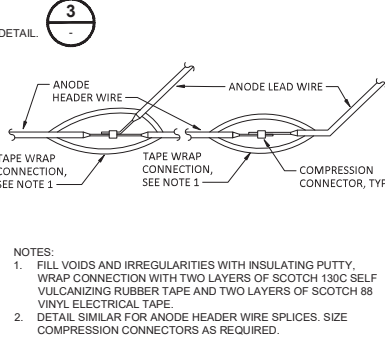


HORIZONTAL GALVANIC ANODE INSTALLATION (7)
SCALE: NTS

TYPE A TEST STATION (1)
SCALE: NTS



TEST STATION OFFSET (4)
SCALE: NTS



GALVANIC ANODE WIRE SPLICES (5)
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.

REV	DATE	Description

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:
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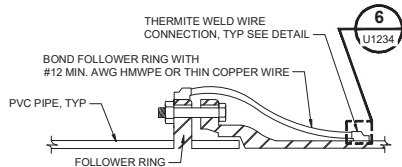
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01-16-26

UTA Contract No.
24-03849

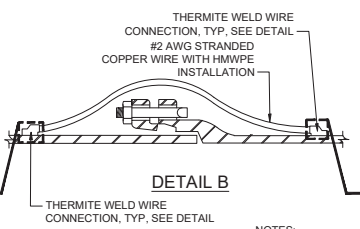
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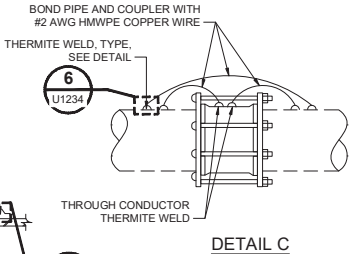
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DETAIL A



DETAIL B

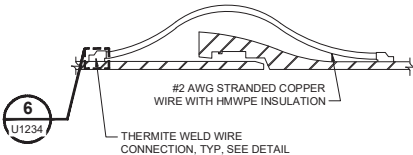


DETAIL C

- 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

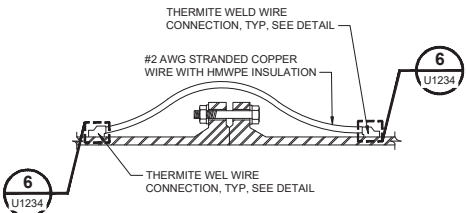
SCALE: NTS



- 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

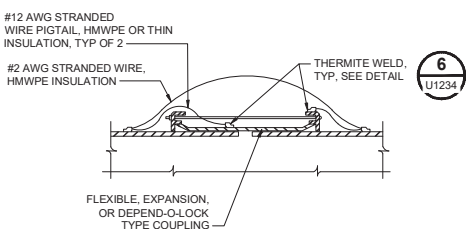
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- NOTES:
- 1. INSTALL NUMBER OF BOND WIRES SPECIFIED PER JOINT FOR PIPE DIAMETER AND MATERIAL.
 - 2. COAT ALL THERMITE WELDS, PIPE, AND EXPOSED COPPER WIRE WITH AQUATA-POXY, WAX TAPE, DENSO PROTAL 7200, OR COATING SYSTEM AS SPECIFIED.
 - 3. PIPELINE COATING NOT SHOWN FOR CLARITY.

FLANGED JOINT BOND

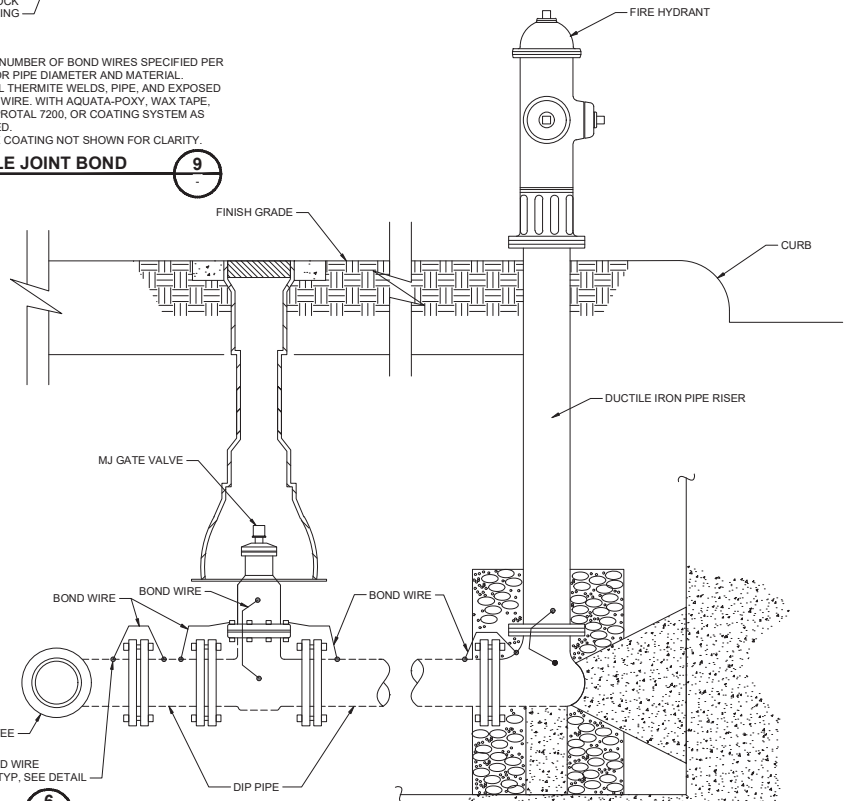
SCALE: NTS



- 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

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

SCALE: NTS

REV	DATE	Description



Kiewit

Submitted By: _____

UTA

UTAH TRANSIT AUTHORITY

Approved By: _____

Designed By	D. TREADWELL
Drawn By	A. LEWIS
Checked By	F. NANNENGA
Approved By	D. TREADWELL

S-LINE EXTENSION PROJECT		State	NTS
CATHODIC PROTECTION DETAILS 2 OF 2		CADD Filename:	SL-C-U-1-235.dwg
		Submit Date:	01-16-26
		UTA Contract No.	24-03849
		Drawing No.	U1235
		Sheet No.	

ABBREVIATIONS

GENERAL NOTES

AB	ANCHOR BOLT	ELEC	ELECTRIC, ELECTRICAL	M	MEDIUM LOADING	S	SOUTH
ABUT	ABUTMENT	EL	ELEVATION	MAX	MAXIMUM	SB	SOUTHBOUND
ABV	ABOVE	EQ	EQUAL	MCM	SEE KCMIL	SCADA	SUPERVISORY CONTROL & DATA
ACI	AMERICAN CONCRETE INSTITUTE	EQN	EQUATION	MD	MAXIMUM DISPLACEMENT	SC	ACQUISITION
ADJ	ADJACENT	EQUIP	EQUIPMENT	MH	MANHOLE	SCAT	SPIRAL TO CURVE
A/G	AT GRADE	ES	ELECTRICAL OPERATED SWITCH	MI	MILD IRON	SE	SIMPLE CATENARY AUTO TENSION
AHD	AHEAD	ES	EXTRA STRENGTH	MIN	MINIMUM	SHT	SUPER ELEVATION
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	F	FAHRENHEIT	ML	MAIN LINE	SI	SECTION
ANC	ANCHOR	F/F	FACE TO FACE	MOP	MOTOR OPERATED	SHT	SHEET
APPROX	APPROXIMATE	FBO	FURNISHED BY OTHERS	MOS	MANUALLY OPERATED SWITCH	SI	SECTION INSULATOR (NOTE 15)
AREMA	AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION	FDN	FOUNDATION	MOW	MAINTENANCE OF WAY	SIG	SIGNAL
ASSY	ASSEMBLY	FDR	FEEDER	MPA	MIDPOINT ANCHOR	SIM	SIMILAR
ASTM	AMERICAN SOCIETY OF TESTING & MATERIALS	FFJ	FULL FEEDING JUMPER	MPH	MILES PER HOUR	SL	STRINGLINE
AT	AUTOTENSIONED	FG	FINISH GRADE	MSO	MIDSPAN OFFSET	SLC	SALT LAKE CITY
ATM	ALONG TRACK MOVEMENT	FJ	FEEDER JUMPER	MW	MESSANGER WIRE	SOP	SETOUT POINT
ATR	ABOVE TOP OF RAIL	FOP	FACE OF POLE			SP	SPRING
ATS	AUTOTENSIONED SYSTEM	FOS	FACTOR OF SAFETY	N	NORTH	SPTC	SOUTHERN PACIFIC TRANSPORTATION COMPANY
AWG	AMERICAN WIRE GAUGE	FT	FOOT, FEET	(N)	NEW	SPEC	SPECIFICATION
AWS	AMERICAN WELDING SOCIETY	FTK	FOOT KIPS	N/A	NOT APPLICABLE	SPS	SMALL PART STEELWORK
AUX	AUXILIARY	FUT	FOOT KIPS	NB	NORTHBOUND	SPST	SINGLE POLE SINGLE THROW
BAT	BATTERY	FWY	FREEWAY	NBR	NONBRIDGING (NOTE 15)	SQ.	SQUARE
B/B	BACK TO BACK			NC	NORMALLY CLOSED	S/SPAN	STEADY SPAN
BC	BACK CIRCLE	GA	GAUGE	NEC	NATIONAL ELECTRICAL CODE	SST	STAINLESS STEEL
BEG	BEGIN	GALV	GALVANIZED	NESC	NATIONAL ELECTRICAL SAFETY CODE	STA	STATION, STATIONING
BFA	BY PASS FEEDER ANCHOR	GI	GENERAL INFORMATION	NF	NEAR FACE	STD	SINGLE TRACK CANTILEVER
BK	BACK	G/L	GROUND LINE	NC	NOT IN CONTRACT	STD	STANDARD
BKR	BREAKER	GND	GROUND	NO	NORMALLY OPEN	STL	STEEL
BL	BASE LINE	GRS	GALVANIZED RIGID STEEL	No	NUMBER	STRUCT/STR	STRUCTURE
BLDG	BUILDING	GRX	GRADE CROSSING	NOM	NOMINAL	SUB	SUBSTATION
BM	BENDING MOMENT	GW	GUY WIRE	NR	NOT REGISTERED	SW	SWITCH
BO	BLOW-OFF			NS	NOT SUPPORTED	SWA	SINGLE WIRE ANCHOR
BR	BRIDGE	H	HEAVY LOADING	NSR	NOT SUPPORTED OR REGISTERED	SWAT	SINGLE WIRE AUTO TENSION
BRKT	BRAKET	HD	HARD DRAWN	NTS	NOT TO SCALE	SWFT	SINGLE WIRE-FIXED TERMINATED
BTM	BOTTOM	HDX	HOT DIP GALVANIZED			SWST	SINGLE WIRE SPRING TENSION
BTWN	BETWEEN	HEX	HEXAGONAL	OC	ON CENTER	TAN	TANGENT
BW	BALANCE WEIGHT	HH	HANDHOLE	OCS	OVERHEAD CONTACT SYSTEM	TBD	TO BE DETERMINED
BWA	BALANCE WEIGHT ANCHOR	HO	HAND OPERATED	OD	OUTSIDE DIAMETER	TC	TRACK CENTER
BZ	BRONZE	HORZ	HORIZONTAL	OFF	OFFSET	TEMP	TEMPERATURE
CAB	CABINET	HRL	HIGH RAIL LEVEL	OHD	OVERHEAD	TEM	TEMPORARY
CANT	CANTILEVER	H/SPAN	HEADSPAN	OL	OVERLAP	TERM	TERMINATION
CF	CUBIC FEET	HS	HIGH STRENGTH	OLF	OVERLOAD FACTOR	TOF	TOP OF FOUNDATION
CIDH	CAST-IN DRILLED HOLE	HT	HEIGHT	OOR	OUT-OF-RUNNING (NONRIDING CONTACT WIRE)	T/G	TOP OF FINISH GRADE
CKT	CIRCUIT	HWY	HIGHWAY			TL	TENSION LENGTH
CLR	CLEARANCE	IB	IMPEDANCE BOND	PAN	PANTOGRAPH	T/LR	TOP OF LOW RAIL
CL	CENTER LINE	ID	INSIDE DIAMETER	PB	PULL BOX	T/C	TOP OF CURB, TOP OF CONCRETE
COMM	COMMUNICATION	IMP	INSULATED MIDPOINT	PC	POINT OF CURVE	TPSS	TRACTION POWER SUBSTATION
CONC	CONCRETE	IN	INCH	PEJ	POTENTIAL EQUALIZING JUMPER	TOR	TOP OF RAIL (NEAREST HIGH RAIL)
COND	CONDUIT	INSR	INSULATOR	PF	POINT OF FROG	TRK/TK	TRACK
CONST	CONSTRUCTION	INSUL	INSULATION	PI	POINT OF INTERSECTION	TS	TANGENT TO SPIRAL
CONT	CONTINUOUS, CONTINUATION	IR	IN-RUNNING (RIDING CONTACT WIRE)	PITO	POINT OF INTERSECTION OF TURNOUT	TTC	TWO TRACK CANTILEVER
CONTR	CONTRACTOR	I/S	IN-SPAN	PKT	POCKET TRACK	TWA	TIE WIRE ANCHOR
CR	CONDUIT RISER	I/SJ	IN-SPAN JUMPER	PL	PLATE	TYP	TYPICAL
CS	CURVE TO SPIRAL			P/L	PROPERTY LINE	UBC	UNIFORM BUILDING CODE
CTR	CENTER	PS	POINT OF SWITCH	PS	POUNDS PER SQUARE FOOT	UG	UNDERGRADE, UNDERGROUND
CTRS	CENTERS	PSF	POUNDS PER SQUARE INCH	PSI	POUNDS PER SQUARE INCH	UGB	UNDERGRADE BRIDGE
C TO C	CENTER LINE TO CENTER LINE	PT	POINT OF TANGENT	PT	POINT OF TANGENT	UPRR	UNION PACIFIC RAIL ROAD
CU	COPPER	PVC	POLYVINYL CHLORIDE	PNL	PANEL	U/S	UNDERSIDE
CW	CONTACT WIRE	POL	PULL OFF	PO	PULL OFF	UNINS	UNINSULATED
CWA	CONTACT WIRE ANCHOR	K	KIP, KILO			UNO	UNLESS OTHERWISE NOTED
CWH	CONTACT WIRE HEIGHT	KCMIL	THOUSAND CIRCULAR MILS	QTY	QUANTITY	UTA	UTAH TRANSIT AUTHORITY
		KSF	KIPS PER SQUARE FEET	(R)	RELOCATE OR REMOVE AND SALVAGE	UTL	UTILITY
		KSI	KIPS PER SQUARE INCH	RAD	RADIUS	VAR	VARIES
		KW	KILOWATT	R/A	ROCK ANCHOR	VERT	VERTICAL
				REF	REFERENCE	VLM	VEHICLE LATERAL MOVEMENT
		L	LIGHT LOADING	RD	ROAD	W	WEST, WATT
		LA	LIGHTNING ARRESTER	RE	RUNNING EDGE OF RAIL	WR	WIRE RUN
		LB	POUND	REF	REFERENCE	WB	WESTBOUND
		LB/FT	POUNDS PER FOOT	RC	REINFORCED CONCRETE	WP	WOOD POLE
		LF	LINEAR FOOT	RD	ROAD	WT	WEIGHT
		LG	LONG	RE-BAR	CONCRETE REINFORCING BAR	WW	WALKWAY
		LGTH	LENGTH	REINF	REINFORCED	WWF	WELDED WIRE FABRIC
		LOC	LOCATION	REQD	REQUIRED		
		LPSCFT	LOW PROFILE SIMPLE CATENARY-FIXED TERMINATION	RETWALL	RETAINING WALL		
		LPSCAT	LOW PROFILE SIMPLE CATENARY-AUTO TENSION	REV	REVISION		
		LPT	LOW POINT	R/L	RIGHT/LEFT	XFMR	TRANSFORMER
		LR	LOW RAIL	RMP	ROCKY MOUNTAIN POWER	XING	CROSSING
		LRT	LIGHT RAIL TRANSIT	ROW	RIGHT-OF-WAY	X/O	CROSSOVER
		LRV	LIGHT RAIL VEHICLE	RT	RIGHT	X/SECT	CROSS SECTION
		LT	LEFT	RTU	REMOTE TERMINAL UNIT	X/CAT	CROSS CATENARY
				RR	RAILROAD	X/SPAN	CROSS SPAN
				RRX	RAILROAD GRADE CROSSING		
				RGS	RIGID GALVANIZED STEEL		

- 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
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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

GENERAL
OVERHEAD CONTACT SYSTEM
ABBREVIATIONS AND GENERAL NOTES

State	NTS
CADD Filename	SL-C-Y-0-001.dwg
Submission Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y0001

SYMBOLS

SAMPLE OCS WIRING LAYOUT

WIDE FLANGE POLE WITH CANTILEVER

DOWNGUY WITH ANCHOR FOUNDATION

WIDE FLANGE ANCHOR POLE

CANTILEVER POLE WITH IR WIRING

CANTILEVER POLE WITH OOR WIRING SECTIONING IF REQUIRED

9" STAGGERS IN INCHES

NOTE: ALL STAGGER VALUES ARE GIVEN TO CENTERLINE OF ADJACENT OPERATING TRACK UNLESS OTHERWISE STATED.

WIDE FLANGE ANCHOR POLE WITH CANTILEVER

WIDE FLANGE POLE WITH CANTILEVER

OCS SPAN LENGTH (ft.)

MSP = 3.5"

MIDSPAN OFFSET IN INCHES

STRING LINE MAGNITUDE (XX) IN INCHES AND CURVE DIRECTION.

HEADGUY BETWEEN WF POLES WITH DOWNGUY AND TIE ANCHOR

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:

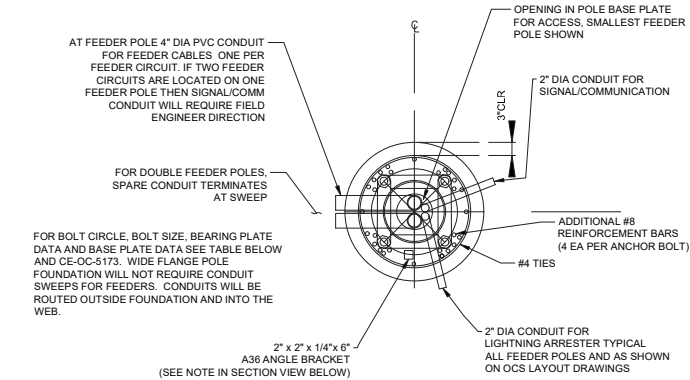
- ALL STRUCTURAL STEEL SHALL BE ASTM A36, A570, A572, A595, A992 OR AS NOTED ON THE DRAWING AND SPECIFICATIONS.
- ALL STEEL SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A123 FOR STRUCTURAL STEEL AND ASTM A153 FOR STEEL HARDWARE.
- ALL FIELD CONNECTIONS SHALL BE BOLTED UNLESS 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

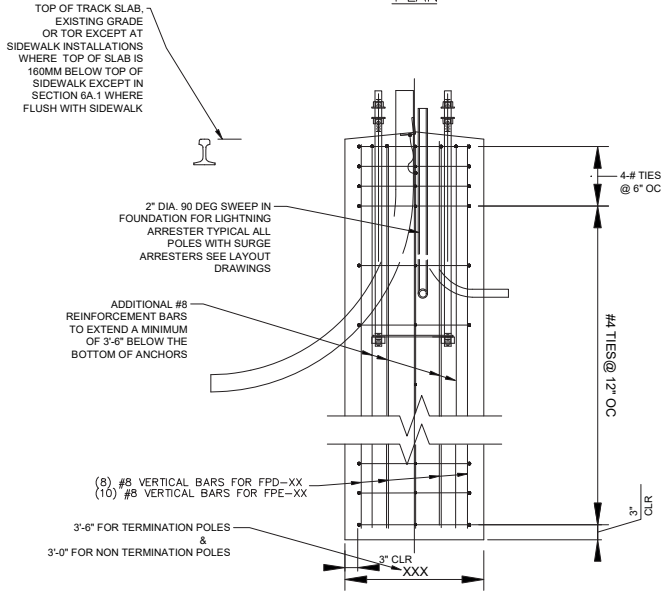
- OFFSET DIRECTION IS DETERMINED LOOKING IN THE DIRECTION OF INCREASING STATIONING.
- TOP OF FOUNDATION LEVEL IS IN REFERENCE TO THE TOP ADJACENT RAIL.
- REMOVE TOP 2' OF TOP SOIL AND REPLACE WITH GRANULAR FILL. LIMITS ARE 10'-0" ALONG TRACK BY 5'-0" NORMAL WITH FOUNDATION CENTERED IN LIMITS. FOUNDATION 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

1/6/2026	△							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	Sheet No. Y0002
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REV	DATE	Description			Submitted By:	Approved By:										

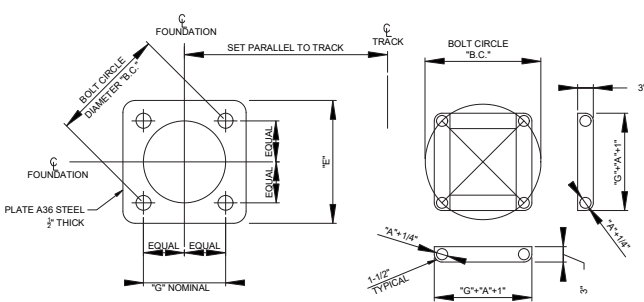
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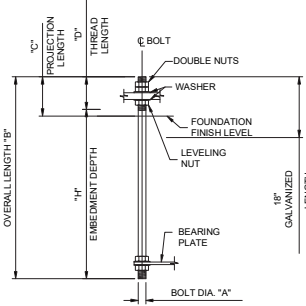


FOUNDATION TYPE FPE-XX
POLE TYPE PD-XX, PE-XX
SCALE: NTS



TEMPLATE DETAIL " C "
SCALE: NTS

BEARING PLATE DETAIL " B "
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.

REV	DATE	Description



Submitted By: _____

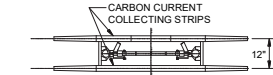


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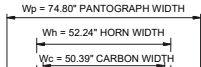
Designed By B.DEMERS
Drawn By S.KHAYYAT
Checked By Y.LIU
Approved By B.DEMERS

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OCS POLE FOUNDATIONS

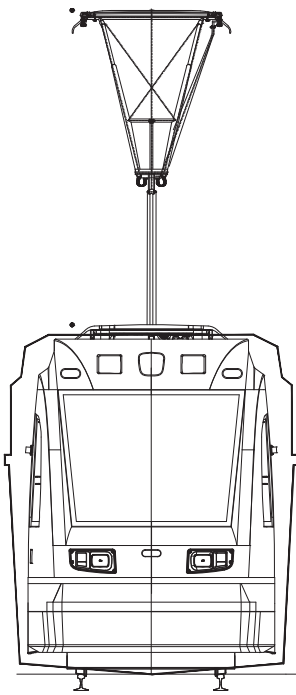
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Submission Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y3002
Sheet No.



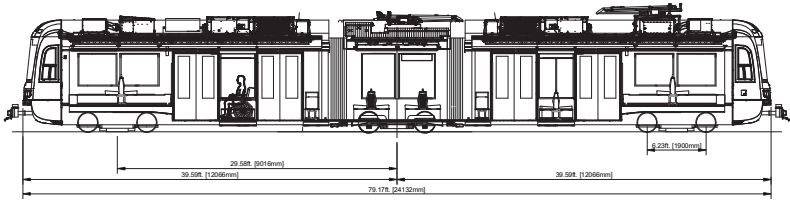
PAN HEAD PLAN



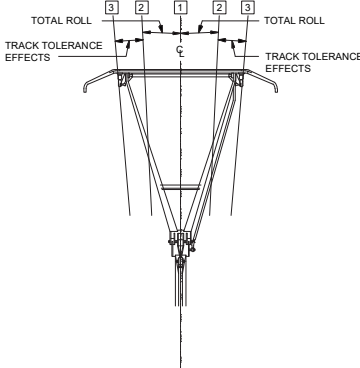
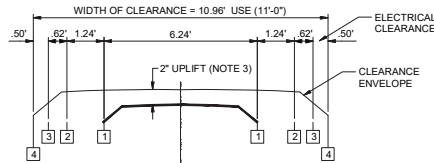
HORN POINT OF INTERSECTION



CONTACT WIRE OPERATING HEIGHTS



VEHICLE CRITERIA



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" PANTOGRAPH UPLIFT PLUS 1" CARBON WEAR.

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)	60.22	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 = 3.12 FT

FULL ROLL OF VEHICLE = 3.00 DEGREES EACH SIDE OF CENTERLINE

FULL ROLL TOTAL ROLL 1 TO 2 = 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



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
UNIVERSAL PANTOGRAPH
CLEARANCE ENVELOPE

State NTS
CADD Filename SL-C-Y-7-005.dwg
Submission Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7005
Sheet No.

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- 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)	SPAN (FT) NOTE 1	MIDSPAN OFFSET (IN)		SPAN (FT) NOTE 1	MW SAG NORMAL (FT)	DROOP DUE TO ICE (FT)
			19'-6"	22'-6"			
210	8.82	210	5.24	NOTE 1	210	1.77	1.04
205	8.41	205	5.66	NOTE 1	205	1.69	0.99
200	8.00	200	6.06	NOTE 1	200	1.61	0.95
195	7.61	195	6.46	NOTE 1	195	1.53	0.90
190	7.22	190	6.84	NOTE 1	190	1.45	0.85
185	6.85	185	7.22	NOTE 1	185	1.38	0.81
180	6.48	180	7.58	6.49	180	1.30	0.77
175	6.13	175	7.94	6.85	175	1.23	0.72
170	5.78	170	8.28	7.19	170	1.16	0.68
165	5.45	165	8.62	7.53	165	1.09	0.64
160	5.12	160	8.94	7.85	160	1.03	0.61
155	4.81	155	9.26	8.17	155	0.97	0.57
150	4.50	150	9.56	8.47	150	0.90	0.53
145	4.21	145	9.86	8.77	145	0.85	0.50
140	3.92	140	10.14	9.05	140	0.79	0.46
135	3.65	135	10.42	9.33	135	0.73	0.43
130	3.38	130	10.68	9.59	130	0.68	0.40
125	3.13	125	10.94	9.85	125	0.63	0.37
120	2.88	120	11.18	10.09	120	0.58	0.34
115	2.65	115	11.42	10.33	115	0.53	0.31
110	2.42	110	11.64	10.55	110	0.49	0.29
105	2.21	105	11.86	10.77	105	0.44	0.26
100	2.00	100	12.06	10.97	100	0.40	0.24
95	1.81	95	12.26	11.17	95	0.36	0.21
90	1.62	90	12.44	11.35	90	0.33	0.19
85	1.45	85	12.62	11.53	85	0.29	0.17
80	1.28	80	12.78	11.69	80	0.26	0.15
75	1.13	75	12.94	11.85	75	0.23	0.13
70	0.98	70	13.08	11.99	70	0.20	0.12
65	0.85	65	13.22	12.13	65	0.17	0.10
60	0.72	60	13.34	12.25	60 AND LESS	0.14	0.09

TABLE 1
BLOW-OFF

TABLE 2
MAX PERMISSIBLE
MIDSPAN OFFSET

TABLE 3
CATENARY DROOP
DUE TO ICE
NOTE 2

1/6/2028

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REV	DATE	Description

Submitted By: _____

Approved By: _____

UTAH TRANSIT AUTHORITY

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

Scale NTS
CADD Filename SL-C-Y-7-009.dwg
Submittal Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7009
Sheet No.

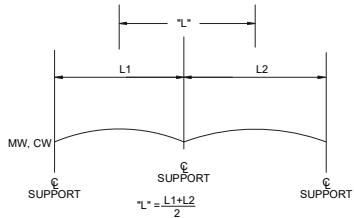
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VERTICAL AND WIND LOADS										
SPAN "L" (FT)	VERTICAL LOAD (LB)			WIND LOAD (LB)						
	WEIGHT W/ICE - 4.159 LB/FT			OPERATING						
	WEIGHT W/OUT ICE - 2.547 LB/FT			NON-OPERATING						
	NO ICE	1/2" ICE	1" ICE	55MPH	40MPH w/ICE	90MPH	55MPH	40MPH w/ICE	90MPH	55MPH
30	79	125	166	18	21	27	42	48	61	77
35	93	140	181	21	24	31	49	56	71	89
40	106	156	200	24	28	35	56	64	81	101
45	119	172	217	27	31	39	63	72	91	112
50	132	188	234	30	34	43	70	80	100	122
55	146	204	251	33	37	47	77	88	109	132
60	159	220	268	36	40	51	84	96	118	142
65	172	236	284	39	43	55	91	104	127	152
70	185	251	300	42	46	58	98	112	136	160
75	199	267	317	45	49	61	105	120	145	170
80	212	283	333	48	52	64	112	128	153	180
85	225	299	349	51	55	67	119	136	161	190
90	238	314	365	54	58	70	126	144	169	200
95	251	330	381	57	61	73	133	152	177	210
100	265	346	397	60	64	76	140	160	185	220
105	278	362	413	63	67	79	147	168	193	230
110	291	378	429	66	70	82	154	176	201	240
115	304	394	445	69	73	85	161	184	209	250
120	318	409	461	72	76	88	168	192	217	260
125	331	425	477	75	79	91	175	200	225	270
130	344	441	493	78	82	94	182	208	233	280
135	357	457	509	81	85	97	189	216	241	290
140	371	472	525	84	88	100	196	224	249	300
145	384	488	541	87	91	103	203	232	257	310
150	397	504	557	90	94	106	210	240	265	320
155	410	520	573	93	97	109	217	248	273	330
160	424	536	589	96	100	112	224	256	281	340
165	437	552	605	99	103	115	231	264	289	350
170	450	568	621	102	106	118	238	272	297	360
175	463	584	637	105	109	121	245	280	305	370
180	476	600	653	108	112	124	252	288	313	380
185	490	616	669	111	115	127	259	296	321	390
190	503	632	685	114	118	130	266	304	329	400
195	516	648	701	117	121	133	273	312	337	410
200	529	664	717	120	124	136	280	320	345	420
205	543	680	733	123	127	139	287	328	353	430
210	556	696	749	126	130	142	294	336	361	440

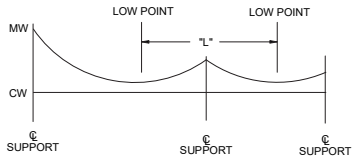
RADIAL LOADS - TANGENT TRACK (NOTE 4)				
SPAN (FT)	OPERATING TENSION (NORMAL)		NON-OPERATING TENSION (MAXIMUM)	
	MW	CW	MW	CW
	4800	3000	7037	4491
30	640	400	938	599
35	549	343	804	513
40	480	300	704	449
45	427	267	626	399
50	384	240	563	359
55	349	218	512	327
60	320	200	469	299
65	295	185	433	276
70	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

RADIAL LOADS BY ANGLE				
ANGLE "A" DEGREES	OPERATING TENSION (NORMAL)		NON-OPERATING TENSION (MAXIMUM)	
	MW	CW	MW	CW
	4800	3000	7037	4491
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

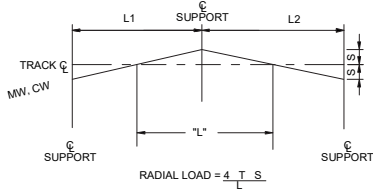
- NOTES:
- NON OPERATING CONDITION IS -30° F WITH 1/2" RADIAL ICE ON MESSENGER WIRE AND 1/2" RADIAL ICE ON CONTACT WIRE AND BALANCE WEIGHT ANCHORS LOCKED AT 0° F.
 - THE EXTREME WIND NON-OPERATING CONDITION IS 90 MPH AT 0° F WITHOUT ICE AS DEFINED ON DRAWING Y7003.
 - TANGENT TRACK RADIAL LOADS ASSUME 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.



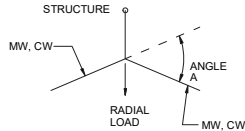
PLAN WIND LOAD



ELEVATION VERTICAL LOAD



PLAN AT SUPPORT RADIAL LOAD - TANGENT TRACK



PLAN AT SUPPORT RADIAL LOAD BY ANGLE

1/5/2023	REV	DATE	Description				Designed By B.DEMERS	S-LINE EXTENSION PROJECT STANDARD DRAWINGS OVERHEAD CONTACT SYSTEM TECHNICAL SHEET SCAT VERTICAL, WIND & RADIAL LOADS	State NTS
						Drawn By N.WU	CADD Filename: SL-C-Y-7-010.dwg		
						Checked By Y.LIU	Submitted Date: 01-16-26		
						Approved By B.DEMERS	UTA Contract No.: 24-03849		Drawing No.: Y7010

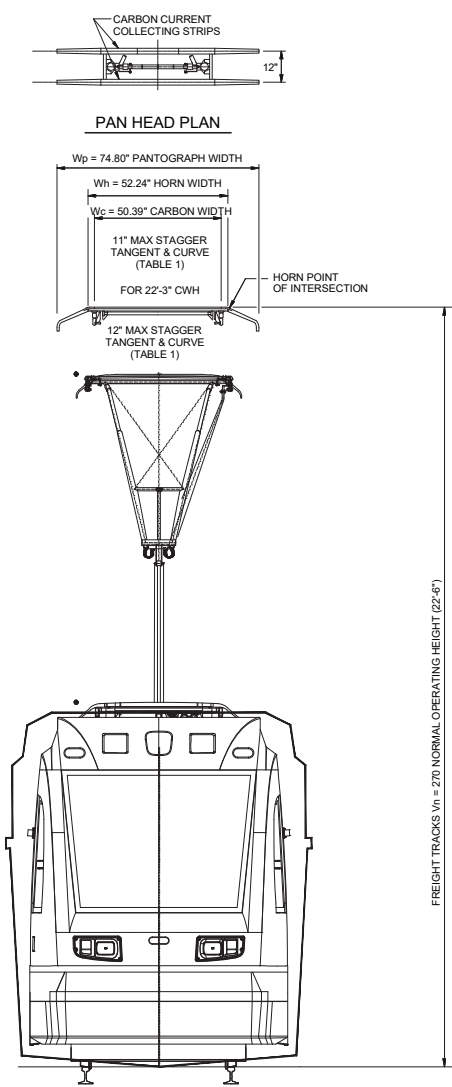


TABLE 1 - PARAMETERS FOR PANTOGRAPH SECURITY			
MAIN LINE TRACK PARAMETERS			
DESCRIPTION	IN	FT	
GAUGE	56.50	4.71	
GAUGE TOLERANCE (INCLUDED IN LATERAL MOTION)		0.01	
HORIZONTAL ALIGNMENT TOLERANCE	1.00	0.08	NOTE 3
CROSS LEVEL TOLERANCE	0.25	0.02	NOTE 3
RAIL HEAD WIDTH	2.72	0.23	
CENTER TO CENTER OF RAILS	59.22	4.94	
VEHICLE PARAMETERS			
DESCRIPTION	IN.	FT.	
TRUCK ROLL CENTER HEIGHT	25	2.08	
LATERAL SHIFT AT TRUCK ROLL CENTER INCL. WHEEL WEAR	2.0	0.17	
MAXIMUM VEHICLE REPETITIVE ROLL ANGLE	3 DEGREES		
PANTOGRAPH PARAMETERS			
DESCRIPTION	IN	FT	
OVERALL WIDTH OVER HORNS	74.80	6.23	
CARBON COLLECTOR LENGTH	50.39	4.20	
PANTOGRAPH ROLL AT ALL HEIGHTS FROM CENTERLINE	1.50	0.13	
PANTOGRAPH UPLIFT ALLOWANCE	3.00	0.25	
MAXIMUM PANTOGRAPH OPERATING HEIGHT	275	22.92	
MINIMUM PANTOGRAPH OPERATING HEIGHT	165	13.75	
OVERHEAD CONTACT SYSTEM PARAMETERS			
DESCRIPTION	IN	FT	
MAXIMUM CATENARY CONSTRUCTION TOLERANCE	1.0	0.08	
OPERATING WIND SPEED WITHOUT ICE	55 MPH		
BLOW OFF OF CW ON 180 FT SPAN	6.48	0.54	
BLOW OFF OF CW ON 210 FT SPAN	8.82	0.74	
MAXIMUM POLE DEFLECTION ALLOCATION AT CONTACT WIRE HEIGHT DUE TO WIND	2.00	0.17	
MAXIMUM DESIGNED STAGGER AT 22'-6"	SEE TABLE 5		
MAXIMUM DESIGNED STAGGER AT 19'-6"	SEE TABLE 5		

TABLE 5 - CALCULATION FOR MAXIMUM STAGGER ON BALLASTLESS TRACK			
CRITERIA: (NO WIND, FULL ROLL CONDITION): WITH 50% ALL ALLOWANCES AND STAGGER, CONTACT WIRE TO REMAIN ON CARBON.			
CONTACT WIRE HEIGHT	AT 22'-6"	AT 19'6"	
ALIGNMENT TOLERANCE	1.00 IN	1.00"	
CROSS LEVEL EFFECT (TABLE 4)	1.14 IN	0.99 IN	
LATERAL SHIFT	2.32 IN	2.32 IN	
FULL ROLL	14.82 IN	12.94	
STAGGER CHANGE ON 2640 FT	3.88 IN	3.88 IN	
ERECTION TOLERANCE	1.00 IN	1.00 IN	
TOTAL	24.16 IN	22.13 IN	
50% OF TOTAL	12.08 IN	11.07 IN	
HALF CARBON WIDTH	25.19 IN	25.19 IN	
AVAILABLE FOR STAGGER	13.11 IN	14.12 IN	
SELECTED MAXIMUM STAGGER	11 IN	12 IN	

- NOTES:
- FOR ACCEPTANCE OF INSTALLED OCS, PERMISSIBLE STAGGER AND MSO IS ONE INCH MORE THAN THE DESIGN VALUE.
 - AREMA RECOMMENDED ALLOWANCE: 50% OF FULL ROLL INTO WIND.
 - TRACK TOLERANCE ALLOWED IS TWICE THE PERMISSIBLE VALUE FOR EMBEDDED TRACK PER DESIGN CRITERIA.
 - FOR PERMISSIBLE MIDSPAN OFFSETS FOR SPANS OF SHORTER LENGTH SEE DRAWING Y7009.
 - MAXIMUM SPAN OF 210FT AT 19'6" WIRE HEIGHT SPECIFIED BY UTA.

TABLE 2 - CALCULATION FOR CROSS LEVEL EFFECT	AT 22'-6" CWH	AT 19'6" CWH
CROSS LEVEL TOLERANCE = 0.25 IN		
CENTER TO CENTER OF RAILS = 59.22 IN		
CONTACT WIRE OPERATING HEIGHT (CWH)	22.50 FT	19.50 FT
CROSS LEVEL EFFECT AT CWH = CWH x 0.25/59.22	= 1.14 IN	0.99 IN

TABLE 3 - CALCULATION FOR ROLL INTO WIND	AT 22'-6" CWH	AT 19'6" CWH
VEHICLE ROLL AT 3 DEGREES ABOVE ROLL CENTER	12.82 IN	10.94 IN
PANTOGRAPH ROLL	2.00 IN	2.00 IN
TOTAL ROLL	14.82 IN	12.94 IN
50% ALLOWANCE (NOTE 2)	7.41 IN	6.47 IN

TABLE 4 - CALCULATION FOR PANTOGRAPH SECURITY AT MIDSPAN	AT 22'-6" CWH	AT 19'6" CWH
TRACK ALLOWANCES ALIGNMENT = 1.00"	1.00 IN	1.00 IN
CROSS LEVEL EFFECT @ .25" DIFFERENCE (TABLE 2)	1.14 IN	0.99 IN
LATERAL SHIFT AT ROLL CENTER	2.00 IN	2.00 IN
PANTOGRAPH ROLL INTO WIND (TABLE 3)	7.41 IN	6.47 IN
BLOW OFF OF CONTACT WIRE ON MAXIMUM STAGGER (NOTE 5)	6.48 IN (180FT)	8.82 IN (210FT)
POLE DEFLECTION ALLOWANCE DUE TO WIND AT CWH	2.00 IN	2.00 IN
STAGGER EFFECT ALLOWANCE	2.00 IN	2.00 IN
STAGGER CHANGE ON 2640 FT	3.88 IN	3.88 IN
ERECTION TOLERANCE	1.00 IN	1.00 IN
TOTAL HALF PANTOGRAPH ROLL FROM CENTERLINE	26.91 IN	28.16 IN
HALF PANTOGRAPH WIDTH	37.40 IN	37.40 IN
SECURITY BY DIFFERENCE	10.49 IN	9.24 IN
AVAILABLE MIDSPAN OFFSET ON MAX SPAN WITH 4" SAFETY AT HORN	6.49 IN (NOTE 4)	5.24 IN (NOTE 4)

1/6/2026	22-4-25		
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
OCS TECHNICAL SHEET
PANTOGRAPH SECURITY AND MAXIMUM
STAGGERS FOR BALLASTLESS TRACK

State	NTS
CADD Filename	SL-C-Y-7-011.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y7011

NOTES:

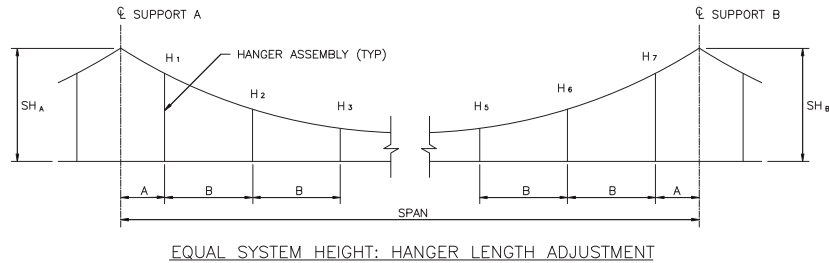
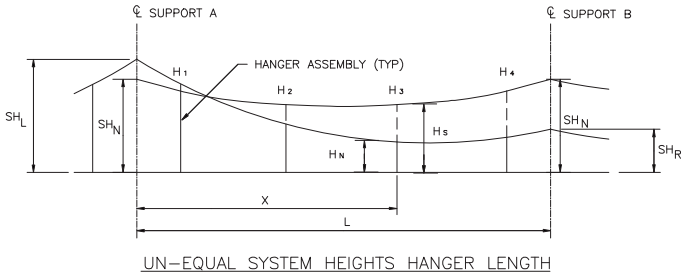
1. NORMAL SYSTEM HEIGHT: SCAT AUTO-TENSIONED = 4'-0"
2. HANGER LENGTHS ARE FOR SPANS WITH 4'0" SYSTEM HEIGHTS EACH END.
3. HANGER LENGTHS FOR AUTO-TENSIONED, LOW PROFILE/NORMAL SYSTEM HEIGHT ARE BASED ON A 500 kcmil HARD DRAWN COPPER MESSENGER AT 4800 POUND TENSION AND A 350 kcmil HARD DRAWN GROOVED 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.

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	3.77			
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	35	3.92	3.92					
45	2	11.25	22.5	3.94	3.94					
40	2	10	20	3.95	3.95					

$$H_n = H_s + ((A_L - A_R) \cdot (A_L - A_R) \frac{X}{L})$$

WHERE: H_n = ADJUSTED HANGER LENGTH (IN.)
 H_s = 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 ($SH_n=SH_s$).



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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
TECHNICAL SHEET
HANGER LENGTH TABLE

State NTS
CADD Filename SL-C-Y-7-012.dwg
Submit Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7012
Sheet No.

NOTES:

1. TENSIONS ARE GIVEN FOR TYPICAL TEMPERATURE RANGE FOR CONSTRUCTION.
2. LOADED TENSIONS EXIST IN MESSENGER WIRES BEFORE BALANCE WEIGHTS ARE RELEASED TO APPLY AUTO TENSIONING.
3. UNLOADED TENSIONS EXIST IN MESSENGER WIRE TO PROFILE THE MESSENGER INTO ITS FINAL SAG BEFORE THE CONTACT WIRE IS INSTALLED.
4. SAG VALUES APPLY ONLY TO THE SAME SPAN LENGTH AS THE EQUIVALENT SPAN.

1/5/2026 ▲ ▲ ▲ ▲					PROFESSIONAL ENGINEER No. 14109550 YANG LIU STATE OF UTAH	PKS Kiewit	U T A UTAH TRANSIT AUTHORITY	Designed By: B.DEMERS	S-LINE EXTENSION PROJECT STANDARD DRAWINGS OVERHEAD CONTACT SYSTEM TECHNICAL SHEET INSTALLATION TENSIONS AND SAGS	Scale: NTS
	Drawn By: N.WU	CADD Filename: SL-C-Y-7-013.dwg								
	Checked By: Y.LIU	Submittal Date: 01-16-26								
	Approved By: B.DEMERS	UTFA Contract No.: 24-03849								
REV	DATE	Description	Submitted By: _____	Approved By: _____				Drawing No.: Y7013	Sheet No.: 	

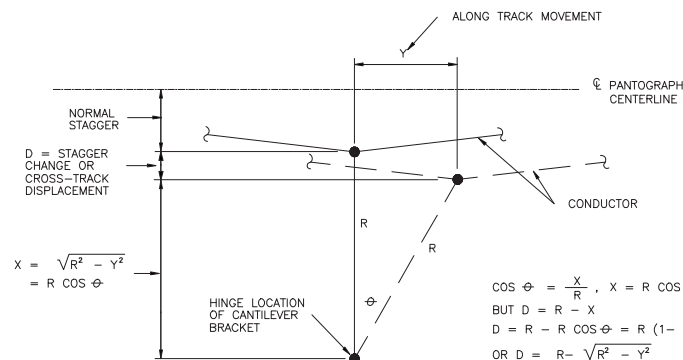
		DISTANCE FROM MIDPOINT ANCHOR (FT)											
	TEMP. °F	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400
		y = ALONG TRACK MOVEMENT (IN)											
TOWARD MIDPOINT ANCHOR(-)	0	1.35	2.71	4.06	5.41	6.77	8.12	9.48	10.83	12.18	13.54	14.89	16.24
	10	1.13	2.26	3.38	4.51	5.64	6.77	7.90	9.02	10.15	11.28	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
	NORMAL	*60	0	0	0	0	0	0	0	0	0	0	0
AWAY FROM MIDPOINT ANCHOR (+)	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

ALONG TRACK MOVEMENT

AUTO-TENSIONED SIMPLE CATENARY

APPLICATION NOTE:
MAXIMUM TENSION LENGTH SHALL BE BASED ON
LAST IN-RUNNING CANTILEVER NOT EXCEEDING
2640 FT FROM FIXED TERMINATION OR MIDPOINT.

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

$$\begin{aligned}\cos \theta &= \frac{X}{R}, \quad X = R \cos \theta \\ \text{BUT } D &= R - X \\ D &= R - R \cos \theta = R (1 - \cos \theta) \\ \text{OR } D &= R - \sqrt{R^2 - Y^2}\end{aligned}$$
[illegible]

- NOTES:
- FOR ABBREVIATIONS AND GENERAL NOTES SEE DWG. Y0001.
 - FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG. Y0002.
 - WEIGHT OF CATENARY INCLUDING AN ASSUMED HANGER LOAD OF 0.04 LB/FT.
 - ICE CONDITION IS WITH ONE HALF INCH RADIAL ICE THICKNESS ON MESSENGER AND CONTACT WIRE.
 - MESSENGER TENSION IS AT THE LOADED CONDITION WITH CONTACT WIRE AND HANGERS.
 - DROOP IS DEFINED AS THE ADDITIONAL SAG OF AN OCS DUE TO ICE ON THE CONDUCTORS.
 - WIND PRESSURES ARE BASED ON NESC, RULE 250B FOR HEAVY LOADING DISTRICT & SPEC. SEC. 12.5.12.
 - OPERATING AND NON-OPERATING CASES MUST BE COMPARED TO DETERMINE WORST POSSIBLE LOAD COMBINATION FOR STRUCTURAL AND OCS COMPONENT DESIGN CONSIDERATION.
 - 90 MPH WIND SPEED TRANSLATES TO EQUIVALENT 21LB/FT² HORIZONTAL WIND PRESSURE WITH CORRESPONDING OVERLOAD FACTOR OF 1.0 FOR STRUCTURAL DESIGN PURPOSES.
 - 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.
 - 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.
 - THE FOLLOWING EQUIVALENT SPAN LENGTHS ARE USED IN DETERMINING TENSIONS IN THE FIXED TERMINATED CONDITION: MESSENGER WIRE 100FT CONTACT WIRE 25FT
 - 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

1/6/2026

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REV	DATE	Description

PROFESSIONAL ENGINEER

No. 14109550

YANG

LIU

STATE OF UTAH

PKS

Kiewit

U T A

UTAH TRANSIT AUTHORITY

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

CONDUCTOR PARTICULARS

Sheet

NTS

CADD Filename

SL-C-Y-7-015.dwg

Submittal Date

01-16-26

UTA Contract No.

24-03849

Drawing No.

Y7015

Sheet No.

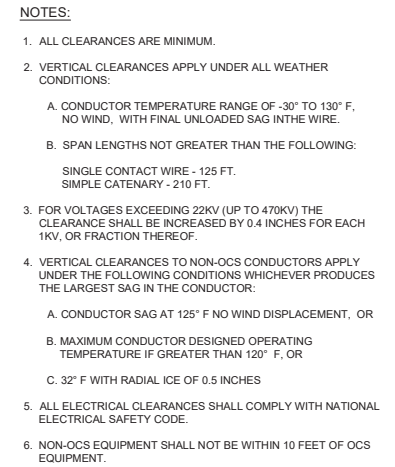
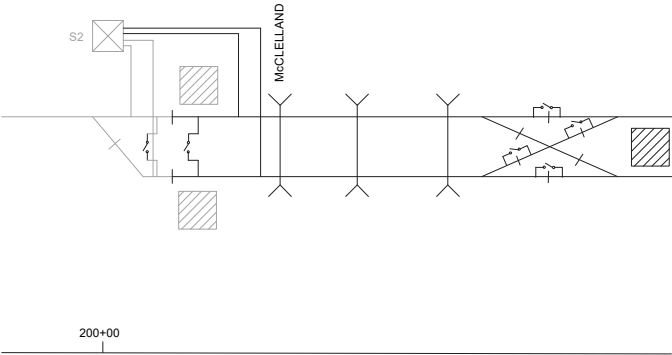


Diagram illustrating the spacing and components of a 127 kV line tower structure. The diagram shows a cross-section of a tower with two main arms. On each arm, there are four horizontal lines representing conductors and one line below them representing a messenger. The spacing between the conductors is 4'-0" between the first and second, 4'-0" between the second and third, and 4'-0" between the third and fourth. The spacing between the fourth conductor and the messenger is 6'-0". A note in a box points to the messenger line, stating "(NOTE 5)". A label "OCS CONTACT WIRE, MESSENGER WIRE, AERIAL FEEDER SPANWIRE LIVE FITTINGS OR UNGROUNDED FITTINGS" points to the messenger line on the right arm. To the right of the diagram, a list of components is provided:

- SUPPLY LINES GREATER THAN 22KV
- SUPPLY LINES 750V-22KV
- SUPPLY LINES 0V-750V
- LIGHTNING PROTECTION WIRES
- COMMON WIRES, CABLES & MESSENGERS
- GUYS & SPAN WIRES

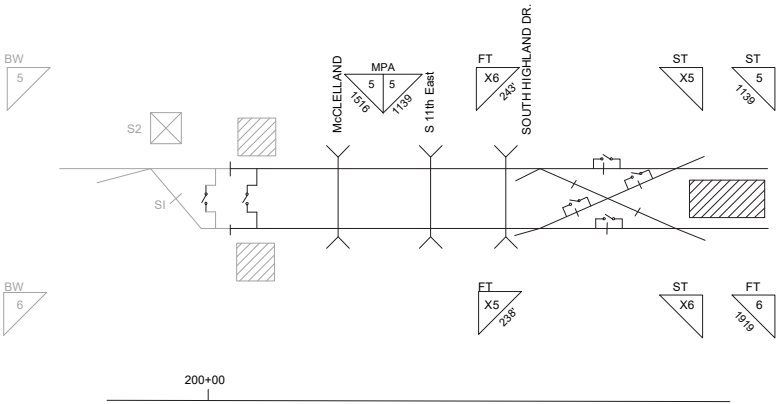
			Designed By: B.DEMERS	S-LINE EXTENSION PROJECT STANDARD DRAWINGS OCS VERTICAL ELECTRICAL CLEARANCE REQUIREMENTS	Scale: NTS
			Drawn By: N.WU		CADD Filename: SL-C-Y-7-016.dwg
			Checked By: Y.LIU		Submittal Date: 01-16-26
			Approved By: B.DEMERS		UTA Contract No.: 24-03849
					Drawing No.: Y7016
REV	DATE	Description	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
- MIDPOINT ANCHOR SHOWING WIRE RUN
- SECTION INSULATOR

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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

OVERHEAD CONTACT SYSTEM
MASTER OVERLAP CHART
AND SECTIONING DIAGRAM

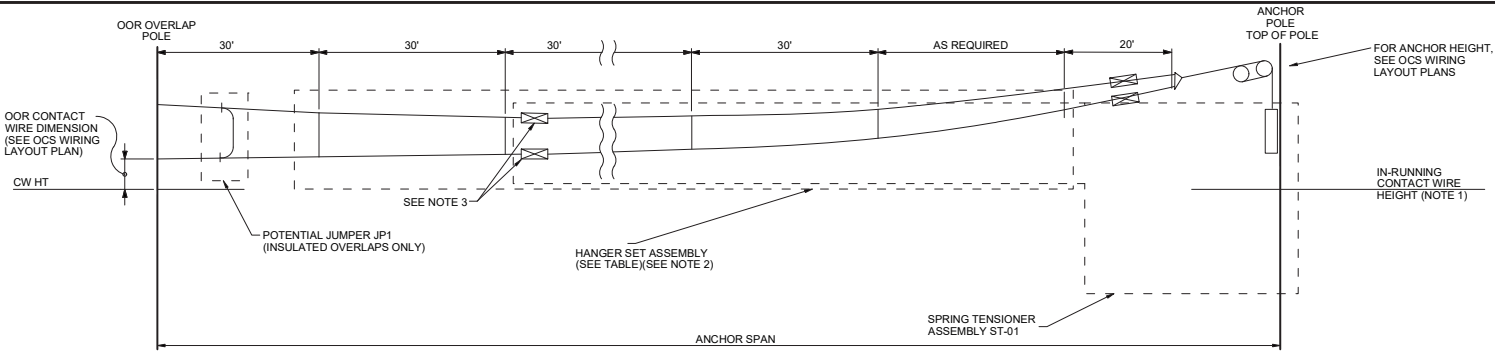
State: NTS
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Submittal Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Y7100
Sheet No.:



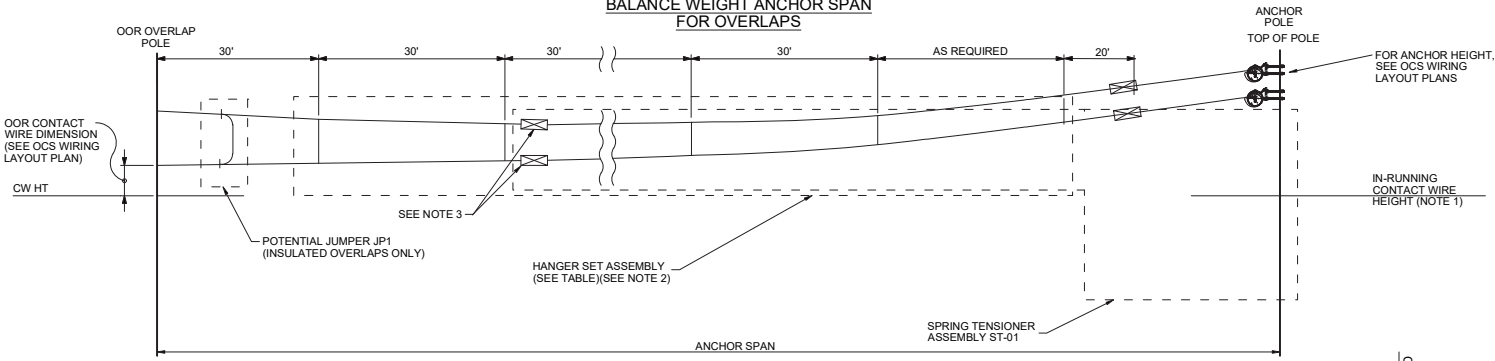
1. THE HANGER SET ASSEMBLY REQUIRED FOR EACH SPAN IS SHOWN IN THE OCS WIRING LAYOUT PLANS AND ALLOCATION SCHEDULES.
2. FOR "A" AND "L2" DIMENSIONS DIVIDE ACTUAL SPAN BY NUMBER OF HANGERS ASSIGNED.
3. MAXIMUM HANGER SPACING IS 30 FEET.

15/02/2016 ▲ ▲ ▲ ▲ ▲				PROFESSIONAL ENGINEER No. 14109550 YANG LIU STATE OF UTAH	PKS Kiewit	U T A UTAH TRANSIT AUTHORITY	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	Scale: NTS CADD Filename: SL-C-Y-7-180.dwg Submit Date: 01-16-26 UTA Contract No.: 24-03849 Drawing No.: Y7180 Sheet No.: Y7180

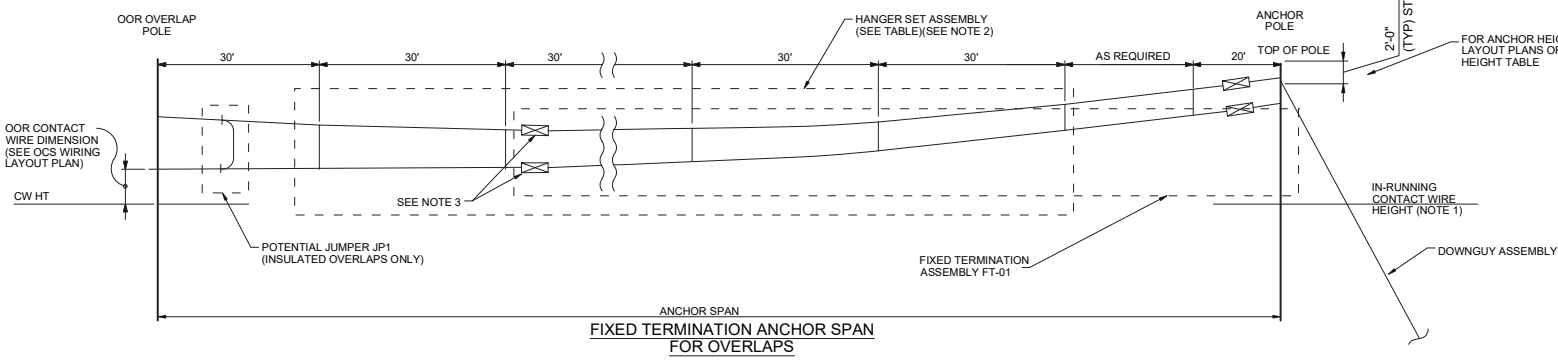
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BALANCE WEIGHT ANCHOR SPAN
FOR OVERLAPS



SPRING TENSIONER ANCHOR SPAN
FOR OVERLAPS



FIXED TERMINATION ANCHOR SPAN
FOR OVERLAPS

- NOTES:
- 1. CONTACT WIRE HEIGHT IS FOR THE IN-RUNNING CONTACT WIRE AT THE ANCHOR POLE.
 - 2. ADJUST HANGER LENGTHS TO ACHIEVE SMOOTHLY GRADED CONTACT WIRE.
 - 3. INSULATORS SHALL BE 4'-0" MINIMUM, 5'-0" MAXIMUM LATERALLY AND HORIZONTALLY FROM SUPERELEVATED CENTERLINE OF TRACK.

HANGER ALLOCATION TABLE		
ANCHOR SPAN	NO. OF HANGERS	HANGER SET REF
UP TO 60	1	HA-1
90	2	HA-2
120	3	HA-3
150	4	HA-4
180	5	HA-5
210	6	HA-6

REV	DATE	Description



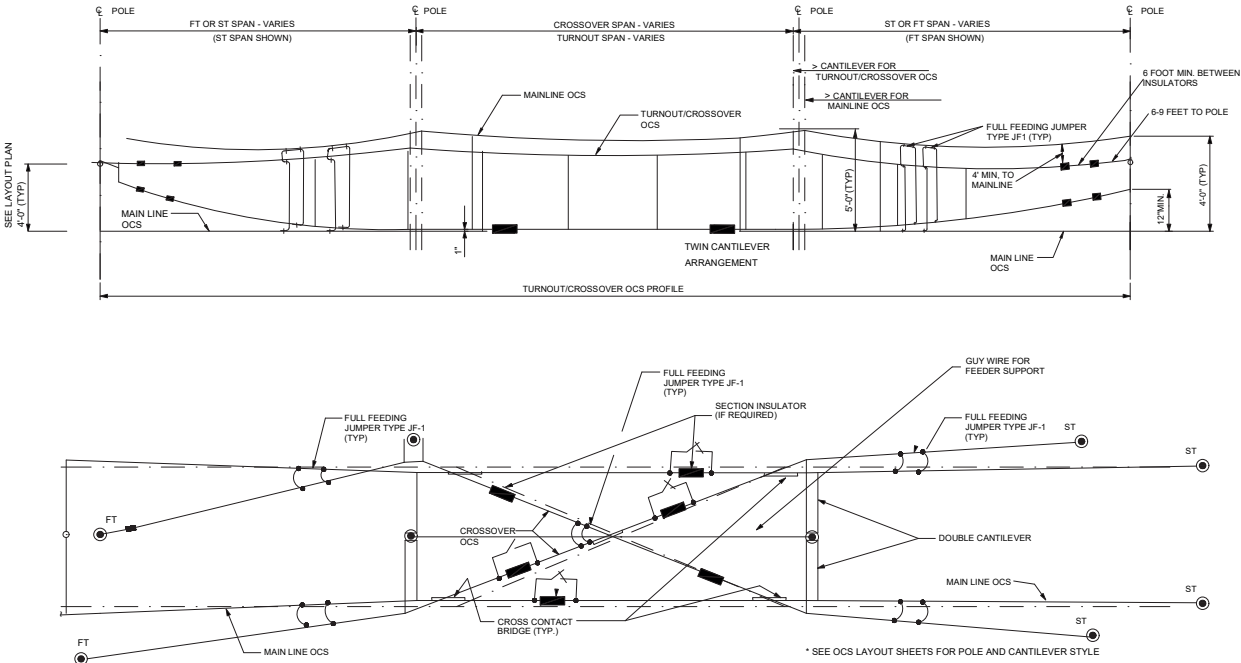
Submitted By: _____ Approved By: _____

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 ANCHOR SPANS

State NTS
CADD Filename SL-C-Y-7-182.dwg
Submittal Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7182
Sheet No.

NOTE:
1. DIMENSION SHOWN FOR SYSTEM HEIGHTS AND TERMINATIONS ARE TYPICAL; FOR ACTUAL VALUES REFER TO OCS LAYOUT AND ALLOCATION PLANS.



1/5/2028	REV	DATE	Description
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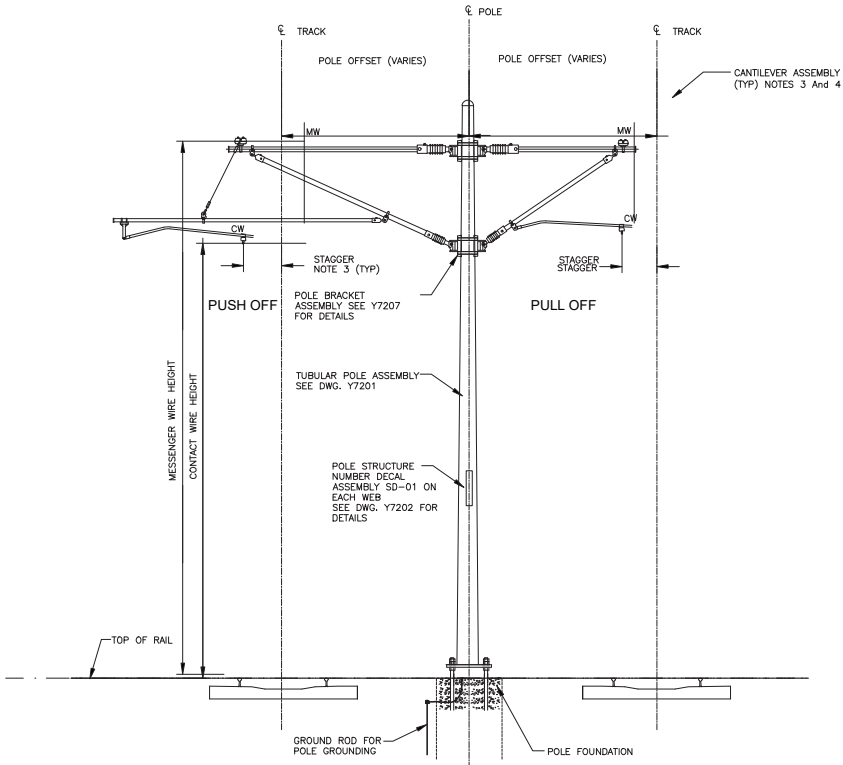
Submitted By: _____ Approved By: _____

Designed By	B.DEMERS
Drawn By	N.WU
Checked By	Y.LIU
Approved By	B.DEMERS

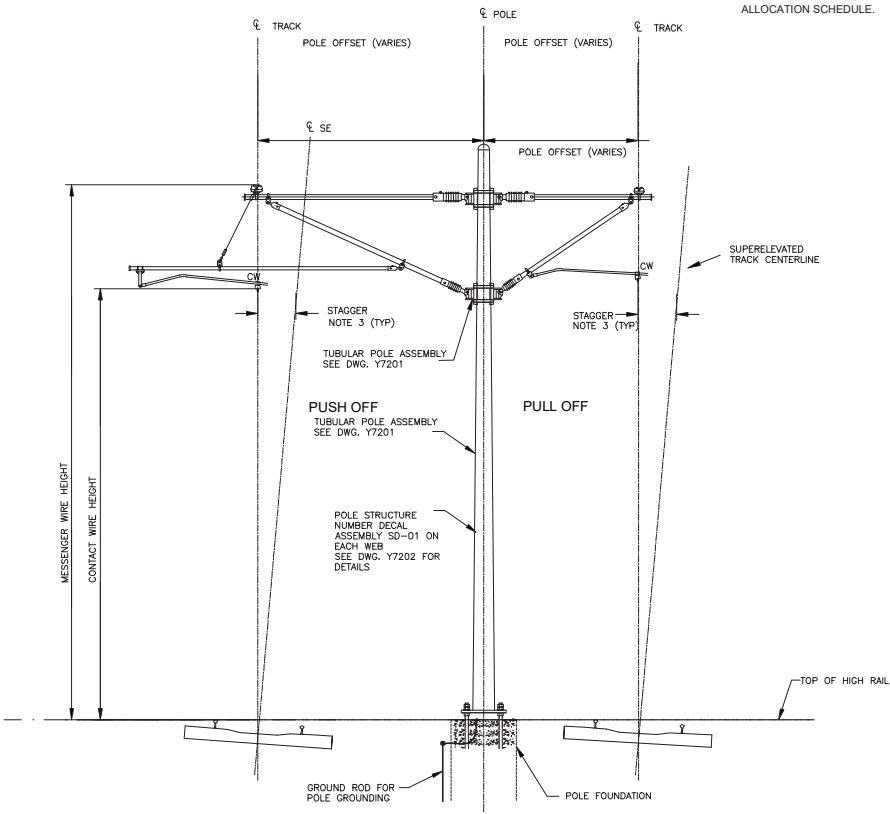
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OCS DIAMOND CROSSOVER

Scale	NTS
CADD Filename	SL-C-Y-7-183.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y7183
Sheet No.	

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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

- 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.

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REV	DATE	Description



Submitted By: _____

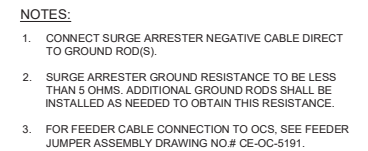


Approved By: _____

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 CENTER POLE STRUCTURES

State	NTS
CADD Filename	SL-C-Y7-190.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y7190
Sheet No.	



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

TYPICAL SURGE ARRESTOR STRUCTURE

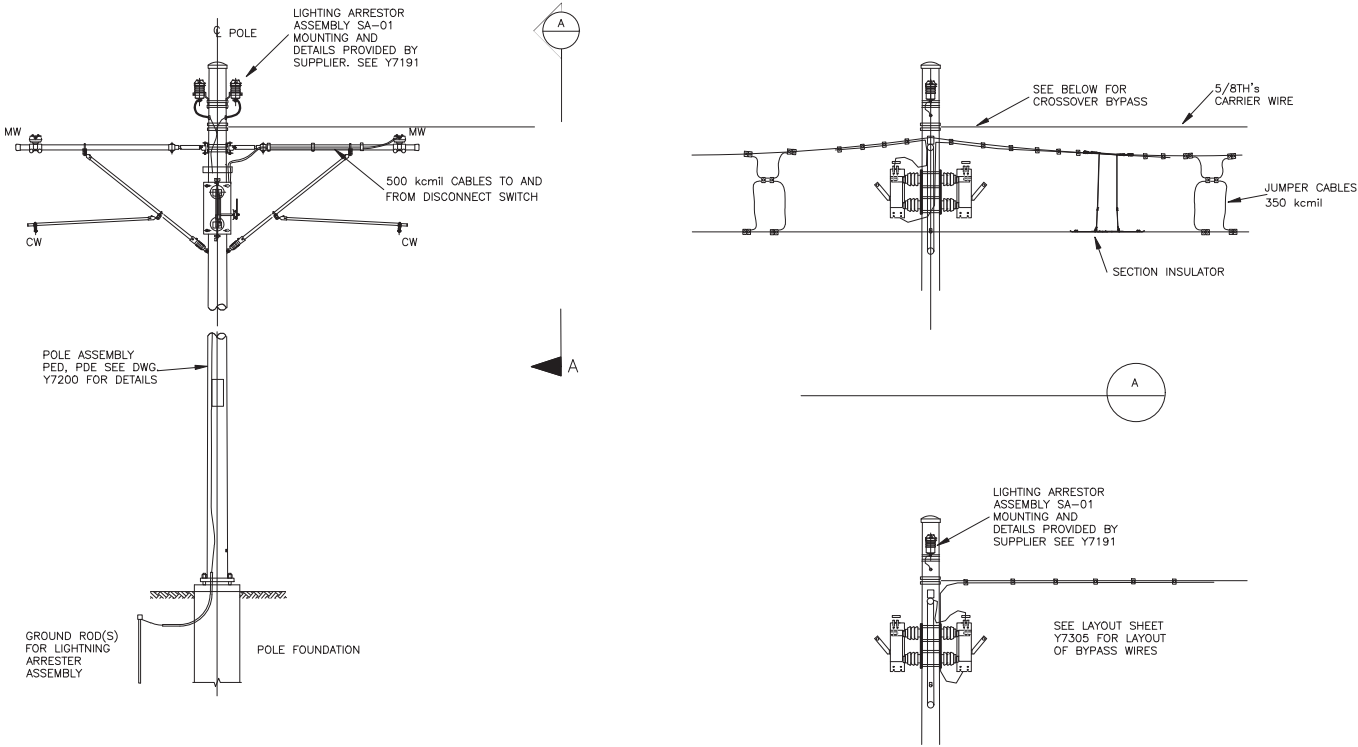
Scale: NTS

CADD Filename: SL-C-Y-7-191.dwg

Submitted Date: 01-16-26

UTA Contract No.: 24-03849

Drawing No.: Y7191



FOR FOUNDATION TYPE AND GROUNDING DETAILS SEE DRAWING Y3001 AND OCS LAYOUT SHEETS

TYPICAL DISCONNECT STRUCTURE AT DIAMOND CROSSOVER

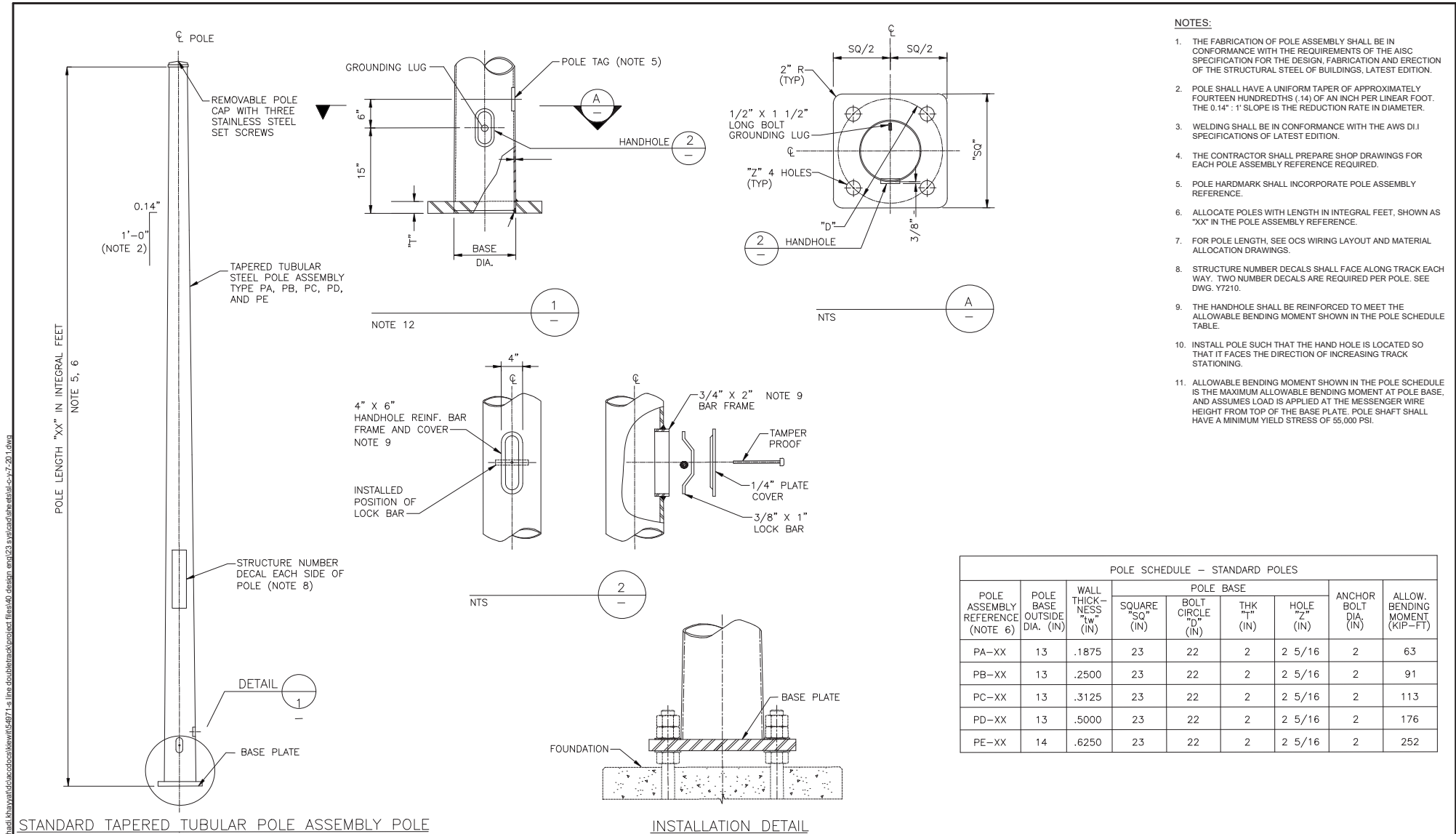
- NOTES:
1. FOR ABBREVIATIONS AND GENERAL NOTES, SEE DRAWING Y0001.
 2. FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG Y0002.
 3. LIGHTNING ARRESTER SHALL BE MOUNTED ON POLES AS SHOWN ON DRAWING Y7233.
 4. OUT-OF-RUNNING SECTION INSULATORS ARE NOT PART OF ASSEMBLY TYPES SHOWN IN THIS DRAWING, FOR LOCATION, 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.

1/5/2028	△						Designed By B.DEMERS	S-LINE EXTENSION PROJECT	Scale NTS		
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REV	DATE	Description	Submitted By: _____	Approved By: _____		Drawn By N.WU		STANDARD DRAWINGS OVERHEAD CONTACT SYSTEM BYPASS DISCONNECT SWITCH STRUCTURE	CADD Filename: SL-C-Y-7-192.dwg Submittal Date 01-16-26 UTA Contract No. 24-03849 Drawing No. Y7192		
						Checked By Y.LIU					
						Approved By B.DEMERS					



1. HEAD SPAN 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 HEAD SPAN 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.

15/02/20				Designed By: B.DEMERS	S-LINE EXTENSION PROJECT STANDARD DRAWINGS OVERHEAD CONTACT SYSTEM TYPICAL HEADSPAN STRUCTURES	Scale: NTS
				Drawn By: N.WU		CADD Filename: SL-C-Y-7-194.dwg
				Checked By: Y.LIU		Submitted Date: 01-16-26
				Approved By: B.DEMERS		UTA Contract No.: 24-03849
REV	DATE	Description	Submitted By:	Approved By:		Drawing No.: Y7194



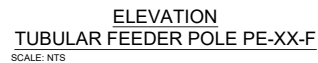
- NOTES:
- THE FABRICATION OF POLE ASSEMBLY SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF THE STRUCTURAL STEEL OF BUILDINGS, LATEST EDITION.
 - POLE SHALL HAVE A UNIFORM TAPER OF APPROXIMATELY FOURTEEN HUNDREDTHS (14) OF AN INCH PER LINEAR FOOT. THE 0.14" : 1' SLOPE IS THE REDUCTION RATE IN DIAMETER.
 - WELDING SHALL BE IN CONFORMANCE WITH THE AWS D11 SPECIFICATIONS OF LATEST EDITION.
 - THE CONTRACTOR SHALL PREPARE SHOP DRAWINGS FOR EACH POLE ASSEMBLY REFERENCE REQUIRED.
 - POLE HARDMARK SHALL INCORPORATE POLE ASSEMBLY REFERENCE.
 - ALLOCATE POLES WITH LENGTH IN INTEGRAL FEET, SHOWN AS "XX" IN THE POLE ASSEMBLY REFERENCE.
 - FOR POLE LENGTH, SEE OCS WIRING LAYOUT AND MATERIAL ALLOCATION DRAWINGS.
 - STRUCTURE NUMBER DECALS SHALL FACE ALONG TRACK EACH WAY. TWO NUMBER DECALS ARE REQUIRED PER POLE. SEE DWG. Y7210.
 - THE HANDHOLE SHALL BE REINFORCED TO MEET THE ALLOWABLE BENDING MOMENT SHOWN IN THE POLE SCHEDULE TABLE.
 - INSTALL POLE SUCH THAT THE HAND HOLE IS LOCATED SO THAT IT FACES THE DIRECTION OF INCREASING TRACK STATIONING.
 - 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.

1/6/2024	REV	DATE	DESCRIPTION				UTAH TRANSIT AUTHORITY	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	State SCALE OF DWG CADD Filename: SL-C-Y-7-201.dwg Submitted Date: 01-16-26 UTA Contract No.: 24-03849 Drawing No.: Y7201



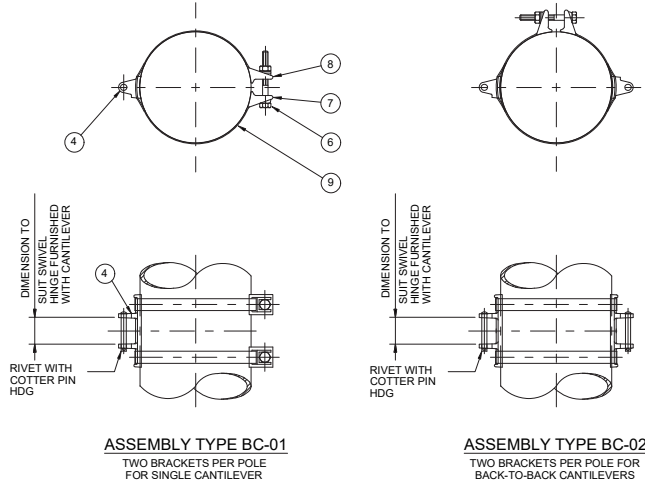
1. ALL OCS POLES SHALL BE IDENTIFIED USING CONSECUTIVE NUMBERED REFLECTIVE SELF-ADHESIVE BLACK DECALS, POSITIONED AS SHOWN.
2. DECAL NUMBERS SHALL BE SIMILAR TO EXISTING UTA-LRT POLE DECAL NUMBERS.
3. ONE STRUCTURE DECAL ASSEMBLY SD-01 COMPRISING TWO DECAL NUMBERS SHALL BE INSTALLED PER POLE.
4. POLE ID NUMBERS SHALL BE INSTALLED FACING ALONG TRACK FACING APPROACHING TRAIN
5. DECALS SHALL BE PERMANENTLY FIXED TO EACH POLE. ALL SURFACE PREPARATION SHALL BE IN ACCORDANCE WITH DECAL MANUFACTURER INSTRUCTIONS.
6. CONTRACTOR SHALL PROVIDE SHOP DRAWING SUBMITTAL FOR UTA APPROVAL.

[illegible][illegible]



S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM

Scale:		NTS	
CADD Filename:		SL-C-Y-7-203.dwg	
Submittal Date		01-16-26	
UTA Contract No.:		24-03849	
Drawing No.:		Y7203	
		Sheet No.	

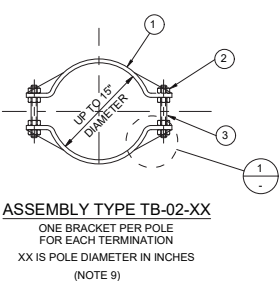


HINGE TYPE POLE BAND BRACKET ASSEMBLY
FOR CANTILEVERS
(NOTE 5)

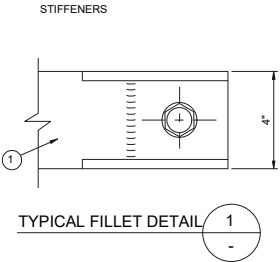
- NOTES:
- 1. FOR GENERAL NOTES, SEE DWG NO. Y0001.
 - 2. FOR SYMBOLS AND ABBREVIATIONS, SEE DWG NO. Y0002.
 - 3. CONTRACTOR SHALL USE THIS DRAWING TO PREPARE SHOP DRAWINGS. CONTRACTOR SHOP DRAWINGS SHALL GIVE LIST OF SUPPLIER COMPONENTS WITH PART NUMBERS. COMPONENT DRAWINGS SHALL ACCOMPANY SHOP DRAWINGS.
 - 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.

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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1/6/2026

REV	DATE	Description



Designed By B.DEMERS
Drawn By N.WU
Checked By Y.LIU
Approved By B.DEMERS

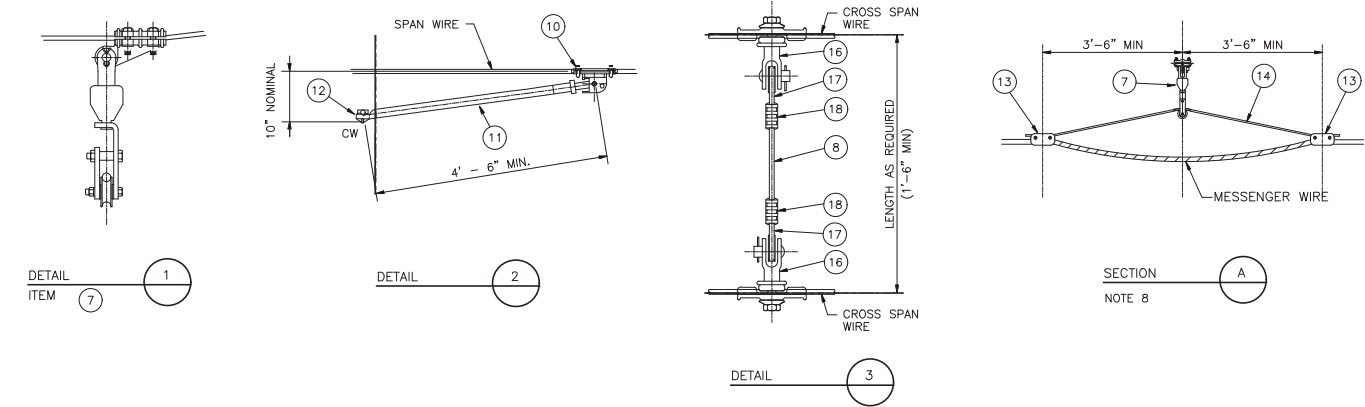
S-LINE EXTENSION PROJECT

STANDARD DRAWINGS

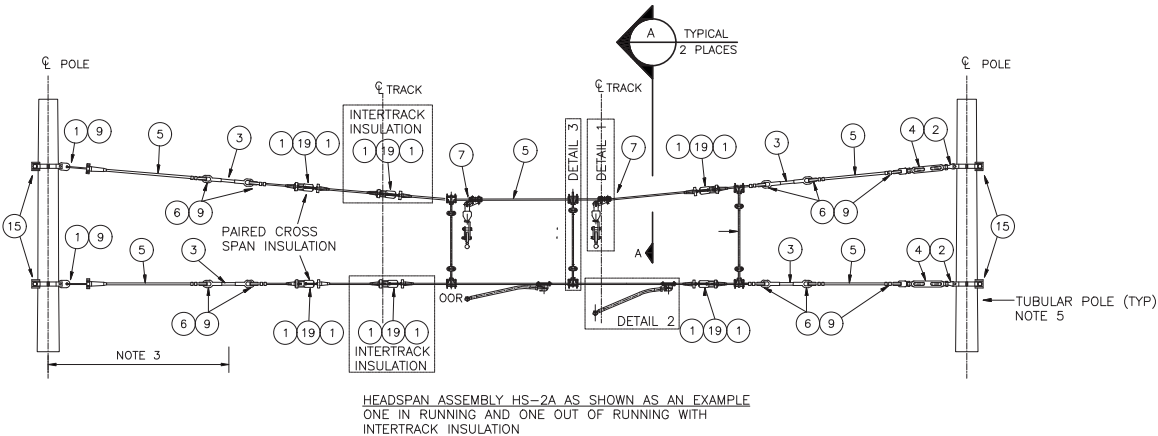
OCS POLE BRACKET ASSEMBLIES
FOR TUBULAR POLES
TYPES BC-XX AND TB-02-XX

State NTS
CADD Filename: SL-C-Y-7-207.dwg
Submittal Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7207
Sheet No.

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- NOTES:
- FOR ABBREVIATIONS AND GENERAL NOTES, SEE DRAWING Y0001.
 - FOR STRUCTURAL NOTES SEE DRAWING Y0002.
 - 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".
 - 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.
 - FOR TUBULAR POLE DIMENSIONS SEE DRAWING Y7201.
 - BRACKET ASSEMBLIES FOR TUBULAR POLES CALLED OUT SEPARATELY, SEE DRAWING Y7207.
 - THIS DIMENSION TO BE AS SHORT AS PRACTICAL.
 - 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	

REV	DATE	Description

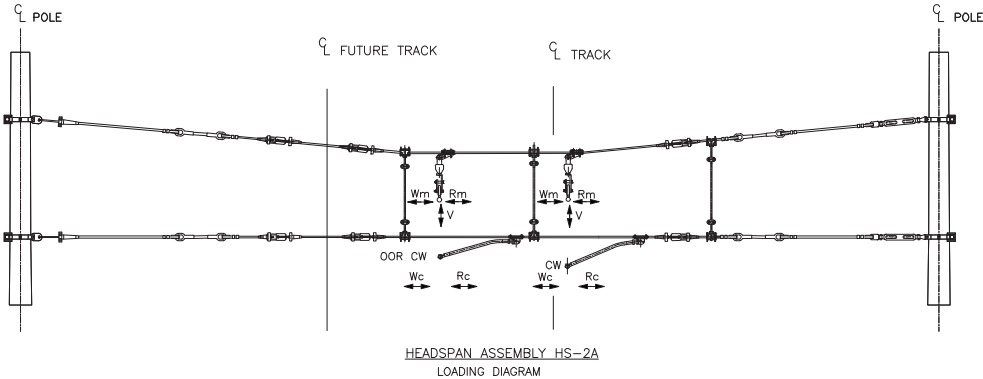


Submitted By: _____ Approved By: _____

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
HEADSPAN ASSEMBLIES HS-1, HS-1A,
HS-2, AND HS-2AX

Drawn NTS	Sheet No. Y7209
CADD Filename: SLC-Y7-209.dwg	
Submittal Date: 01-16-26	
UTA Contract No.: 24-03849	

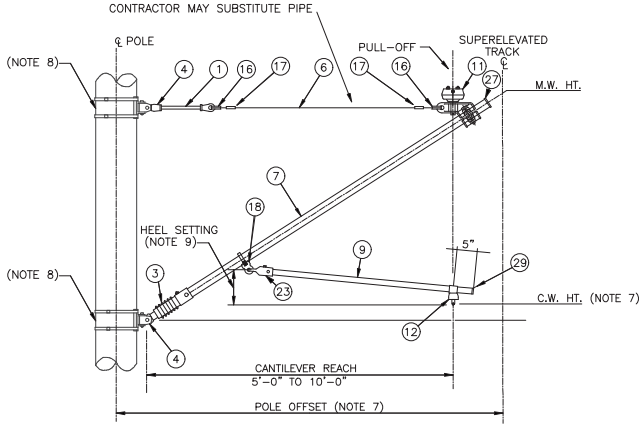


- NOTES:
- 1. FOR SITE SPECIFIC APPLICATION OF THESE HEADSPAN ASSEMBLIES REFER TO WIRING LAYOUT AND ALLOCATION SCHEDULE.
 - 2. WIRE HEIGHTS, STAGGERS AND POLE OFFSETS ARE INDICATED ON OCS LAYOUT PLAN. STAGGERS ARE RELATIVE TO THE SUPERELEVATED TRACK CENTERLINE AT CONTACT WIRE LEVEL.
 - 3. THE CONTRACTOR'S 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.

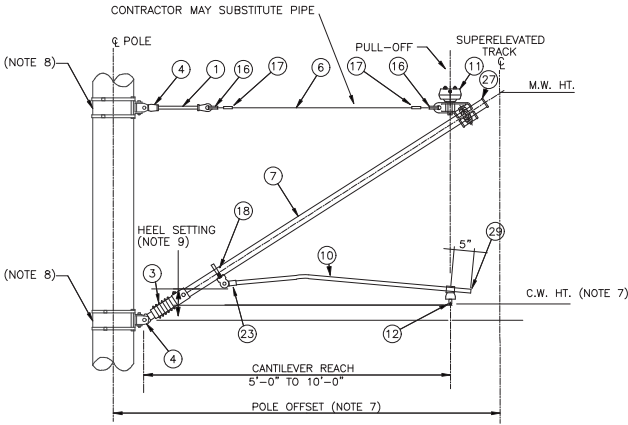
LOADING TABLE — V = VERTICAL, R = RADIAL, W = WIND, m = MESSENGER, AND c = CONTACT								
HEADSPAN ASSEMBLY	APPLICATION	CW DEVIATION	HEEL SETTING	MAXIMUM LOADS (LB) (NOTES 8 & 9)				
				V	Rc	Rm	Wc	Wm
HS—01	ONE CATENARY HEADSPAN	UP TO 3.5"	3" TO 5"	1,000	295	430	235	305
HS—02	TWO CATENARY HEADSPAN	UP 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

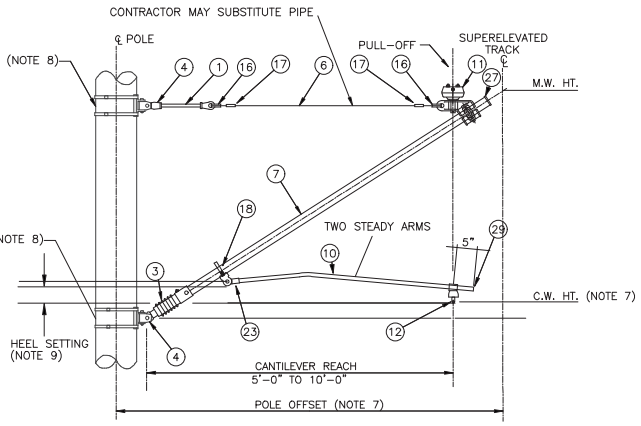
1/6/2028	△						Designed By B.DEMERS	S-LINE EXTENSION PROJECT	State NTS
	△								
	△								
	△								
	△								
REV	DATE	Description	Submitted By:	Approved By:	Drawing No. Y7210				



CANTILEVER TYPE CA-01L (LIGHT LOAD)
PULL-OFF APPLICATION

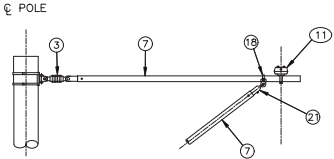


CANTILEVER TYPE CA-01M (MEDIUM LOAD)
PULL-OFF APPLICATION



CANTILEVER TYPE CA-01H (HEAVY LOAD)
PULL-OFF APPLICATION

APPLICATION RULE
FOR LIGHT, MEDIUM AND HEAVY
LOAD VALUES SEE DWG. Y7212



ALTERNATIVE MESSENGER
SUPPORT DETAIL
FOR CA-01X CANTILEVERS

- 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.
 - 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 UNIVERSAL PANTOGRAPH CLEARANCE ENVELOPE SEE DWG. Y7005.

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

Sheet NTS	Sheet No.
CADD Filename: SL-C-Y-7-211.dwg	
Submittal Date: 01-16-26	
UTA Contract No.: 24-03849	
Drawing No.: Y7211	



(NOTE 9)

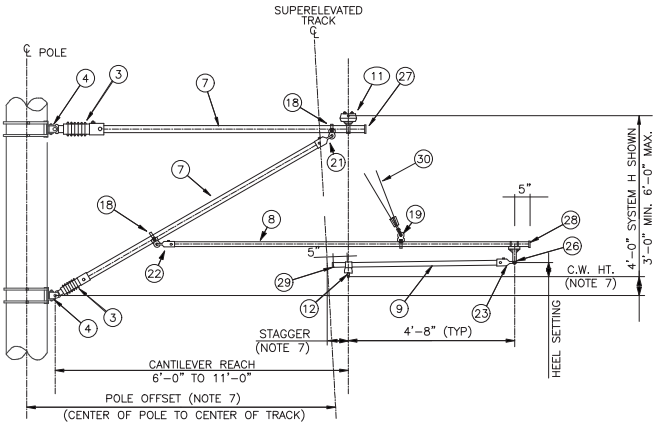
A diagram of a tapered probe. It features two 'STEADY ARMS' on the left that converge towards a central point. A 'CONTACT WIRE' is shown on the right, with a vertical dimension of '1-0" (1 inch) indicated between two points on the wire.

CANTILEVER TYPE CA-01H

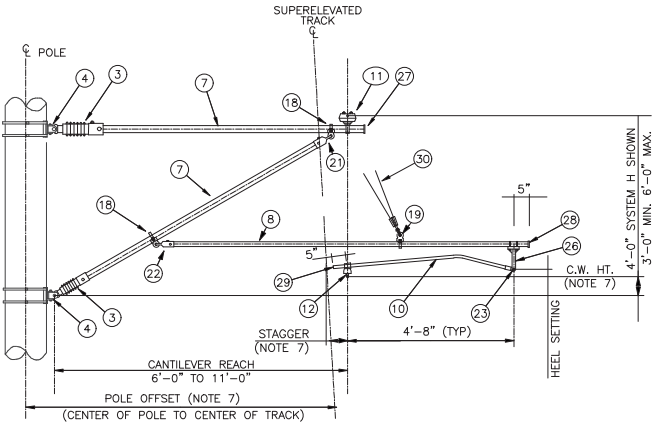
PULL-OFF HEAVY LOAD APPLICATION ONLY

1. FOR SITE SPECIFIC APPLICATION OF THESE CANTILEVER ASSEMBLIES REFER TO LAYOUT PLANS AND MATERIAL ALLOCATION DRAWINGS.
2. 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.
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 CANTILEVER ASSEMBLY. MAXIMUM LOADS ARE BASED ON THE WIRE TENSION CHARTS FOUND ON DWG. Y7015.
9. CANTILEVER SELF-WEIGHT IS NOT INCLUDED.
10. VERTICAL LOAD AT MESSENGER ONLY.

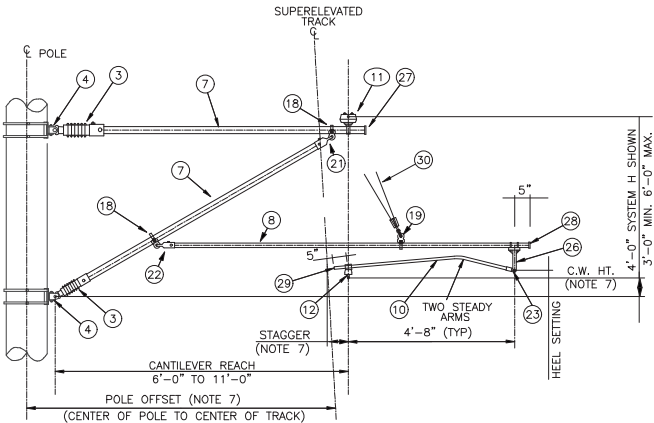
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CANTILEVER TYPE: CA-03L (LIGHT LOAD)
PUSH-OFF APPLICATION



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:
- 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 SCHEDULES.
 - 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. 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	

1/8/2028	REV	DATE	Description
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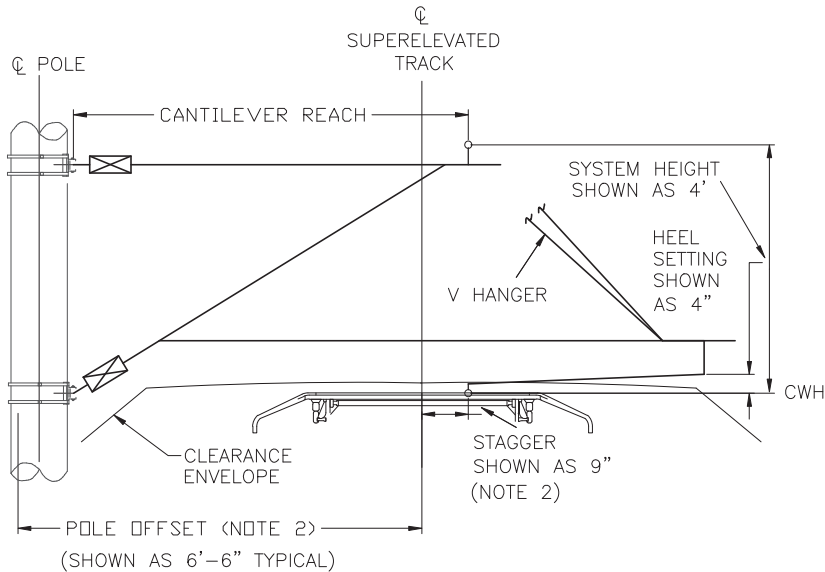
Designed By B.DEMERS
Drawn By N.WU
Checked By Y.LIU
Approved By B.DEMERS

S-LINE EXTENSION PROJECT

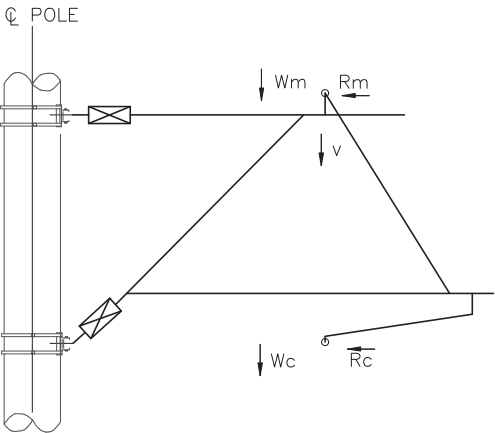
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
CANTILEVER ASSEMBLY PUSH-OFF
CA-03L, CA-03M, AND CA-03H

State NTS
CADD Filename SL-C-Y-7-213.dwg
Submission Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7213
Sheet No.

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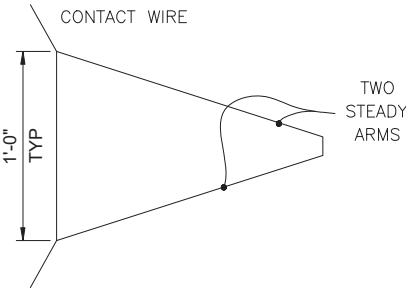
CANTILEVER ASSEMBLY CA-03 (SCALED)



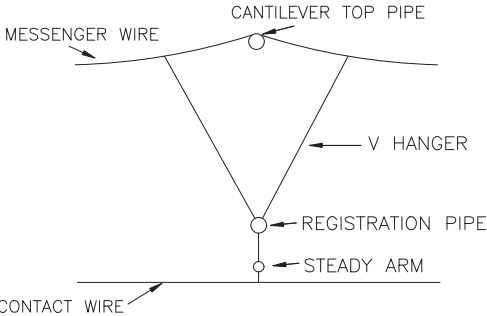
LOADING DIAGRAM
(NOTE 9)

- 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	APPLICATION	CW DEVIATION	HEEL SETTING	MAXIMUM LOADS (LB) (NOTES 8 & 9)				
				V	Rc	Rm	Wc	Wm
CA-03L	LIGHT PUSH-OFF	UP TO 3.5°	3" TO 5"	1000	295	430	235	305
CA-03M	MEDIUM PUSH-OFF	UP TO 7°	1" TO 3"	1000	585	855	235	305
CA-03H	HEAVY PUSH-OFF	UP TO 14°	1"	1000	1160	1700	235	305



CANTILEVER TYPE CA-03H
PUSH-OFF HEAVY LOAD APPLICATION ONLY



CANTILEVER TYPE CA-03
V-HANGER APPLICATION

1/6/2026	REV	DATE	Description
1			
2			
3			
4			
5			



Submitted By: _____



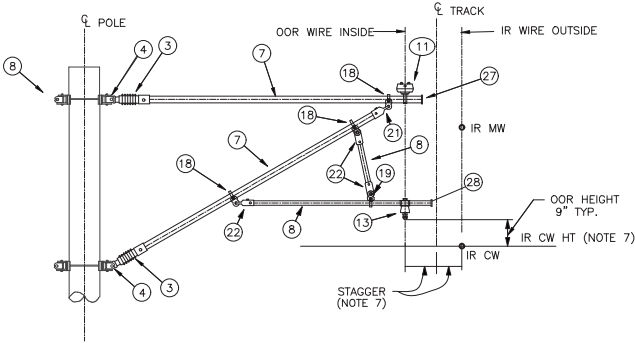
Approved By: _____

Designed By B.DEMERS
Drawn By N.WU
Checked By Y.LIU
Approved By B.DEMERS

S-LINE EXTENSION PROJECT

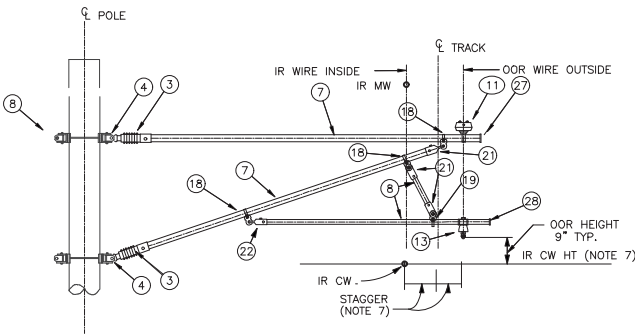
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
CONFIGURATION AND LOADING DIAGRAM
TYPES CA-03L, CA-03M, AND CA-03H

State NTS
CADD Filename SL-C-Y-7-214.dwg
Submission Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7214



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	

1/8/2028	REV	DATE	Description
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Submitted By: _____ Approved By: _____

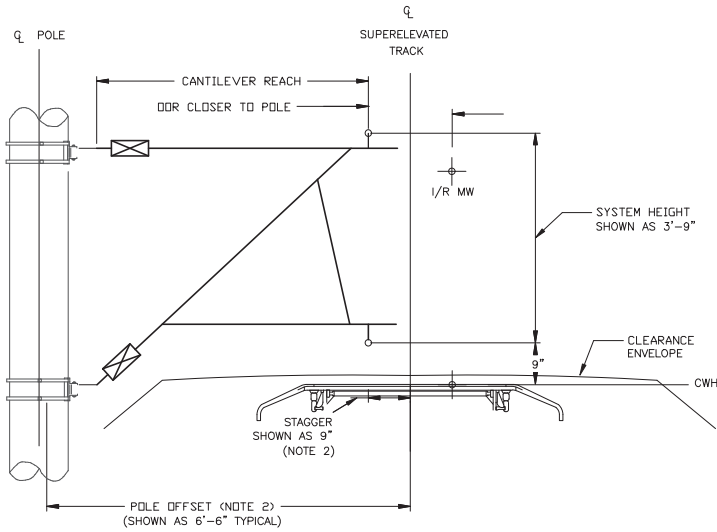
Designed By B.DEMERS
Drawn By N.WU
Checked By Y.LIU
Approved By B.DEMERS

S-LINE EXTENSION PROJECT

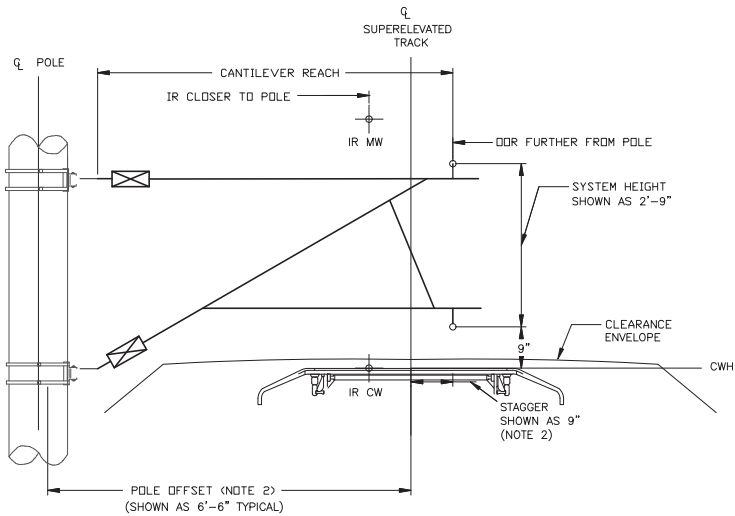
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
CANTILEVER ASSEMBLY OUT-OF-RUNNING
TYPES CA-05AM, AH AND CA-05BM, BH

Issue NTS
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Submittal Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7215
Sheet No.

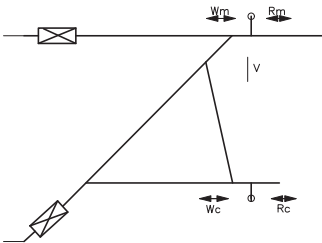
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1/6/2026



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 SUPER-ELEVATED 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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REV	DATE	Description



Submitted By: _____



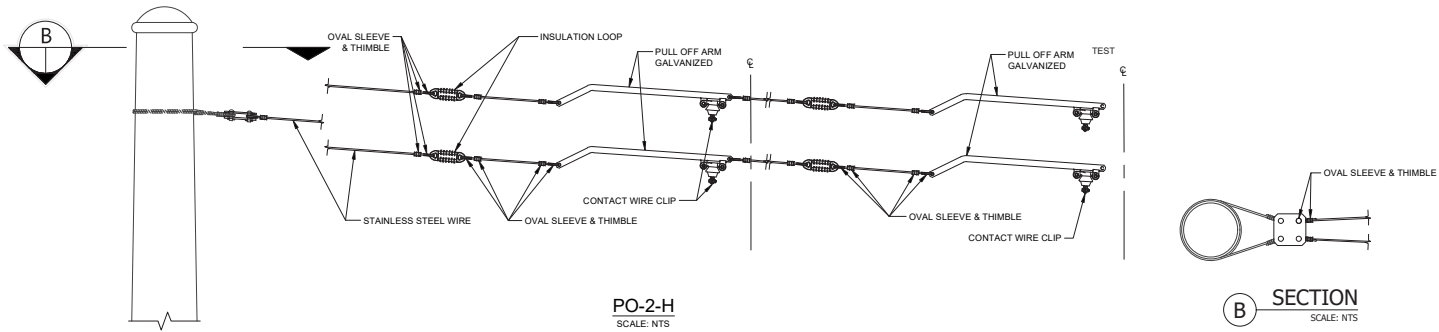
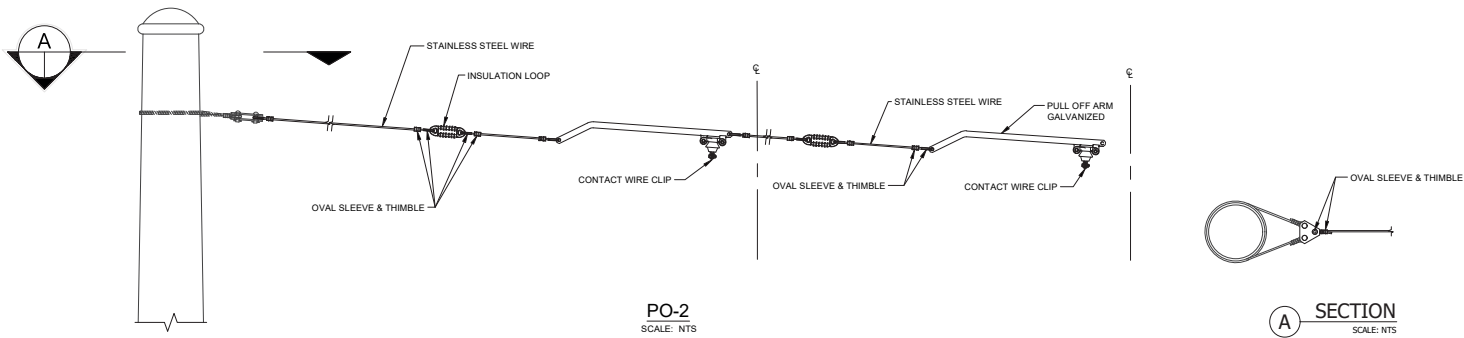
Approved By: _____

Designed By B.DEMERS
Drawn By N.WU
Checked By Y.LIU
Approved By B.DEMERS

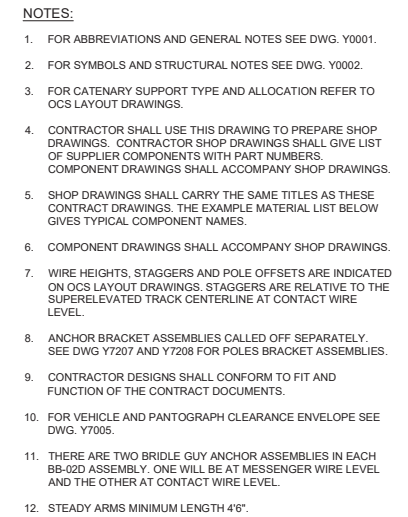
S-LINE EXTENSION PROJECT

STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
CONFIGURATION AND LOADING DIAGRAM
TYPES CA-05AM, AH AND CA-05BM, BH

State NTS
CADD Filename SL-C-Y-7-216.dwg
Submittal Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7216
Sheet No.

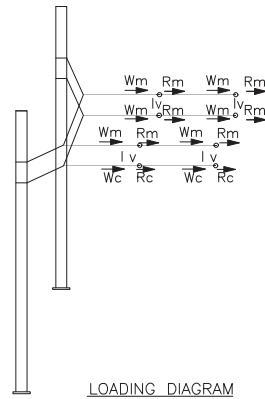
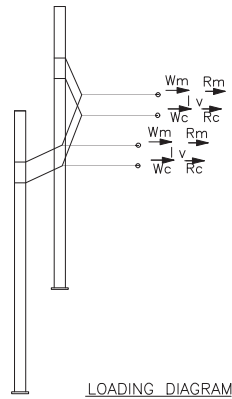


1/5/2028							Designed By: B.DEMERS	S-LINE EXTENSION PROJECT	Scale: NTS			
							Drawn By: S.KHAYYAT			STANDARD DRAWINGS		
							Checked By: Y.LIU				OVERHEAD CONTACT SYSTEM	
							Approved By: B.DEMERS					TWO TRACK PULL-OFF PO-2 AND PO-2A
REV	DATE	Description	Submitted By: _____	Approved By: _____	Drawing No.: Y7220	Sheet No.: 						



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	STRANDVISE	
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	

[illegible]



-
- The diagram shows a vertical cable with two loads. The cable is supported at the top and bottom by 'OCS POLE'. Two 'LOAD' arrows point horizontally to the right from the cable. 'BRIDLE TENSION' is indicated at the top and bottom supports. A slope triangle is shown with a vertical side of 5 and a horizontal side of 1.

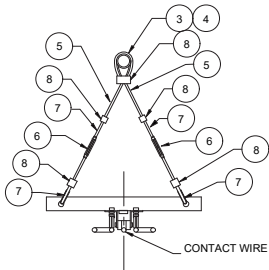
A diagram of a vertical cable system. A central vertical line represents the cable, with a small circle in the middle labeled "LOAD". At the top and bottom of the cable are larger circles, each labeled "OCS POLE" with an arrow pointing to it. To the right of the cable, two arrows point towards it, both labeled "BRIDLE TENSION". To the left of the cable, a right-angled triangle is shown with a vertical side labeled "5" and a horizontal side labeled "1".

BRIDLE ASSEMBLY – TYPICAL LOADINGS (NOTES 4 AND 5)

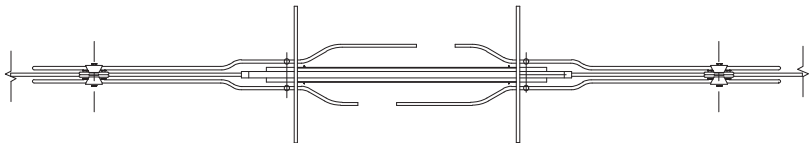
TWO BRIDLES - ONE FOR MESSENGER WIRE, AND ONE FOR
CONTACT WIRE FORM ASSEMBLY BB-02D, SEE DWG. Y7221

                           							Designed By: B.DEMERS		S-LINE EXTENSION PROJECT		Scale: NTS	
	Drawn By: N.WU		Submitted By:		Approved By:		Drawn By: N.WU		STANDARD DRAWINGS OVERHEAD CONTACT SYSTEM CONFIGURATION AND LOADING DIAGRAM TYPE BB-02D		CADD Filename: SL-C-Y-7-222.dwg	
	Checked By: Y.LIU		Date:		Date:		Checked By: Y.LIU		UTA Contract No.: 24-03849		Submittal Date: 01-16-26	
	Description:		Date:		Date:		Approved By: B.DEMERS		Drawing No.: Y7222		Sheet No.:	
	REV:		DATE:		DATE:		Description:		Description:		Description:	

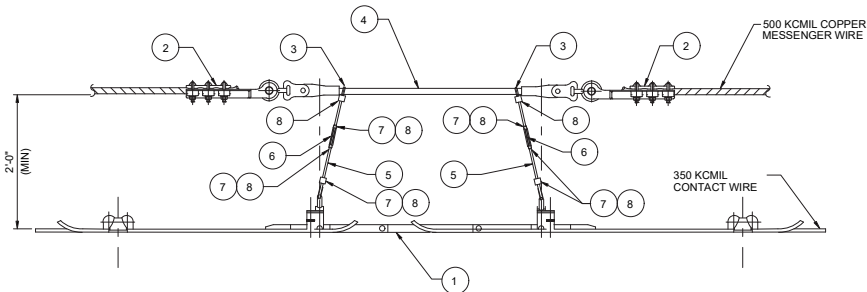
- NOTES:
- 1. CONTACT WIRE TO BE INSTALLED TO MANUFACTURER INSTRUCTIONS.
 - 2. CONTRACTOR SHOP DRAWINGS SHALL GIVE WEIGHT OF ASSEMBLY AS SHOWN TO NEAREST LB. WT.



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	

1/5/2023	REV	DATE	DESCRIPTION



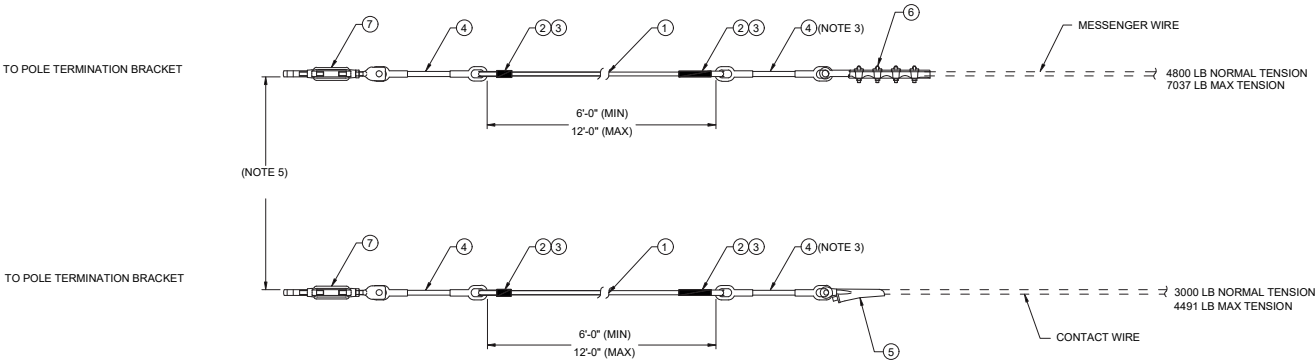
Designed By	B.DEMERS
Drawn By	N.WU
Checked By	Y.LIU
Approved By	B.DEMERS

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
SECTION INSULATOR ASSEMBLY
TYPE MLSI-01

Scale	NTS
CADD Filename:	SL-C-Y-7-223.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y7223
Sheet No.	

- 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	

1/8/2028

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REV	DATE	Description

PROFESSIONAL ENGINEER

No. 14109550

YANG

LIU

STATE OF UTAH

PKS

Kiewit

Submitted By:

UTAH TRANSIT AUTHORITY

UT A

UTAH TRANSIT AUTHORITY

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

Submittal Date:

01-16-26

UTA Contract No.:

24-03849

Drawing No.:

Y7224

Sheet No.:



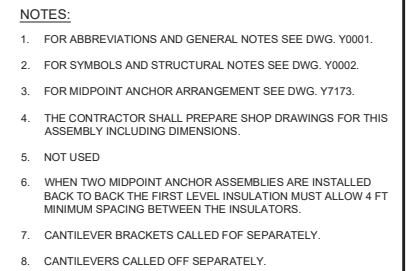
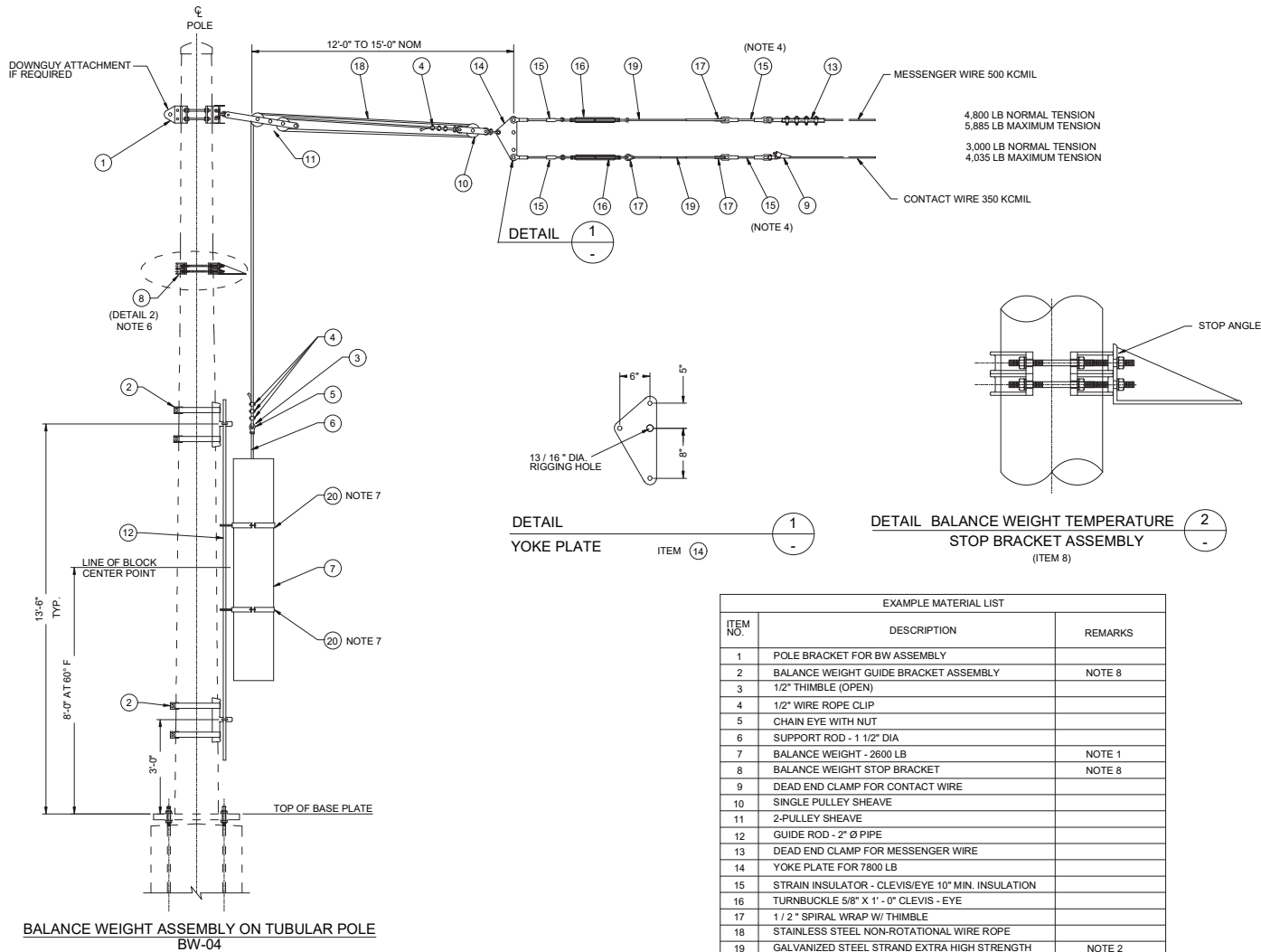


Diagram illustrating a three-span transmission line structure. The diagram shows a horizontal line with three spans. The central span is supported by a W3 MIDPOINT STRUCTURE SEE DWG. Y7173 TYP. The two outer spans are supported by WF POLE CALLED OFF SEPARATELY. The diagram includes labels for MESSENGER WIRE (500 KCML), NOTE 7 & 8, 4' MIN TO INSULATOR, MIDPOINT SPAN GUY, and FOR TYPICAL WF ANCHOR POLE SEE DWG. Y7193. Numbered callouts 1 through 8 are used to identify specific components and features.

EXAMPLE MATERIAL LIST		
ITEM	DESCRIPTION	REMARKS
1	PARALLEL CONDUCTOR CLAMP	
2	MESSANGER 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	

Scale:		NTS	
CADD Filename:		SL-C-Y-7-226.dwg	
Submital Date		01-16-26	
UTA Contract No.:		24-03849	
Drawing No.:		Y7226	
		Sheet No.	

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- NOTES:
1. 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.
 2. GALVANIZED STEEL STRAND SHALL BE WELDLESS EXTRA HIGH STRENGTH.
 3. WEIGHT MOVEMENT TABLE BASED UPON CONTACT WIRE HAVING ACOEFFICIENT OF LINEAR EXPANSION OF 9.4×10^{-6} .
 4. INSULATOR TO BE INSTALLED 4 FEET MINIMUM AND 5 FEET MAXIMUM DIMENSION HORIZONTAL TO SUPERELEVATED CENTERLINE OF TRACK.
 5. A TOLERANCE OF PLUS 6" -ZERO" ON THIS DIMENSION IS PERMITTED
 6. WEIGHTS SHALL IMPACT THE LOW TEMPERATURE STOP AT 0° F.
 7. INSTALL EYE BRACKETS RIGIDLY ON BALANCE WEIGHT AT THE ONE THIRD POINTS.
 8. INSTALLATION HEIGHT OF WEIGHT YOKES AND WEIGHT STOPS ARE DEPENDANT UPON WIRE RUN LENGTH. SEE ALONG TRACK MOVEMENT CHART ON DWG. Y7014.

1/6/2026	REV	DATE	Description

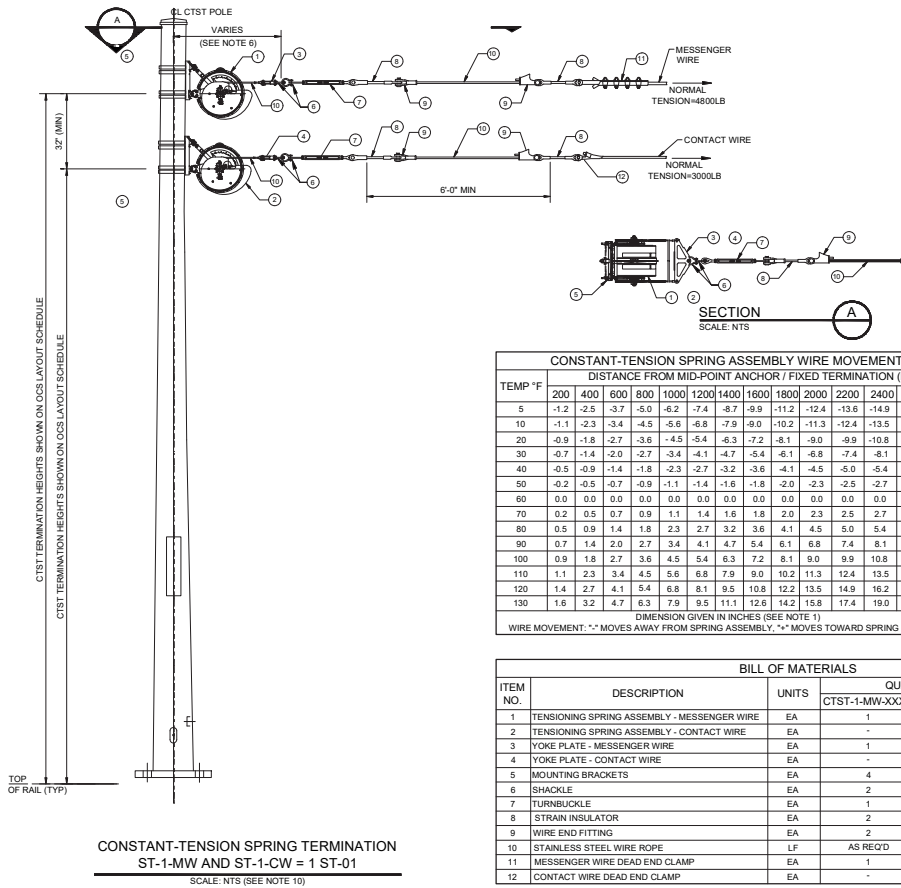


Designed By B.DEMERS
Drawn By N.WU
Checked By Y.LIU
Approved By B.DEMERS

S-LINE EXTENSION PROJECT

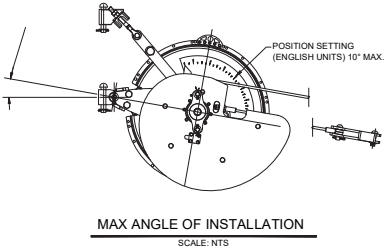
STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
BALANCE WEIGHT FOR TUBULAR POLE
TYPE BW-04

State NTS
CADD Filename SL-C-Y-7-227.dwg
Submittal Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7227
Sheet No.



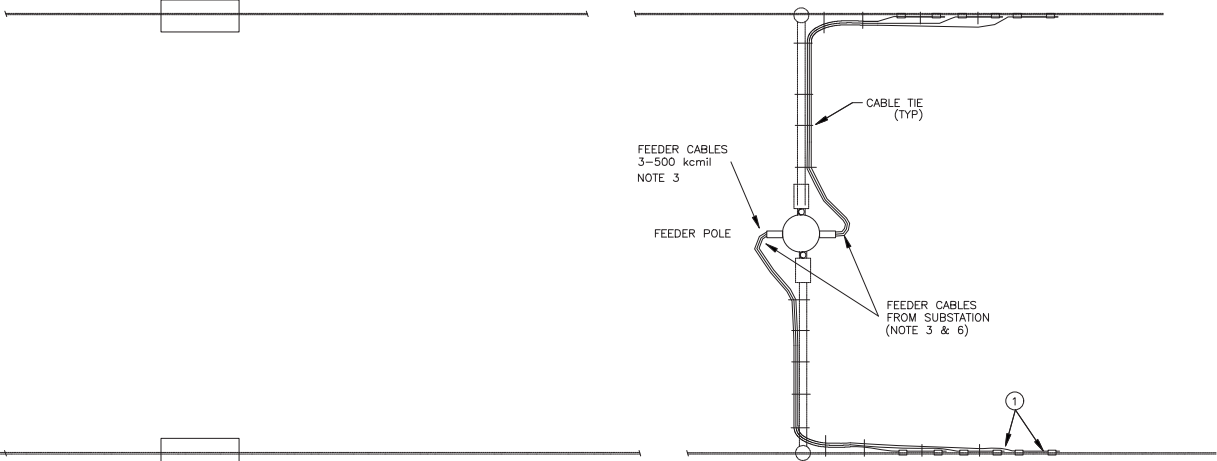
CONSTANT-TENSION SPRING ASSEMBLY WIRE MOVEMENT															
DISTANCE FROM MID-POINT ANCHOR / FIXED TERMINATION (FT)															
TEMP °F	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	
5	-1.2	-2.5	-3.7	-5.0	-6.2	-7.4	-8.7	-9.9	-11.2	-12.4	-13.6	-14.9	-16.1	-17.4	
10	-1.1	-2.3	-3.4	-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															

BILL OF MATERIALS					
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	

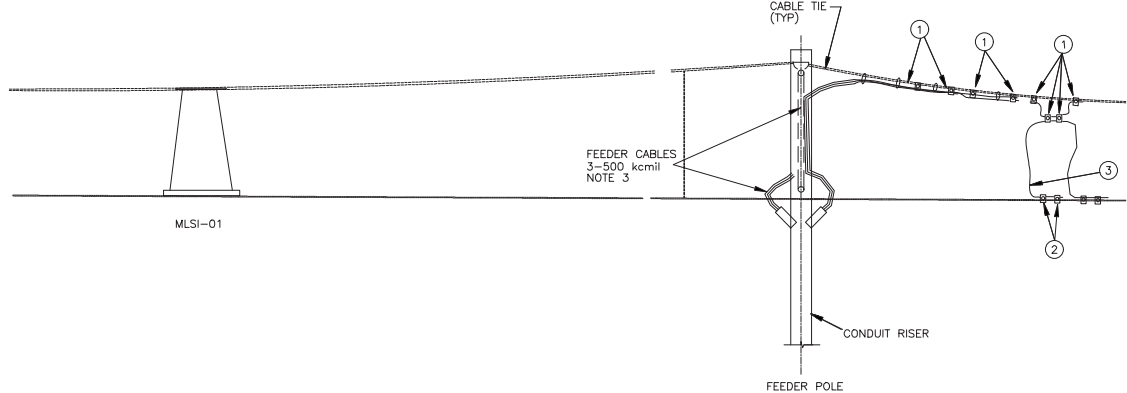


- NOTES:
1. THE WIRE MOVEMENT VALUES SHOWN IN THE TABLE PROVIDED ARE BASED ON A 1:1 RATIO OF SPRING SYSTEM TO WIRE MOVEMENT. CONTRACTOR SHALL SUBMIT POSITION SETTING TABLES BASED ON WIRE MOVEMENT FOR EACH CONSTANT-TENSION SPRING TERMINATION ASSEMBLY.
 2. AFTER FINAL ADJUSTMENT OF WIRING, TURNBUCKLES 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 CATENARY.
 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.

1/6/2028	REV	DATE	Description				Designed By B.DEMERS	S-LINE EXTENSION PROJECT STANDARD DRAWINGS OVERHEAD CONTACT SYSTEM SPRING TENSIONER	State NTS
						Drawn By N.WU	CADD Filename: SL-C-Y-7-228.dwg		
						Checked By Y.LIU	Submit Date 01-16-26		
						Approved By B.DEMERS	UTA Contract No. 24-03849		
								Drawing No. Y7228	Sheet No.



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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1/6/2026

REV	DATE	Description



Submitted By: _____



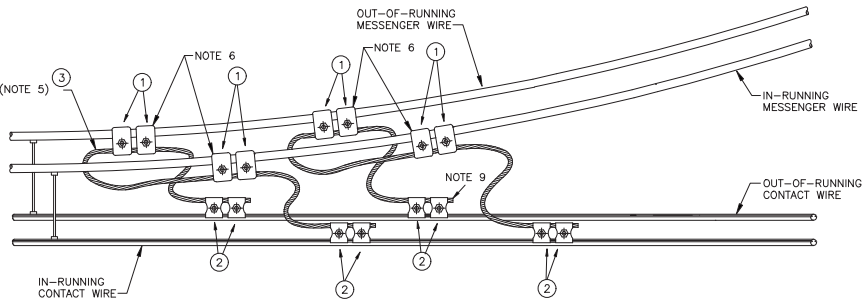
Approved By: _____

Designed By: B.DEMERS
Drawn By: N.WU
Checked By: Y.LIU
Approved By: B.DEMERS

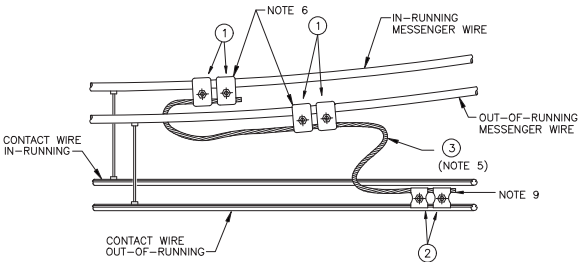
S-LINE EXTENSION PROJECT

STANDARD DRAWINGS
OVERHEAD CONTACT SYSTEM
FEEDER CONNECTION ASSEMBLY
TYPE FR-04

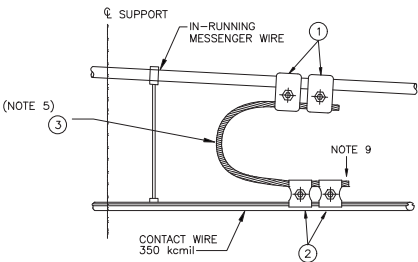
State: NTS
CADD Filename: SL-C-Y7-231.dwg
Submittal Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Y7231
Sheet No.:



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 MESSENGERS TO ACCOMMODATE DIFFERENTIAL ALONG-TRACK MOVEMENT BETWEEN THE MESSENGERS, 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	

1/8/2028	REV	DATE	Description



Submitted By: _____



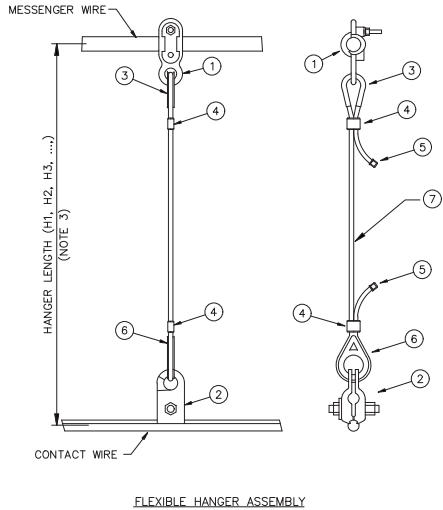
Approved By: _____

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
JUMPER ASSEMBLIES
TYPES JF-1, JP-1 AND JS-1

State NTS
CADD Filename SL-C-Y-7-233.dwg
Submittal Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7233
Sheet No.

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1/6/2028



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	
175	6	HA-6
170	6	
165	6	
160	6	
155	6	
150	5	HA-5
145	5	
140	5	
135	5	
130	5	
125	5	HA-4
120	4	
115	4	
110	4	
105	4	
100	4	HA-3
95	4	
90	3	
85	3	
80	3	
75	3	HA-2
70	3	
65	3	
60	2	
55	2	
50	2	HA-1
45	2	
40	2	
35	2	
30	2	
25	1	
20	1	

- NOTES:
1. FOR ABBREVIATIONS AND GENERAL NOTES SEE DWG. Y0001.
 2. FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG. Y0002.
 3. FOR DEFINITION OF H1, H2, H3, ... AND FOR THEORETICAL QUANTITIES AND LENGTHS OF HANGERS IN HANGER SET, SEE DWG. Y7012.

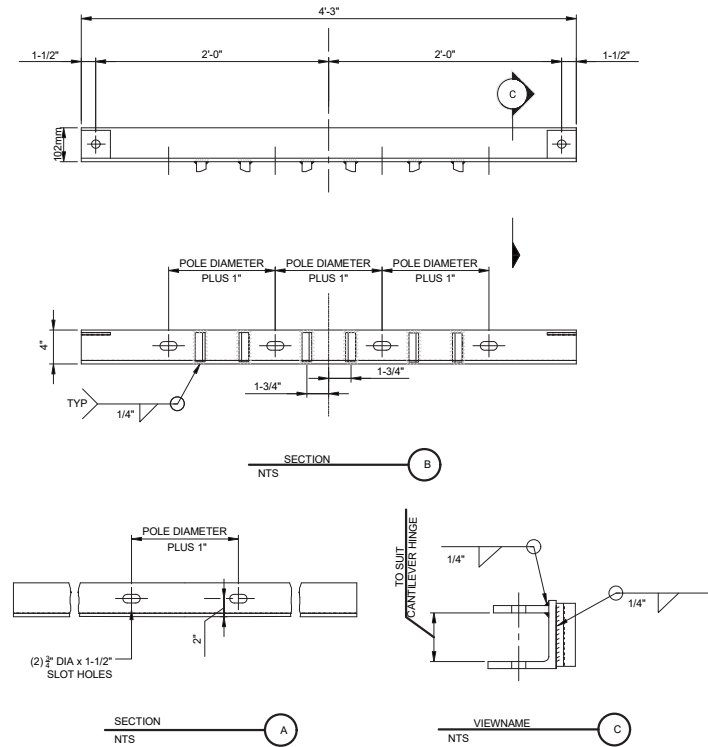
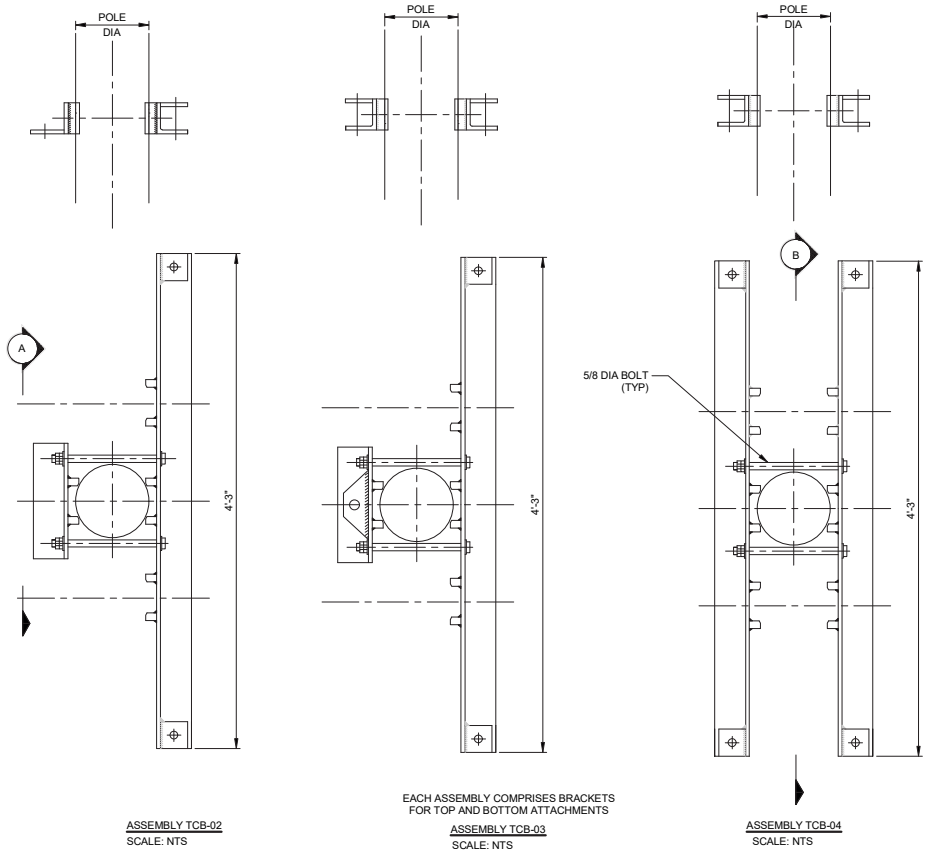
EXAMPLE BILL OF MATERIALS		
ITEM	DESCRIPTION	REMARKS
1	CLAMP - MESSENGER HANGER 500 kcmil	
2	CLAMP - CONTACT HANGER 350 kcmil GROOVED	
3	THIMBLE - 1/8"	
4	SLEEVE - 1/8" COMPRESISON	
5	CAP - CRIMP 1/8"	
6	THIMBLE - 1/8" INSULATED, WEATHER RESISTANT	
7	WIRE ROPE, 1/8" STAINLESS STEEL	

1/6/2028	△						Designed By B.DEMERS	S-LINE EXTENSION PROJECT	State NTS		
	△						Drawn By N.WU			STANDARD DRAWINGS OVERHEAD CONTACT SYSTEM HANGER ASSEMBLIES TYPES HA-1 THROUGH HA-7	
	△						Checked By Y.LIU				CADD Filename: SL-C-Y-7-235.dwg
	△						Approved By B.DEMERS				Submittal Date 01-16-26
	△										UTA Contract No. 24-03849
REV	DATE	Description	Submitted By:	Approved By:	Drawing No. Y7235	Sheet No.					



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.

Scale:		NTS	
CADD Filename:		SL-C-Y-7-236.dwg	
Submittal Date		01-16-26	
UTA Contract No.:		24-03849	
Drawing No.:		Y7236	
		Sheet No.	



1/8/2028	REV	DATE	Description
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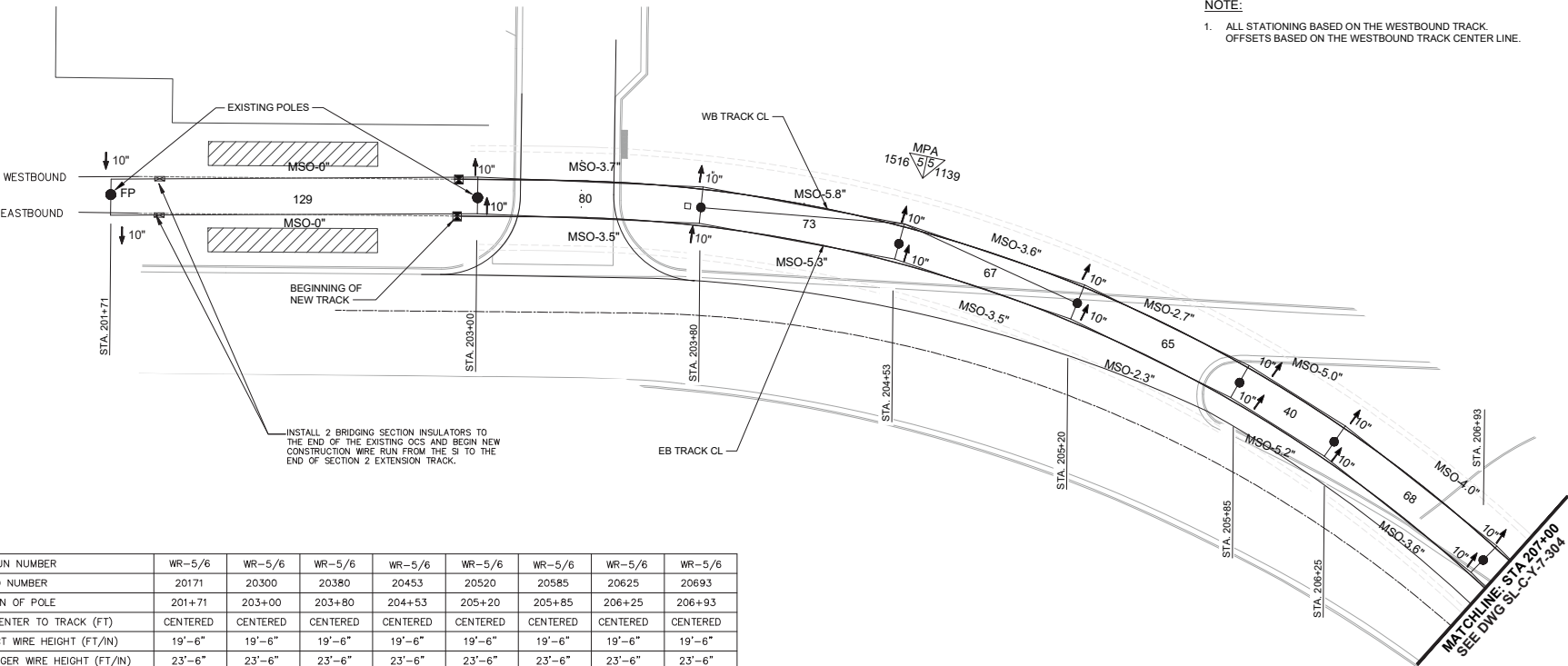
Designed By B.DEMERS
Drawn By N.WU
Checked By Y.LIU
Approved By B.DEMERS

S-LINE EXTENSION PROJECT

STANDARD DRAWINGS

OVERHEAD CONTACT SYSTEM
MULTI-CANTILEVER BRACKETS

Scale NTS
CADD Filename SL-C-Y-7-237.dwg
Submittal Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7237
Sheet No.



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	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	
SUPPORT/CANTILEVER INBOUND	CA-03L	CA-03M	CA-03H	CA-03H	CA-03H	CA-03H	CA-03M	CA-03M	
SUPPORT/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	BC-02	
MISC. ASSEMBLIES AND FEEDERS	2-MLSJ-01			MP-01					
	(2)FR-4**	JS-1	JS-1	JS-1	JS-1	JS-1	JS-1	JS-1	
	(2)JS-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



Submitted By: _____ Approved By: _____

Designed By	B.DEMERS
Drawn By	N.WU
Checked By	Y.LIU
Approved By	B.DEMERS

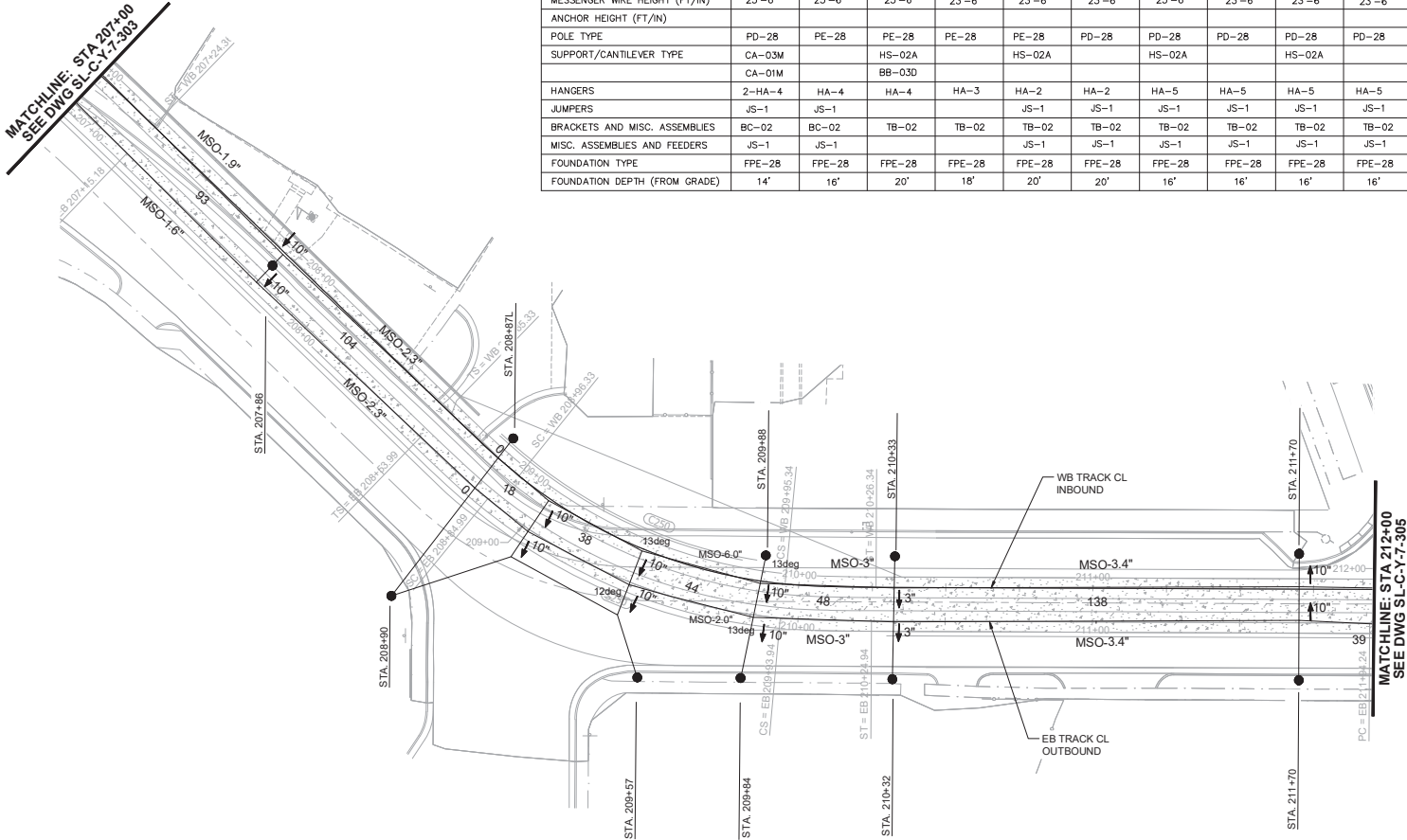
S-LINE EXTENSION PROJECT

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.	

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MATCHLINE: STA 207+00
SEE DWG SL-C-Y-7-303



- NOTE:
1. ALL STATIONING BASED ON THE WESTBOUND TRACK.
OFFSETS BASED ON THE WESTBOUND TRACK CENTER LINE.



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

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
Submittal Date 01-16-26
UTA Contract No. 24-03849
Drawing No. Y7304
Sheet No.

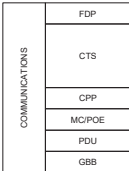
NOTE:

1. ALL STATIONING BASED ON THE WESTBOUND TRACK.
OFFSETS BASED ON THE WESTBOUND TRACK CENTER LINE.



	DESIGNED BY B.DEMERS				Drawn By: N.WU Checked By: Y.LIU Approved By: B.DEMERS	Scale: 1"=20' CADD File Name: SL-C-Y-7-305.dwg Submittal Date: 01-16-26 UTA Contract No.: 24-03849 Drawing No.: Y7305	S-LINE EXTENSION PROJECT OVERHEAD CONTACT SYSTEM WIRING LAYOUT & ALLOCATION SCHEDULE WB STA 212+00 TO WB STA 215+96.33
	DRAWN BY N.WU						
	CHECKED BY Y.LIU						
	APPROVED BY B.DEMERS						
	DATE						

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1/19/2024

STANDARD COMMUNICATION SYMBOLS		ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
	COMMUNICATION HOUSE	CAT 6A	CATEGORY 6 NETWORK CABLE	POE	POWER OVER ETHERNET
	PULL BOX / HANDHOLE / MANHOLE	CCTV	CLOSED-CIRCUIT TELEVISION	PSTN	PUBLIC SWITCHED TELEPHONE NETWORK
	COMMUNICATIONS CABLE / CAT 6A	CPP	COPPER PATCH PANEL	RTU	REMOTE TERMINAL UNIT
	UNDERGROUND CONDUIT / DUCTBANK	CTS	COMMUNICATION TRANSMISSION SYSTEM	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
	PULL BOX / HANDHOLE / MANHOLE WITH UNDERGROUND RACEWAYS OR CONDUITS	ETEL	EMERGENCY TELEPHONE	SCR	SMART CARD READER
	SINGLE-MODE FIBER CABLE WITH NUMBER OF STRAND	F/O	FIBER OPTIC	SEH	SIGNAL EQUIPMENT HOUSE
	POWER CONTROL CABINET (PCC)	FDP	FIBER OPTIC DISTRIBUTION PANEL	SM	SINGLE-MODE
	CLOSED-CIRCUIT TELEVISION SYSTEM	FST	FIBER SPLICE THROUGH	STP	SHIELDED TWISTED PAIR CABLE
	EMERGENCY TELEPHONE	GBB	GROUNDING BUS BAR	TVM	TICKET VENDING MACHINE
	PUBLIC ADDRESS / PUBLIC INFORMATION SIGNS	GBPS	GIGABIT PER SECOND	TX / RX	TRANSMIT / RECEIVE
	SMART CARD READER	GIG-E	GIGABIT ETHERNET	UPS	UNINTERRUPTIBLE POWER SUPPLY
	TICKET VENDING MACHINE	I/O	INPUT / OUTPUT	VAC	VOLTAGE ALTERNATING CURRENT
	FIBER DISTRIBUTION PANEL	IP	INTERNET PROTOCOL	VOIP	VOICE OVER INTERNET PROTOCOL
	COPPER PATCH PANEL	IT	INFORMATION TECHNOLOGY		
	PLATFORM	MC	MEDIA CONVERTERS		
	MEDIA CONVERTERS	NVR	NETWORK VIDEO RECORDER		
	SIGNAL EQUIPMENT HOUSE	OMF	OPERATION / MAINTENANCE FACILITY		
		PA	PUBLIC ADDRESS		
		PCC	POWER CONTROL CABINET		
		PDU	POWER DISTRIBUTION UNIT		
		PLC	PROGRAMMABLE LOGIC CONTROLLER		

NOTES:

1. LABELING AS SHOWN IN DETAILS SHALL BE TYPICAL FOR UTA.

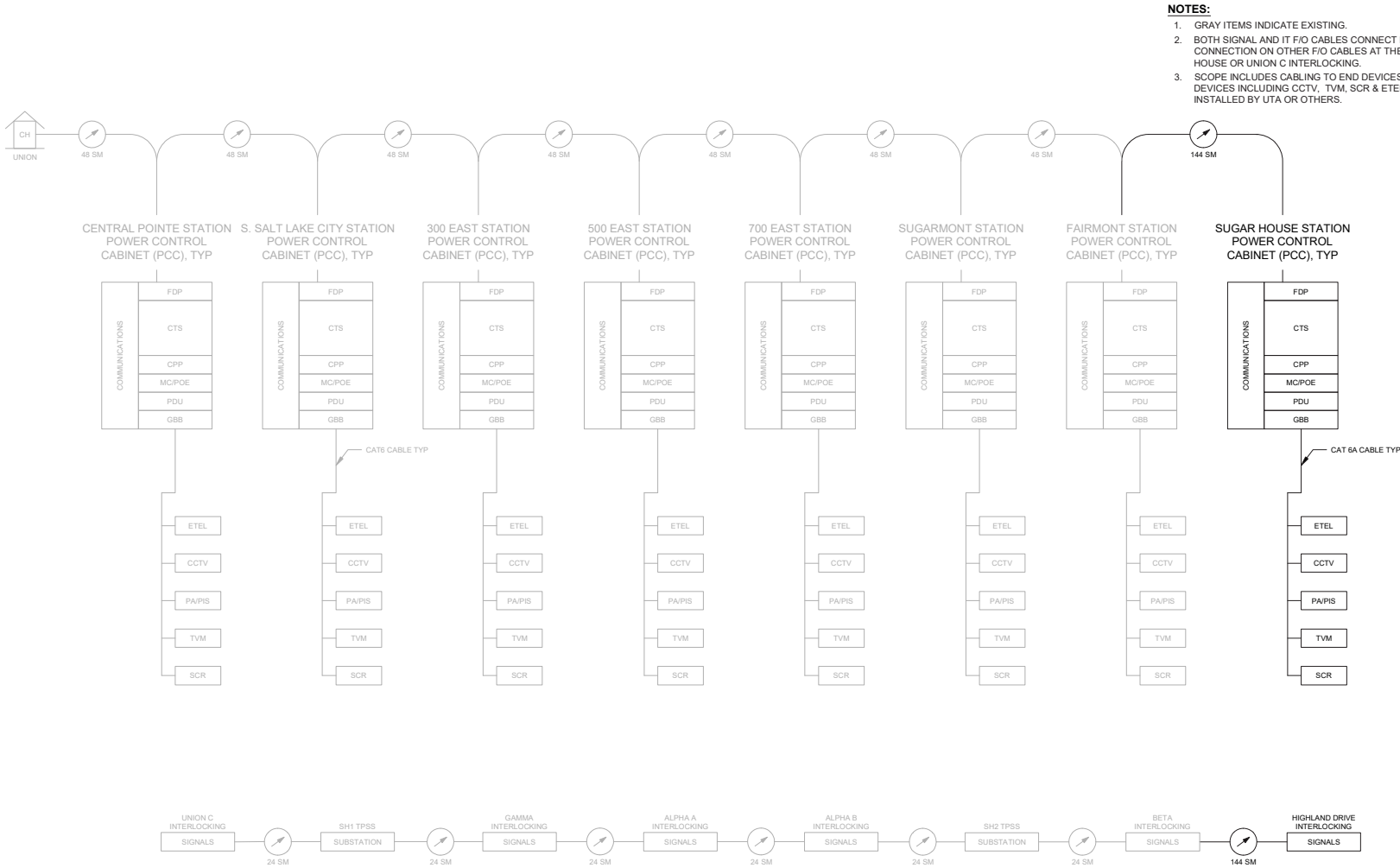
2. REFER TO SYSTEMWIDE ELECTRICAL DRAWINGS FOR SIGNAL CONDUIT PLAN.

3. REFER TO SYSTEMWIDE ELECTRICAL DUCTBANK PLANS FOR UNDERGROUND RACEWAY AND CABLE PLANS.

4. 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.

5. 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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1/5/2028	REV	DATE	Description
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U T A
UTAH TRANSIT AUTHORITY

Designed By
M.WESTERGARD

Drawn By
K.EFFERTZ

Checked By
M.NEALE

Approved By
Y.LIU

S-LINE EXTENSION PROJECT

COMMUNICATIONS
SYSTEMWIDE SINGLE LINE DIAGRAM

State
NTS

CADD Filename
SL-C-Y-1-801.dwg

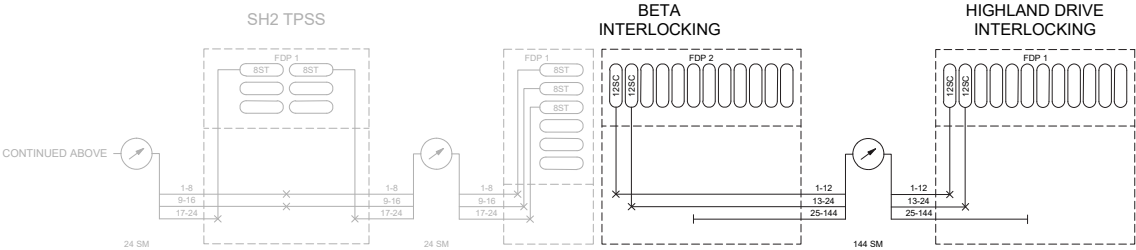
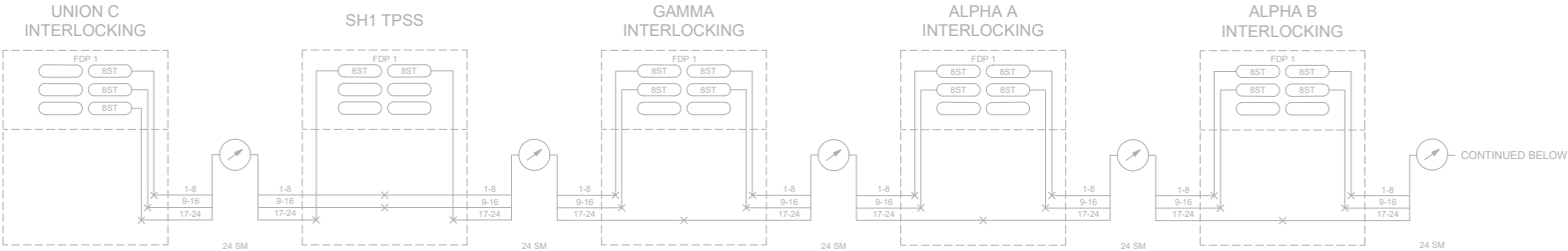
Submitted Date
01-16-26

UTA Contract No.
24-03849

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:**
- SEE FIBER ALLOCATION TABLES ON SHEET Y3803 & Y3804 FOR FIBER DISTRIBUTION PANEL TERMINATION DETAILS.
 - GRAY ITEMS INDICATE EXISTING.
 - EXISTING FDP FOR 24 SM CABLES ARE 6 PANEL WALL MOUNT STYLE.
 - NEW FDP FOR 144 SM CABLES ARE 12 PANEL RACK MOUNT STYLE.
 - F/O JUMPERS ARE REQUIRED BETWEEN THE NEW AND EXISTING FDP FOR REQUIRED CONNECTIONS.

1/5/2028	REV	DATE	DESCRIPTION
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3			
4			
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		Designed By M.WESTERGARD	S-LINE EXTENSION PROJECT	Issue NTS
		Drawn By K.EFFERTZ		CADD Filename: SL-C-Y-1-802.dwg
		Checked By M.NEALE		Submitted Date 01-16-26
		Approved By Y.LIU		UTA Contract No. 24-03849
Submitted By: _____		Approved By: _____	COMMUNICATIONS SIGNAL FIBER OPTIC CABLE PLAN	Drawing No. Y1802

NOTES:
1. GRAY ITEMS INDICATE EXISTING.

BETA INTERLOCKING - WALL MOUNT FDP 1 (EXISTING)										
CABLE				FIBER DISTRIBUTION PANEL			CONNECTION			
ORIGINATION	TYPE	BUFFER	COLOR	STRAND	PANEL	POSITION	CONNECTION TYPE	LOCAL CONNECTION	FAR END CONNECTION	FAR END LOCATION
WEST TO SHZ TFS8	24 SINGLE-MODE	BLUE	BLUE	1	A	1	ST	RS400 PORT 1	RS400 PORT 2	ALPHA A INTERLOCKING
			ORANGE	2		2	ST			
			GREEN	3		3	ST			
			BROWN	4		4	ST			
			SLATE	5		5	ST			
			WHITE	6		6	ST			
			RED	7		7	ST	PATCHCORD TO FDP 2 PORTS 5/6	RS400 PORT 2	ALPHA B INTERLOCKING
			BLACK	8		8	ST			
			YELLOW	9		9	ST			
			VIOLET	10		10	ST			
			ROSE	11		11	ST			
			AQUA	12		12	ST			
		ORANGE	BLUE	13	B	13	ST	VHLC PORT B	VHLC PORT D	ALPHA B INTERLOCKING
			ORANGE	14		14	ST			
			GREEN	15		15	ST			
			BROWN	16		16	ST			
			SLATE	17		17	ST			
			WHITE	18		18	ST			
			RED	19		19	ST			
			BLACK	20		20	ST			
			YELLOW	21		21	ST			
			VIOLET	22		22	ST			
			ROSE	23		23	ST			
			AQUA	24		24	ST			

BETA INTERLOCKING - RACK MOUNT FDP 2 (NEW)										
CABLE				FIBER DISTRIBUTION PANEL			CONNECTION			
ORIGINATION	TYPE	BUFFER	COLOR	STRAND	PANEL	POSITION	CONNECTION TYPE	LOCAL CONNECTION	FAR END CONNECTION	FAR END LOCATION
EAST TO HIGHLAND DRIVE INTERLOCKING	144 SINGLE-MODE	BLUE	BLUE	1	A	1	SC	RS400 PORT 2	RS400 PORT 1	HIGHLAND DRIVE INTERLOCKING
			ORANGE	2		2	SC			
			GREEN	3		3	SC			
			BROWN	4		4	SC			
			SLATE	5		5	SC	PATCHCORD TO FDP 1 PORTS 5/6	RS400 PORT 2	HIGHLAND DRIVE INTERLOCKING
			WHITE	6		6	SC			
			RED	7		7	SC			
			BLACK	8		8	SC			
			YELLOW	9		9	SC	VHLC PORT D	ELECTROLOGIX SERIAL PORT SLOT 1	HIGHLAND DRIVE INTERLOCKING
			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	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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1/5/2028

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REV	DATE	Description	



UTAH TRANSIT AUTHORITY

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 BETA INTERLOCKING
FIBER ALLOCATION TABLE

State: NTS

CADD Filename: SL-C-Y-3-803.dwg

Submittal Date: 01-16-26

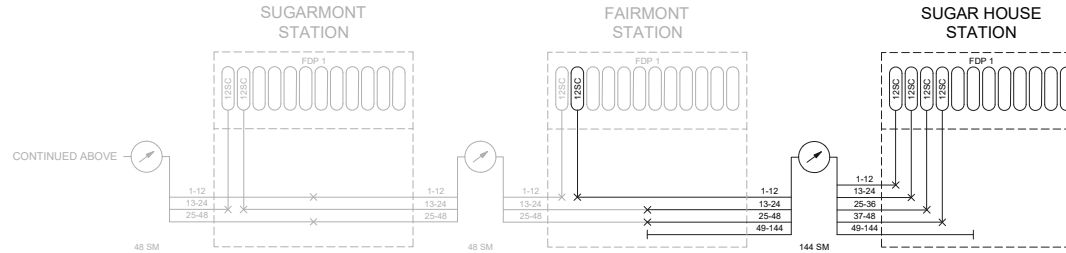
UTA Contract No.: 24-03849

Drawing No.: Y3803

Sheet No.:

15/05/2018 </
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700 EAST STATION



1. SEE FIBER ALLOCATION TABLES ON SHEET Y3811 & Y3812 FOR FIBER DISTRIBUTION PANEL TERMINATION DETAILS.
2. GRAY ITEMS INDICATE EXISTING.
3. NEW FDP FOR 144 SM CABLES ARE 12 PANEL RACK MOUNT STYLE.
4. F/O JUMPERS ARE REQUIRED BETWEEN THE NEW AND EXISTING FDP FOR REQUIRED CONNECTIONS.

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1/5/2028			
	REV	DATE	Description



Designed By:	M.WESTERGARD
Drawn By:	K.EFFERTZ
Checked By:	M.NEALE
Approved By:	Y.LIU

COMMUNICATIONS
IT FIBER OPTIC
CABLE PLAN

Scale:		NTS	
CADD Filename:		SL-C-Y-1-810.dwg	
Submittal Date		01-16-26	
UTA Contract No.:		24-03849	
Drawing No.:		Y1810	Sheet No.

1. FST DENOTES FIBER BEING FUSION SPLICED THROUGH WITH NO TERMINATIONS INSIDE PANEL.
2. GRAY ITEMS INDICATE EXISTING.

FAIRMONT (MCLELLAND ST.) PCC FDP																				
CABLE					FIBER DISTRIBUTION PANEL			CABLE					FIBER DISTRIBUTION PANEL							
ORIGINATION	TYPE	BUFFER	COLOR	STRAND	PANEL	POSITION	CONNECTION TYPE	ORIGINATION	TYPE	BUFFER	COLOR	STRAND	PANEL	POSITION	CONNECTION TYPE					
WEST TO SUGARMONT (600 E) 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					
		ORANGE	BLUE	13	FST TO F144SM-MCL-1 STRANDS 13-48	BLUE	13			FST TO F48SM-800-1 STRANDS 13-48	ORANGE	14	GREEN	ORANGE	14	UNTERMINATED & COILED IN PANEL	-	-		
			ORANGE	14		ORANGE	15				ORANGE	15								
			GREEN	15		BROWN	16				BROWN	16								
			BROWN	16		SLATE	17				SLATE	17								
			SLATE	17		WHITE	18				WHITE	18								
			WHITE	18		RED	19				RED	19								
			RED	19		BLACK	20				BLACK	20								
			BLACK	20		YELLOW	21				YELLOW	21								
			YELLOW	21		VIOLET	22				VIOLET	22								
			VIOLET	22		ROSE	23				ROSE	23								
			ROSE	23		AQUA	24				AQUA	24								
			GREEN	BLUE		25	BLUE				25	ORANGE		26	ORANGE				26	GREEN
		ORANGE		26	ORANGE	27	BROWN			28	BROWN	28	SLATE	29	SLATE	29				
		GREEN		27	WHITE	30	WHITE			30	WHITE	30	RED	31	RED	31				
		WHITE		29	BLACK	32	BLACK			32	BLACK	32	YELLOW	33	YELLOW	33				
		RED		31	YELLOW	33	VIOLET			34	VIOLET	34	ROSE	35	ROSE	35				
		BLACK		32	ROSE	35	AQUA			36	AQUA	36	BLUE	37	BLUE	37				
		YELLOW		33	BLUE	37	ORANGE			38	ORANGE	38	GREEN	39	GREEN	39				
		VIOLET		34	GREEN	39	BROWN			40	BROWN	40	SLATE	41	SLATE	41				
		ROSE		35	SLATE	41	WHITE			42	WHITE	42	BLACK	44	BLACK	44				
		AQUA		36	RED	43	RED			43	YELLOW	45	YELLOW	45	VIOLET	46				
		BLUE		37	BLACK	44	BLACK			44	ROSE	47	ROSE	47	AQUA	48				
		BROWN		ORANGE	38	ORANGE	39			ORANGE	40	ORANGE	41	ORANGE	42	ORANGE	43	ORANGE	44	ORANGE
			GREEN	39	GREEN	40	GREEN			41	GREEN	42	GREEN	43	GREEN	44	GREEN	45	GREEN	46
			BROWN	40	BROWN	41	BROWN			42	BROWN	43	BROWN	44	BROWN	45	BROWN	46	BROWN	47
			SLATE	41	SLATE	42	SLATE			43	SLATE	44	SLATE	45	SLATE	46	SLATE	47	SLATE	48
			WHITE	42	WHITE	43	WHITE			44	WHITE	45	WHITE	46	WHITE	47	WHITE	48	WHITE	49
			RED	43	RED	44	RED			45	RED	46	RED	47	RED	48	RED	49	RED	50
			BLACK	44	BLACK	45	BLACK			46	BLACK	47	BLACK	48	BLACK	49	BLACK	50	BLACK	51
			YELLOW	45	YELLOW	46	YELLOW			47	YELLOW	48	YELLOW	49	YELLOW	50	YELLOW	51	YELLOW	52
			VIOLET	46	VIOLET	47	VIOLET			48	VIOLET	49	VIOLET	50	VIOLET	51	VIOLET	52	VIOLET	53
			ROSE	47	ROSE	48	ROSE			49	ROSE	50	ROSE	51	ROSE	52	ROSE	53	ROSE	54
			AQUA	48	AQUA	49	AQUA			50	AQUA	51	AQUA	52	AQUA	53	AQUA	54	AQUA	55

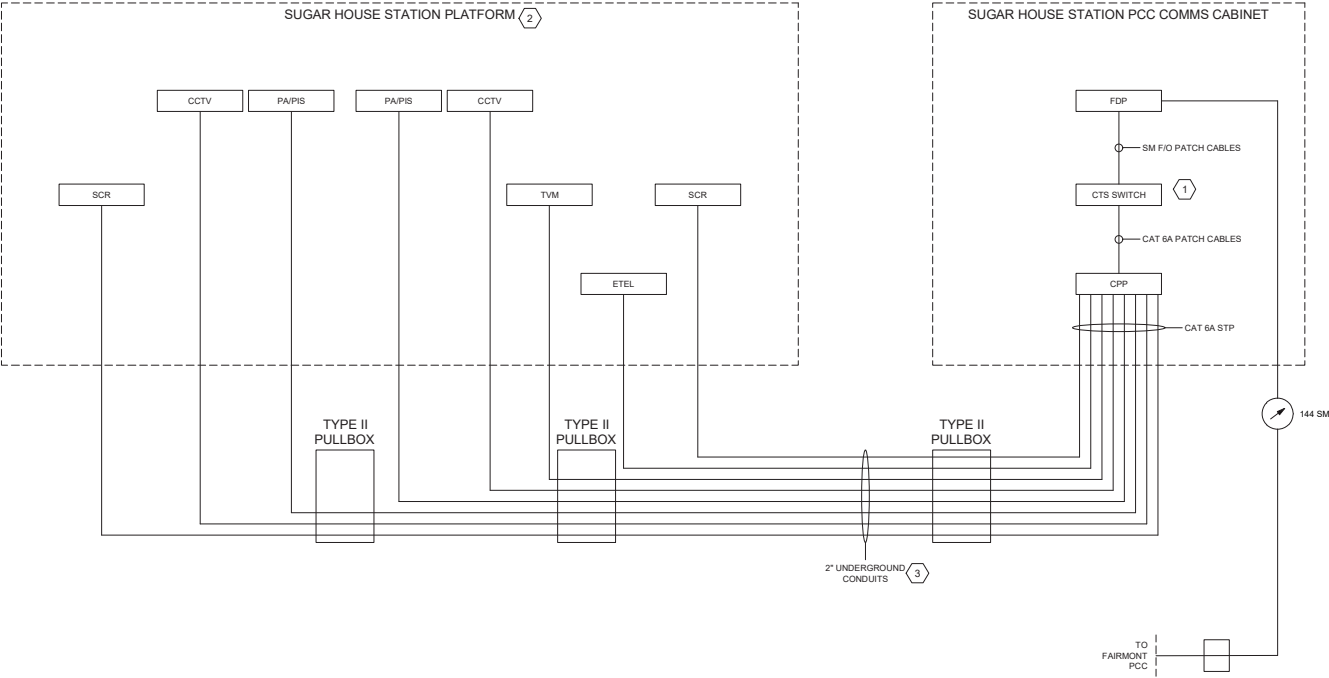
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SUGAR HOUSE PCC FDP								
CABLE					FIBER DISTRIBUTION PANEL			
ORIGINATION	TYPE	BUFFER	COLOR	STRAND	PANEL	POSITION	CONNECTION TYPE	
WEST TO FAIRMONT (MCLELAND ST.) PCC	144 STRAND SINGLE-MODE	BLUE	BLUE	1	A	1	SC	
			ORANGE	2		2	SC	
			GREEN	3		3	SC	
			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				

1/5/2028	△						Designed By	M.WESTERGARD	S-LINE EXTENSION PROJECT	Issue	NTS
	△						Drawn By	K.EFFERTZ		CADD Filename:	SL-C-Y3-812.dwg
	△						Checked By	M.NEALE		Submitted Date	01-16-26
	△						Approved By	Y.LIU		UTA Contract No.	24-03849
	△									Drawing No.	Y3812
REV	DATE	Description	Submitted By:	Approved By:	COMMUNICATIONS SUGAR HOUSE PCC IT FIBER ALLOCATION TABLE						

- NOTES:**
- 1. SEE SHEET P1201 AND P3203 FOR LOCATIONS OF DEVICES ON PLATFORM.
 - 2. SEE ELECTRICAL SHEET E0208 FOR TYPE II PULLBOX INFORMATION.

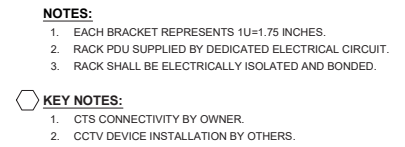
- KEY NOTES:**
- 1. CTS DEVICE & CONNECTIVITY BY OWNER.
 - 2. SCOPE INCLUDES CABLING TO END DEVICES AND PIS INSTALLATION. END DEVICES INCLUDING CCTV, TVM, SCR & ETEL SHALL BE PROVIDED AND INSTALLED BY UTA OR OTHERS.
 - 3. SEE ELECTRICAL SHEET E1205 FOR CONDUIT ROUTING AND DETAILS FROM PCC TO PLATFORM AND END DEVICES.



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1/8/2028

REV	DATE	Description
△		
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 Submitted By: _____	 Approved By: _____	Designed By: M.WESTERGARD	S-LINE EXTENSION PROJECT	Scale: NTS	
		Drawn By: K.EFFERTZ		CADD Filename: SL-C-Y-8-813.dwg	
		Checked By: M.NEALE		Submittal Date: 01-16-26	
		Approved By: Y.LIU		UTA Contract No.: 24-03849	
			COMMUNICATIONS SUGAR HOUSE STATION RISER DIAGRAM	Drawing No.: Y8813	Sheet No.:



C:\Users\jgarcia\OneDrive - UTA\Documents\Drawings\2024\15/2024							Designed By: M.WESTERGARD	S-LINE EXTENSION PROJECT	State: NTS	CADD Filename: SL-C-Y-8-814.dwg	Submitted Date: 01-16-26	UTA Contract No.: 24-03849	Drawing No.: Y8814	Sheet No.:
REV	DATE	Description	Submitted By:	Approved By:										

1. REFER TO PLATFORM ELECTRICAL FOR CONDUIT DETAILS.
2. CABLING TYPE SHALL BE RATED FOR INTENDED PATHWAY.
3. CAT 6A SHIELDING TO BE GROUNDED ON PCC END ONLY TO PREVENT GROUND LOOPS.
4. SURGE SUPPRESSION IN PCC ON CAT 6A CABLES RUN TO ELEVATED STATION CANOPY LOCATIONS.

SUGAR HOUSE STATION COMMUNICATIONS PATCH CABLE SCHEDULE													
CABLE				ROUTE									
#	ID	CONSTRUCTION	TYPE	SOURCE LOCATION	SOURCE DEVICE	TERM.	PORT	PATH TYPE	DESTINATION LOCATION	DESTINATION DEVICE	TERM.	PORT	TAG
9	ETEL	CAT 6A	PATCH JUMPER	PCC RU 11	CP#-01	RJ45	04	NA	PCC RU 07	CTS SWITCH	RJ45	TBD	ETEL - CAT 6A: PCC RU 11CPCP-01 P04 TO PCC RU 07 CTS SWITCH
10	SCR-01	CAT 6A	PATCH JUMPER	PCC RU 11	CP#-01	RJ45	02	NA	PCC RU 07	CTS SWITCH	RJ45	TBD	SCR-01 - CAT 6A: PCC RU 11CPCP-01 P02 TO PCC RU 07 CTS SWITCH
11	SCR-02	CAT 6A	PATCH JUMPER	PCC RU 11	CP#-01	RJ45	03	NA	PCC RU 07	CTS SWITCH	RJ45	TBD	SCR-02 - CAT 6A: PCC RU 11CPCP-01 P03 TO PCC RU 07 CTS SWITCH
12	TVM	CAT 6A	PATCH JUMPER	PCC RU 11	CP#-01	RJ45	01	NA	PCC RU 07	CTS SWITCH	RJ45	TBD	TVM - CAT 6A: PCC RU 11CPCP-01 P01 TO PCC RU 07 CTS SWITCH
13	PIDS/PA	CAT 6A	PATCH JUMPER	PCC RU 11	CP#-01	RJ45	05	NA	PCC RU 07	CTS SWITCH	RJ45	TBD	PIDS/PA - CAT 6A: PCC RU 11CPCP-01 P05 TO PCC RU 07 CTS SWITCH
14	CCTV-01	CAT 6A	PATCH JUMPER	PCC RU 11	CP#-01	RJ45	06	NA	PCC RU 07	CTS SWITCH	RJ45	TBD	CCTV-01 - CAT 6A: PCC RU 11CPCP-01 P06 TO PCC RU 07 CTS SWITCH
15	CCTV-02	CAT 6A	PATCH JUMPER	PCC RU 11	CP#-01	RJ45	07	NA	PCC RU 07	CTS SWITCH	RJ45	TBD	CCTV-02 - CAT 6A: PCC RU 11CPCP-01 P07 TO PCC RU 07 CTS SWITCH
16	CTS-01	DUPLEX SM, F/O	PATCH JUMPER	PCC RU 02	FDP-01	SC	1/2	NA	PCC RU 07	CTS SWITCH	LC	TBD	CTS-01 - DUPLEX SM, F/O: PCC RU 02FDP-01 P1/2 TO PCC RU 07 CTS SWITCH
17	CTS-02	DUPLEX SM, F/O	PATCH JUMPER	PCC RU 02	FDP-01	SC	12/13	NA	PCC RU 07	CTS SWITCH	LC	TBD	CTS-02 - DUPLEX SM, F/O: PCC RU 02FDP-01 P12/13 TO PCC RU 07 CTS SWITCH

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- | | | | |
|----|--|-----|--|
| 1. | REFER TO DWG. Y3216 AND Y3215 FOR DUCTBANK FOUNDATION DETAIL, CONDUIT SCHEDULE, AND PULL BOX DIMENSIONS. | 9. | CONDUIT INTERCONNECTION BETWEEN TRAFFIC CONTROLLER AND PULL BOXES SHALL BE PROVIDED ON TRAFFIC PLANS. |
| 2. | DUCTBANK IS INSTALLED 36" MINIMUM BELOW TOP OF SLAB AND FINISHED GRADE. | 10. | 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. |
| 3. | NOT USED | 11. | TRAIN DETECTION CIRCUIT TRAFFIC CONTROLLER IS INSTALLED INTO COMMUNICATION PULL BOX. CONDUIT CONNECTION TO LOOP TO BE COMPLETED AFTER EMBEDDED TRACK INSTALLED. |
| 4. | DUCTBANK DIMENSIONS CAN VARY. REFER TO DWG. Y4217 AND Y4218 FOR TYPICAL DUCTBANK SECTIONS/ SIZES. | 12. | SIGNAL CONDUIT ROUTED THROUGH UTA COMMUNICATION PULL BOX. |
| 5. | COORDINATE DUCTBANK LOCATION WITH SIGNAL FOUNDATION PLAN. | 13. | CONDUIT INTERCONNECTION BETWEEN PCC AND PULL BOXES SHALL BE PROVIDED ON STATION PLANS. |
| 6. | DUCTBANK TO RUN BETWEEN OCS FOUNDATION AND EDGE OF TRACK SLAB AND ONLY COME INTO THE CENTER FOR MANHOLE PLACEMENT. | 14. | THE DUCTBANK IS RUN UNDER THE TRACK AND OVER THE EXISTING DRAINAGE CANAL. AT STATIONING 212+00, THE MINIMUM DEPTH OF THE DUCTBANK IS 18" BELOW TOP OF SLAB. |
| 7. | CONDUIT BETWEEN JUNCTION BOX AND DETECTION LOOP TO BE DIRECT BURIED. CONDUIT CONNECTION TO BE COMPLETED AFTER EMBEDDED TRACKS INSTALLED. | | |
| 8. | NOT USED. | | |



Approved By: _____

S-LINE EXTENSION PROJECT

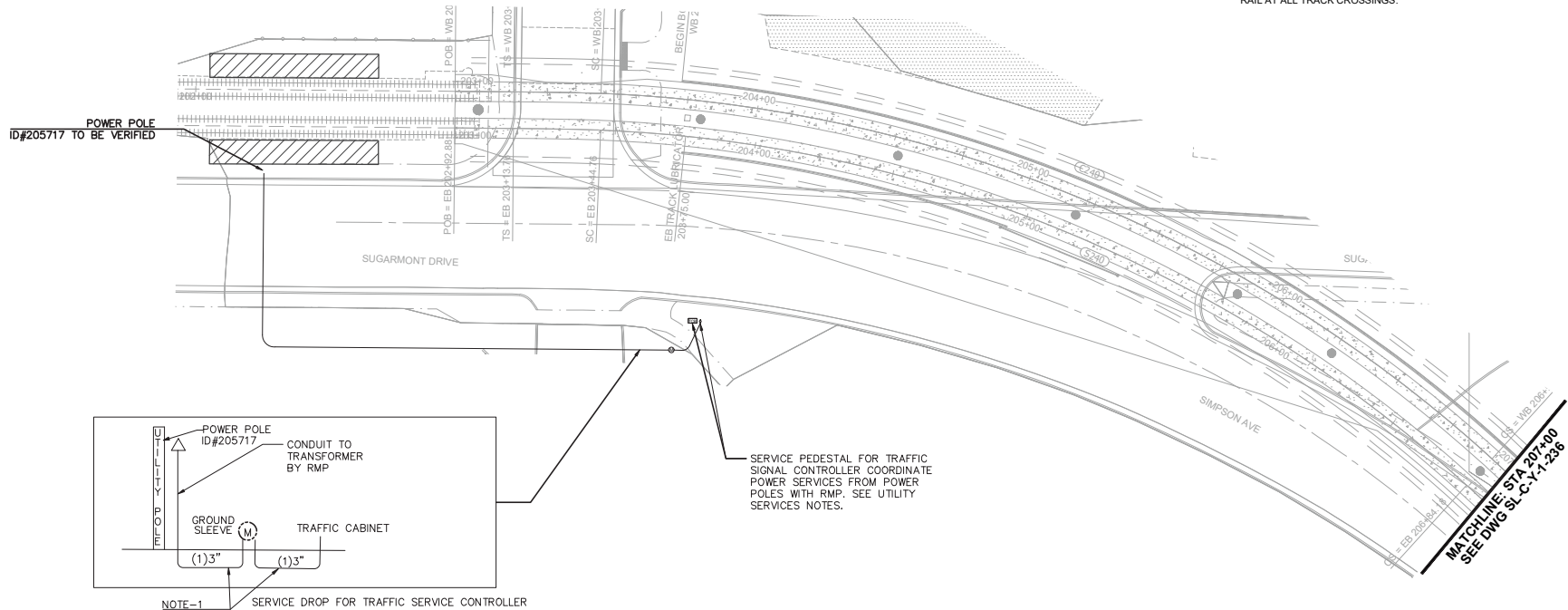
DUCTBANK PLAN
WB STA 212+00 TO WB STA 215+88.5

Scale:		1"=20'
CADD Filename:		
SL-C-Y-1-237.dwg		
Submittal Date		
01-16-26		
UTA Contract No.:		
24-03849		
Drawing No.:	Y1237	Sheet No.

1. ONE (1) 3" PVC CONDUIT PROVIDED BY CONTRACTOR. RMP SHALL INSTALL CONDUCTORS.
2. 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.
3. REFER TO TRAFFIC PLANS SHEET SL-C-T-1-1201 FOR DETAILS.
4. SALT LAKE CITY WILL OWN DUCTBANK AND CONDUITS UPON COMPLETION

1. 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.
2. CONTRACTOR INSTALLS RISER AND CONDUITS FROM RMP POLE TO IDENTIFIED LOCATIONS.
3. CONTRACTOR EXCAVATES AS NEEDED FOR GROUND SLEEVE AND SPLICE CABINET INSTALLATION.
4. RMP FURNISHES AND INSTALLS GROUND SLEEVE AND SPLICE CABINET. MINIMUM CLEARANCE IS REQUIRED IN FRONT OF GROUND SLEEVE.
5. CONTRACTOR INSTALLS CONDUITS TO TRANSFORMER LOCATION.
6. RMP FURNISHES AND INSTALLS TRANSFORMER. CONTRACTOR INSTALLS CONDUIT TO METERED LOCATIONS.
7. RMP INSTALLS CONDUCTORS AND MAKES CONNECTIONS TO LINE SIDE OF METER.

1. TRENCH BACKFILL SHALL BE PER SPECIFICATION 02221 AND APWA PLAN NO. 381, UNLESS OTHERWISE NOTED.
2. PIPE ZONE CONSIDERED TO EXTEND 12" ABOVE CONDUITS. SAND FILL SHALL EXTEND 12" ABOVE CONDUITS.
3. NATIVE COMPACTABLE BACKFILL OR 3/4" MINUS BASE ROCK. PEA GRAVEL SHALL NOT BE PLACED IN ANY PART OF THE TRENCH.
4. 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.
5. COMPACT ALL BACKFILL TO A MODIFIED PROCTOR DENSITY OF 95 PERCENT OR GREATER.
6. CONTRACTOR SHALL PROVIDE DEEPER TRENCH AS NECESSARY TO CROSS EXISTING LATERALS. ALTERNATIVELY, CONTRACTOR MAY LOOP WATER SERVICE PER APWA PLAN NO. 542.
7. TOP OF THE SAND FILL SHALL BE 5' MINIMUM BELOW TOP OF RAIL AT ALL TRACK CROSSINGS.



HORIZ SCALE IN FEET

	REV.	DATE	DESCRIPTION

Submitted By: _____

Approved By: _____

Approved By: _____

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 File Name: **SL-C-Y-1238.dwg**

Submitted Date: **01-16-26**

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

Drawing No.: **Y1238**

Sheet No.: _____

HORIZ SCALE IN FEET

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1/10/2023 1:02:02 PM c:\users\jliu\appdata\local\temp\1454071-a-line double track\electrical\slc-y-1-240.dwg

MATCHLINE: STA 212+00
SEE DWG SLC-Y-1-236

NOTES:

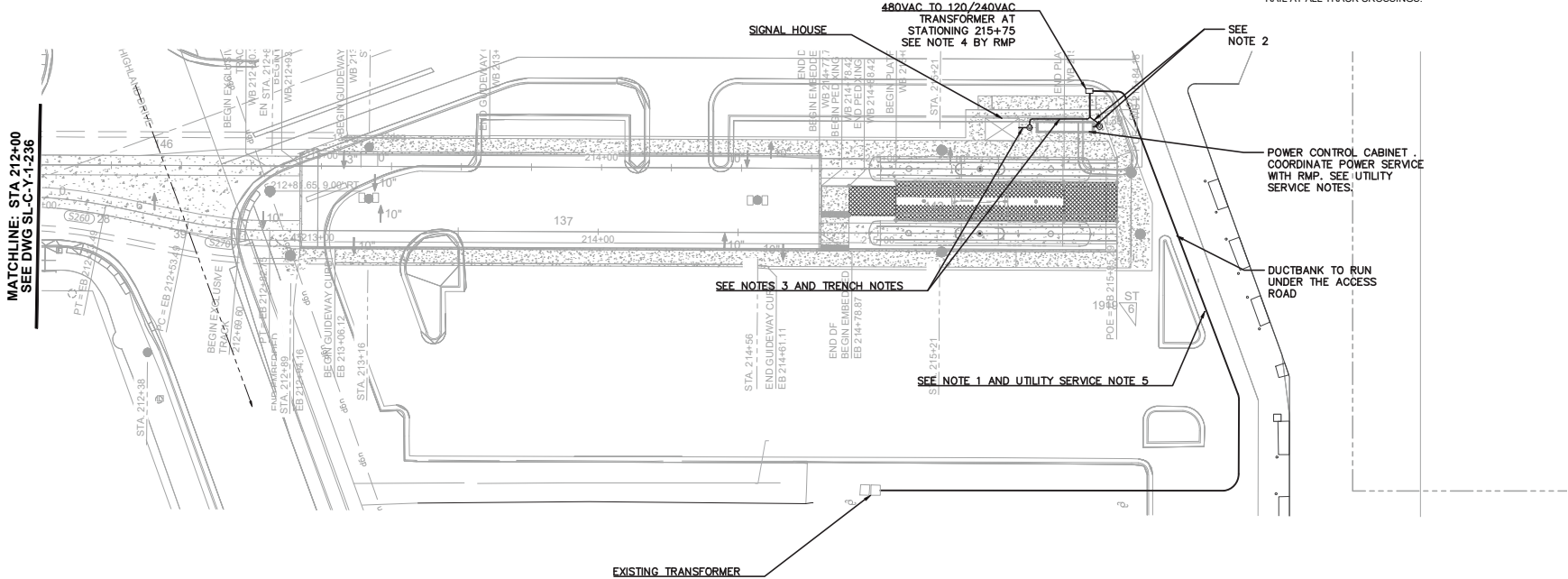
- 1. ONE (1) 4" PVC CONDUIT PROVIDED BY CONTRACTOR. RMP SHALL INSTALL CONDUCTORS.
- 2. FOUR (4) 4" PVC CONDUIT FOR PCC PROVIDED BY CONTRACTOR. RMP SHALL PROVIDE CONDUCTORS.
- 3. TWO (2) 4" PVC CONDUIT PROVIDED BY CONTRACTOR. RMP SHALL INSTALL CONDUCTORS.
- 4. A 480V TO 120/240V SINGLE PHASE TRANSFORMER IS PROVIDED AND INSTALLED BY RMP TO SUPPLY POWER TO SIGNAL HOUSE.

UTILITY SERVICE NOTES:

- 1. 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.
- 2. CONTRACTOR INSTALLS RISER AND CONDUITS FROM RMP POLE TO IDENTIFIED LOCATIONS.
- 3. CONTRACTOR EXCAVATES AS NEEDED FOR GROUND SLEEVE AND SPLICE CABINET INSTALLATION.
- 4. RMP FURNISHES AND INSTALLS GROUND SLEEVE AND SPLICE CABINET. 10' OF CLEARANCE IS REQUIRED IN FRONT OF GROUND SLEEVE.
- 5. CONTRACTOR INSTALLS CONDUITS TO TRANSFORMER LOCATION.
- 6. NOT USED
- 7. CONTRACTOR INSTALLS CONDUIT TO METERED LOCATIONS.
- 8. RMP INSTALLS CONDUCTORS AND MAKES CONNECTIONS TO LINE SIDE OF METER.

TRENCH NOTES:

- 1. TRENCH BACKFILL SHALL BE PER SPECIFICATION 02221 AND APWA PLAN NO. 381, UNLESS OTHERWISE NOTED.
- 2. PIPE ZONE CONSIDERED TO EXTEND 12" ABOVE CONDUITS. SAND FILL SHALL EXTEND 12" ABOVE CONDUITS.
- 3. NATIVE COMPACTABLE BACKFILL OR 3/4" MINUS BASE ROCK. PEA GRAVEL SHALL NOT BE PLACED IN ANY PART OF THE TRENCH.
- 4. 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.
- 5. COMPACT ALL BACKFILL TO A MODIFIED PROCTOR DENSITY OF 95 PERCENT OR GREATER.
- 6. CONTRACTOR SHALL PROVIDE DEEPER TRENCH AS NECESSARY TO CROSS EXISTING LATERALS. ALTERNATIVELY, CONTRACTOR MAY LOOP WATER SERVICE PER APWA PLAN NO. 542.
- 7. TOP OF THE SAND FILL SHALL BE 5' MINIMUM BELOW TOP OF RAIL AT ALL TRACK CROSSINGS.



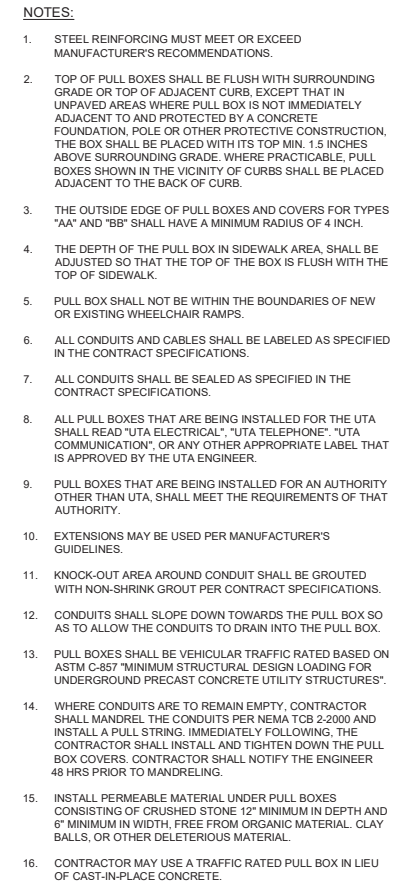
REV	DATE	Description

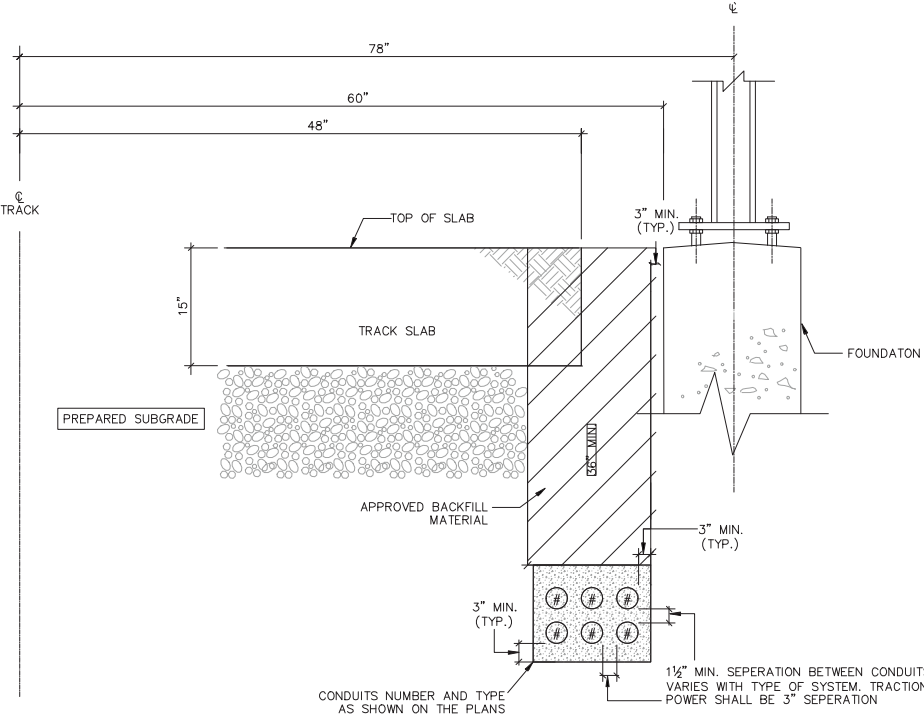


Submitted By: _____ Approved By: _____

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

S-LINE EXTENSION PROJECT		Scale: 1"=20'
ELECTRICAL PLAN WB STA 212+00 TO WB STA 215+85.29		CADD Filename: SLC-Y-1-240.dwg
		Submission Date: 01-16-26
		UTA Contract No.: 24-03849
		Drawing No.: Y1240





1
TYP. DUCT BANK SECTION (LOOKING UP STATION)
N.T.S. (CONCRETE ENCASED)

NOTE:
DUCTBANK DIMENSIONS VARY WITH DUCTBANK CONFIGURATION.

CONDUIT SCHEDULE			
NO.	DESCRIPTION	SCHEDULE SIZE	REMARKS
1	TRACTION POWER POSITIVE	4	
2	TRACTION POWER POSITIVE + SPARE	4	
3	TRACTION POWER NEGATIVE	4	
4	TRACTION POWER NEGATIVE + SPARE	4	
5	UTILITY FEEDER	6	
6	UTILITY FEEDER + SPARE	6	
7	SYSTEMWIDE COMMUNICATIONS	2	
8	SYSTEMWIDE COMMUNICATIONS + SPARE	2	
9	SYSTEMWIDE COMMUNICATIONS	10	
10	COMMUNICATIONS + SPARE	2	
11	SYSTEMWIDE DUCTBANK	4	
12	SYSTEMWIDE DUCTBANK + SPARE	4	
13	TRACK CIRCUITS	2	
14	MAINLINE SIGNALS	3	
15	WAYSIDE PUMP FEEDS ROUTE SIGNAL	3	
16	MAINLINE SWITCH MACHINE	4	
17	MAINLINE SWITCH MECHANISM	3	
18	STREET LIGHTS SIGNALS	3	
19	TRAFFIC SIGNAL	3	
20	UDOT SIGNAL	3	OTHER
21	MAINLINE SWITCH COILS	2	

*UNLESS OTHERWISE NOTED CONDUIT SCHEDULE ARE FOR GENERAL USE. DISREGARD ITEMS WHICH ARE NOT USED ON DRAWING.

NOTE:
1. SCHEDULE 40 1-1/2" CONDUIT SHALL BE COLOR CODED RED STRIPE ON BLACK, BLACK, ORANGE, AND GREY.

1/10/2024
c:\users\jliu\appdata\local\temp\154971-a-line double track section (looking up station) sheet 1 of 2.dwg

REV	DATE	Description



Submitted By: _____ Approved By: _____

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

S-LINE EXTENSION PROJECT

SYSTEMWIDE RACEWAY
DETAILS AND SCHEDULE

Sheet No. Y3216	Drawn By Y3216
Submitted Date 01-16-26	UTA Contract No. 24-03849
CADD Filename SL-C-Y-3216.dwg	State AS SHOWN

4-1 $\frac{1}{2}$ " CONDUITS

4-1 1/2" CONDUITS
1-2" CONDUIT

4-1 $\frac{1}{2}$ " CONDUITS
1-3" CONDUIT

4-1 $\frac{1}{2}$ " CONDUITS
1-2" CONDUIT
1-3" CONDUIT

4-1 1/2" CONDUITS
2-2" CONDUIT
5-3" CONDUIT

4-1 $\frac{1}{2}$ " CONDUITS
2-3" CONDUIT

4-1 $\frac{1}{2}$ " CONDUITS
2-2" CONDUIT
1-3" CONDUIT

4-1 $\frac{1}{2}$ " CONDUITS
2-2" CONDUIT
2-3" CONDUIT

4-1 $\frac{1}{2}$ " CONDUITS
1-2" CONDUIT
2-3" CONDUIT

6-2" CONDUITS

    			
10/20/26	REV	DATE	Description



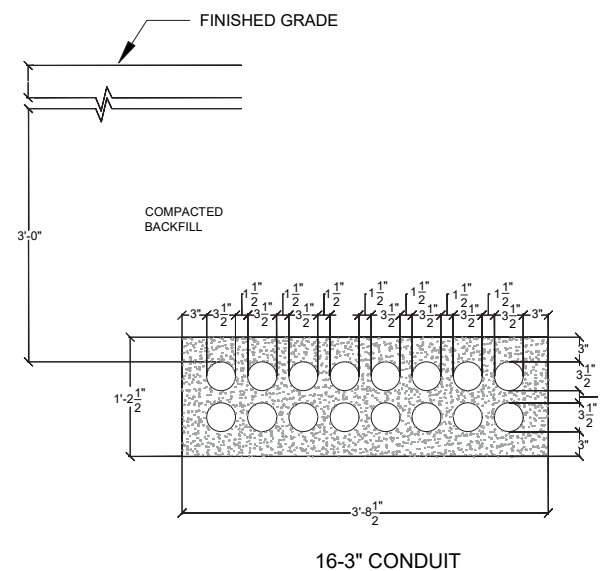
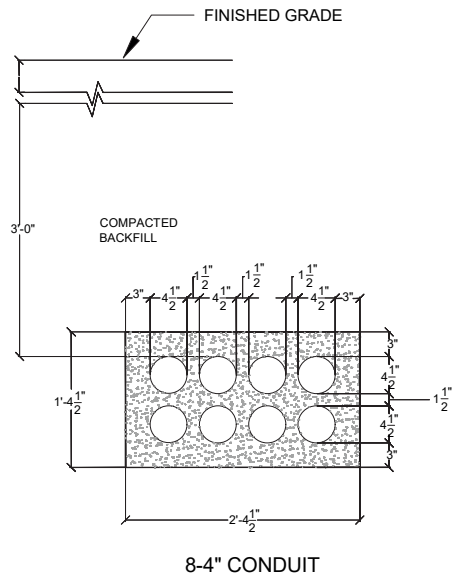
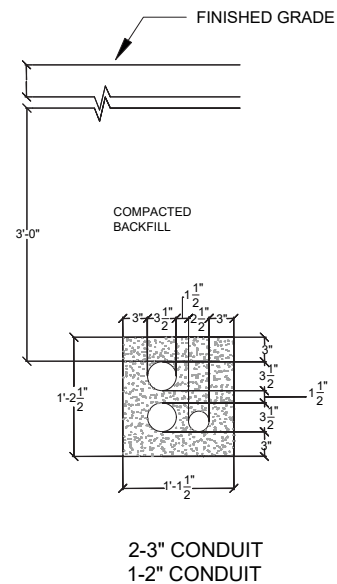
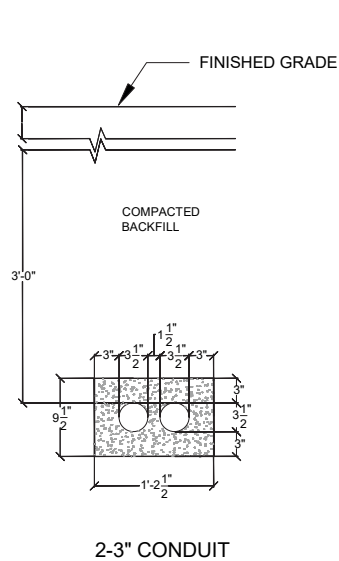
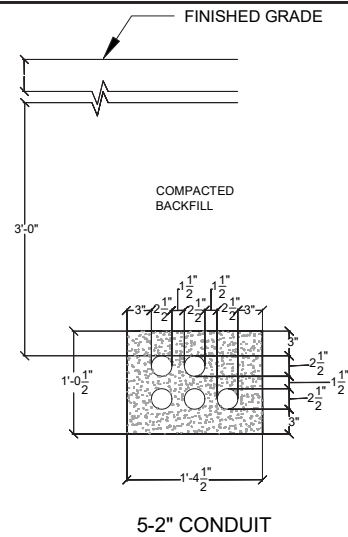
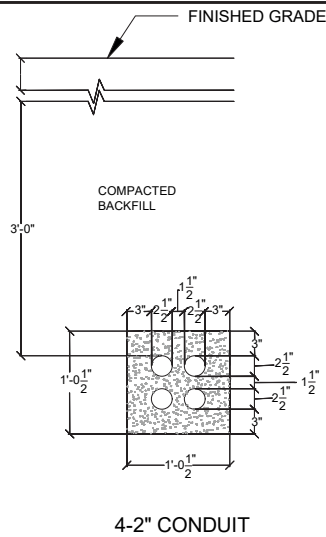
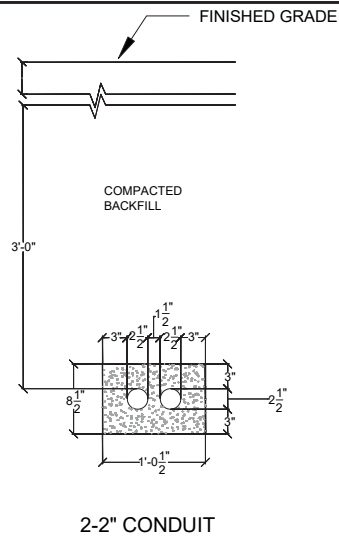
Designed By:	A.JAIN
Drawn By:	A.JAIN
Checked By:	D.DUZAN
Approved By:	Y.LIU

S-LINE EXTENSION PROJECT

SYSTEMWIDE ELECTRICAL
RACEWAY SECTIONS
SHEET-1

Scale:		AS SHOWN	
CADD Filename:		SL-C-Y-4-217.dwg	
Submittal Date		01-16-26	
UTA Contract No.:		24-03849	
Drawing No.:		Y4217	
		Sheet No.	

c:\users\h1m1m1\appdata\local\temp\145671-a line double track section (Rev.4) design.mxd 27 electrical sheets\sl-c-y-4218.dwg 1/16/2026



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△		
△		
REV	DATE	Description



Submitted By: _____



Approved By: _____

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

S-LINE EXTENSION PROJECT

SYSTEMWIDE ELECTRICAL
RACEWAY SECTIONS
SHEET-2

Scale	AS SHOWN
CADD Filename:	SL-C-Y-4218.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Y4218
Sheet No.	



1. WHERE CROSSING UNDER TRACK, TOP OF DUCT BANKS SHALL BE 4'-6" MIN BELOW TOP OF PAVED TRACK UNLESS OTHERWISE INDICATED.
2. TRANSITION FROM PULL BOX ENTRANCE TO NORMAL DEPTH AS SHOWN ON DUCT BANK SECTIONS SHALL BE MADE WITH LONG CONDUIT SWEEPS.
3. MINIMUM DIMENSIONS DO NOT APPLY AT CROSSINGS UNDER UTILITY PIPES.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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1. ITEMS IN BOLD ARE NEW DEVICE, AND ITEMS IN GRAY ARE EXISTING TO REMAIN.
 2. REFER TO SHEET Y1243 FOR DETAILED TRENCH CROSS SECTIONS.
- KEY NOTES:**
1. RMP SHALL BE RESPONSIBLE FOR PROVIDING INCOMING POWER FEED. NEW CONDUITS SHALL BE TIED INTO EXISTING 6" CONDUIT.
 2. RELATED WIRES SHALL BE REMOVED BY RMP.
 3. REFER TO SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES - STREET LIGHTING STANDARDS "STREET LIGHT PULL BOX DETAILS AND STREET LIGHT LOCATION AND WIRE SPECIFICATIONS" FOR PULL BOX DETAILS.
 4. REFER TO SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES - STREET LIGHTING STANDARDS CS4 "STREET LIGHT UTILITY TRENCH SECTION DETAIL" FOR HIGH VOLTAGE CABLE AND FIBER OPTIC JOINT USE TRENCH DETAIL.
 5. NEW FEEDER CABLE FROM RMP SHALL FEED THE EXISTING POWER POLE, WHICH WILL BE UTILIZED TO FEED THE ADJACENT AREA.
 6. EXISTING SERVICE PEDESTAL WILL BE FED BY NEW UNDERGROUND FEEDER CABLE FROM POWER POLE ACROSS STREET.
 7. VAULT SIF# 8004414 & SLEEVE #7999125.
 8. VAULT SIF# 7992596 AT PT 30.
 9. CONNECT TO THE EXISTING BOX.
 10. ABANDON COMCAST AND MCI/VERIZON IN PLACE
 11. THIS CONDUIT RUN NEEDS TO BE PLACED UNDER THE NEW SIDEWALK, A MINIMUM OF 10 LF FROM PROPOSED CS POLE FOUNDATIONS.
 12. PLACE ALL JUNCTION BOXES, HAND HOLES, AND MANHOLES A MINIMUM OF 10 LF FROM CENTERLINE(S) OF PROPOSED TRACKS.
 13. REFER TO SHEET Y1243 FOR DETAILED TRENCH CROSS SECTIONS.

	PROPOSED 6" PVC SCHEDULE 40 DIRECTLY BURIED CONDUIT WITH 3/4"X250KCMIL+1"X250KCMIL
	PROPOSED ELECTRICAL PULL BOX
	PROPOSED 4" PVC SCHEDULE 40 CONDUIT FOR FIBER OPTICS
	PROPOSED 2.25" PVC SCHEDULE 40 CONDUIT FOR COMCAST FIBER OPTICS



15/02/26	REV	DATE	Description



Submitted By:

Approved By: _____

Designed By:	D.TREADWELL
Drawn By:	X.LIU
Checked By:	Y.LIU
Approved By:	Y.LIU

RMP UTILITY RELOCATION PLAN

Scale:		SCALE OF DWG
CADD Filename:		Y1241.dwg
Submital Date		01-16-26
UTA Contract No.:		24-03849
Drawing No.:	Y1241	Sheet No.



1. ITEMS IN BOLD ARE NEW DEVICE, AND ITEMS IN GRAY ARE EXISTING TO REMAIN.
2. 2/C#10+1/C#10G CIRCUIT WILL BE UTILIZED TO FEED EACH NEW POLE LIGHTING.

KEY NOTES:

1. BUILDINGS WILL BE DEMOLISHED.
2. TRAFFIC CONTROL BOX (TCB) WILL BE UTILIZED TO FEED NEW DECORATIVE STREET LIGHTS.
3. 2" PVC CONDUIT DIRECTLY BURIED BELOW THE GROUND. THE CONDUIT SHALL BE BURIED AT LEAST 24" TO THE TOP OF THE GROUND. REFER TO SALT LAKE CITY PUBLIC UTILITIES - STREET LIGHTING STANDARDS CS4 FOR DETAILS.
4. PULL BOX SHALL BE PREPARED FOR EACH NEW LIGHTING POLE. REFER TO SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES SHEET CS5 "TERMINAL POLE DETAILS" FOR DETAILS.
5. NEW PROPOSED POLE LIGHTING CIRCUIT SHALL BE TIED TO THE EXISTING STREET LIGHT CIRCUIT.
6. STREETLIGHT PER SALT LAKE CITY PUBLIC UTILITIES STREET LIGHTING STANDARD DRAWING SL-17. CONCRETE OR DIRECT BURY FOUNDATION PER STANDARD DRAWING CS-3 AND MANUFACTURES RECOMMENDATIONS.
7. EXISTING STREETLIGHT TO BE REMOVED. SEE SHEETS C4001 AND C4002.
8. EXISTING LIGHT TO BE REMOVED.

LEGEND

(EX)	EXISTING STREET LIGHT
D1	PROPOSED STREET LIGHT

Lighting Schedule		
ID	Volt (V)	Model
D1	120 to 277	Acuity Holophane Esplanade ESL3 P40S30KMVOLT.TTG3 QSM BKPR7 A0 PCLL L30 or Equivalent



    			
15/03/26	REV	DATE	Description

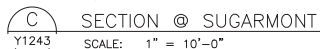
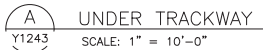


UTA 
UTAH TRANSIT AUTHORITY

Designed By:	X.LIU
Drawn By:	X.LIU
Checked By:	Y.LIU
Approved By:	Y.LIU

STREET LIGHTING PLAN

Scale:		SCALE OF DWG
CADD Filename:		Y1242.dwg
Submital Date		01-16-26
UTA Contract No.:		24-03849
Drawing No.:	Y1242	Sheet No.



- SECTION @ 1100E CROSSING
SCALE: 1" = 10'-0"

    			
12/23/26	REV	DATE	Description



Submitted By:

Approved By: _____

Designed By:	D.TREADWELL
Drawn By:	X.LIU
Checked By:	Y.LIU
Approved By:	Y.LIU

TRENCH SECTION

Scale:	
SCALE OF DWG	
CADD Filename:	
Y1243.dwg	
Submital Date	
01-16-26	
UTA Contract No.:	
24-03849	
Drawing No.:	Sheet No.
Y1243	

SIGNALS SYMBOLS



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

                                      				Designed By: J. MITCHELL Drawn By: J. MITCHELL Checked By: C. ORTEGA Approved By: D. NGUYEN	S-LINE EXTENSION PROJECT GENERAL SIGNALS SYMBOLS	Scale: NTS CADD File Name: SL-C-Z-0-001.dwg Submittal Date: 01-16-26 UTA Contract No.: 24-03849 Drawing No.: Z0001	Sheet No.:
	REV. DATE Description	Submitted By: _____	Approved By: _____				

SIGNALS ABBREVIATIONS

AC	AIR CONDITIONING OR ALTERNATING CURRENT	PP	PLATFORM PRIORITY
AFO	AUDIO FREQUENCY OVERLAY	PS	POINT OF SWITCH
CC	COUPLER CASE	RC	RELAY CASE
CL	CENTERLINE	RS	ROUTE SELECTOR
DISC	DISCONNECT	SM	SINGLE MODE FIBER OPTIC CABLE
EOP	END OF PLATFORM	SS	SUBSTATION
GS	GALVANIZED STEEL	SW	SWITCH OR SWITCH MACHINE
HSE	HOUSE	SIG	SIGNAL
IJ	INSULATED JOINT	STA	STATION
JB	JUNCTION BOX	TK	TRACK
KHZ	KILOHERTZ	TOR	TOP OF RAIL
LED	LIGHT EMITTING DIODE	TPSS	TRACTION POWER SUBSTATION
LRT	LIGHT RAIL TRANSIT	TW	TWISTED
MIN	MINIMUM	TWPR	TWISTED PAIR
NOM	NOMINAL	TYP	TYPICAL
NTS	NOT TO SCALE	WB	WESTBOUND
OD	OUTSIDE DIAMETER	WS	WHEEL SENSOR
PB	PUSHBUTTON OR PULL BOX	XING	CROSSING
PED	PEDESTRIAN		
POE	END OF PROJECT		

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1/15/2028

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REV	DATE	Description



Submitted By: _____



Approved By: _____

Designed By: J. MITCHELL
Drawn By: J. MITCHELL
Checked By: C. ORTEGA
Approved By: D. NGUYEN

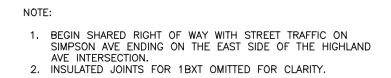
S-LINE EXTENSION PROJECT
GENERAL
SIGNALS ABBREVIATIONS

State NTS
CADD Filename: SL-C-Z-0-002.dwg
Submittal Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Z0002
Sheet No.



1. SYSTEMS REQUIRED FOR STREETCAR SIGNAL PRIORITY, CHECK-IN/CHECK-OUT BY THE MOTOR VEHICLE TRAFFIC SIGNAL CONTROLLER, AND IMPEDANCE BONDS ARE NOT SHOWN.
2. SIGNAL AND TRACK CIRCUIT NAMES AT BETA INTERLOCKING REVISED PER 07/04/2013 IN SERVICE CIRCUIT PLANS.
3. INSULATED JOINTS AT WB 202+73 AND WB 202+74 ARE REUSED. INSULATED JOINT SYMBOL CHANGED TO SHOW THAT INSULATED JOINTS WILL NOT BE END JOINTS AFTER CONSTRUCTION.

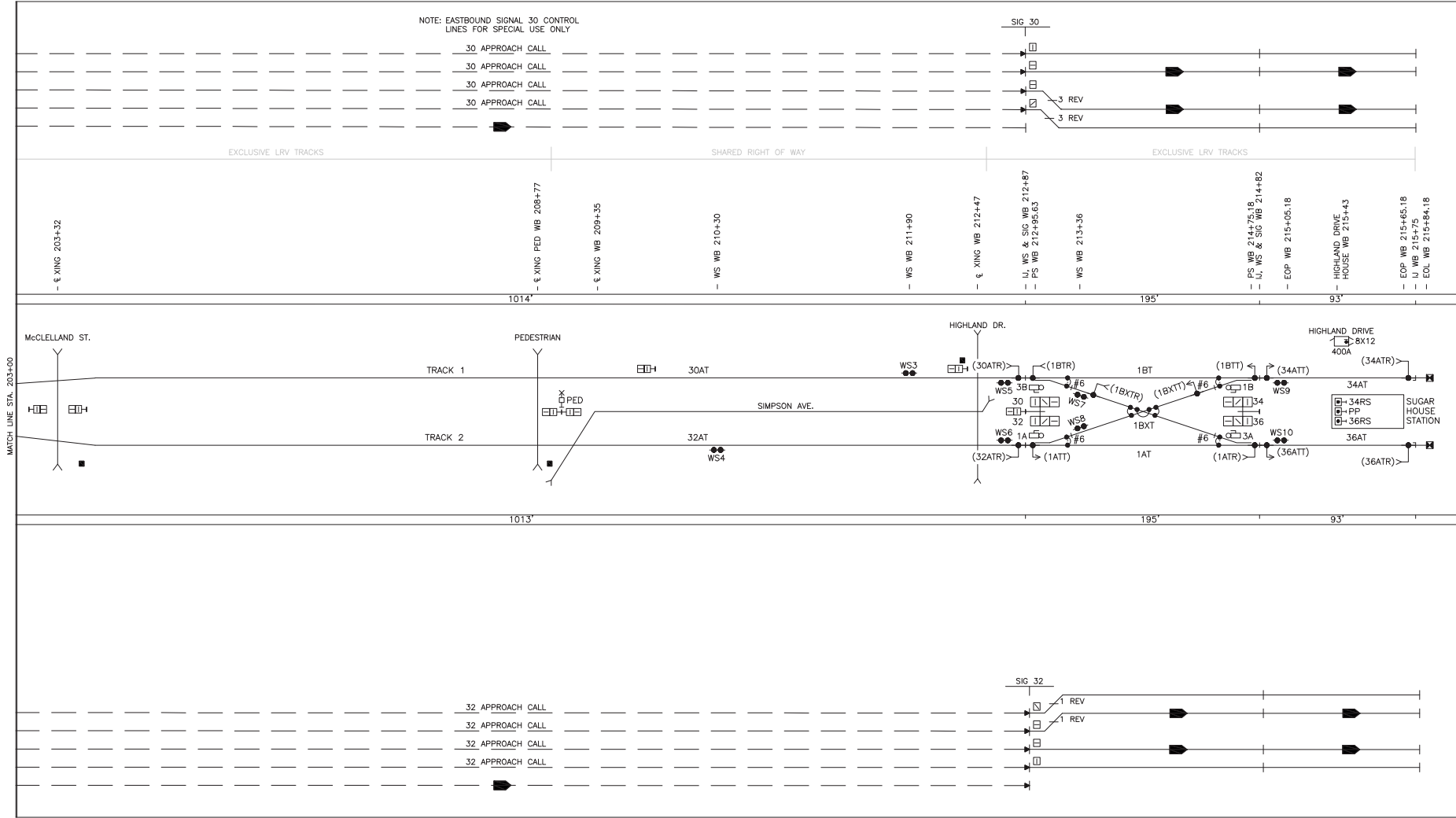
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					Designated By: C. ORTEGA Drawn By: C. ORTEGA Checked By: J. MITCHELL Approved By: D. NGUYEN	S-LINE EXTENSION PROJECT SIGNALS SYSTEM OVERALL SCHEMATIC WB STA 207+65 TO WB STA 216+00		Title: NTS CADD Filename: SL-C-Z-7-002.dwg Submittal Date: 01-16-26 UTA Contract No.: 24-03849 Drawing No.: Z7002	
	Submitted By: _____		Approved By: _____						
	REV		DATE			Description			



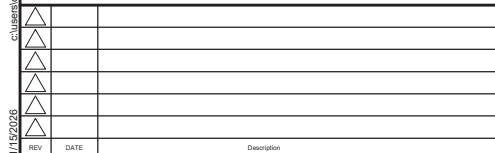
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1/15/2028





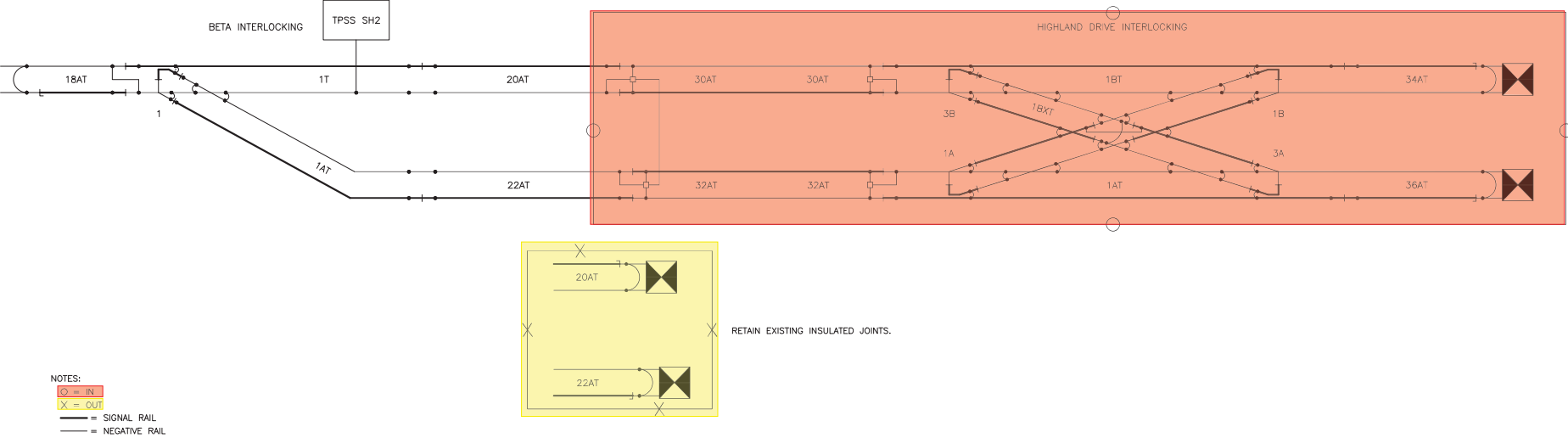
REDRAWN SHEET WCLSHZO007.DWG.
REVISION NOTES ARE FROM ORIGINAL DRAWING.

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Scale:		NTS	
CADD Filename:			
SL-C-Z-7-006.dwg			
Submittal Date:			
01-16-26			
UTA Contract No.:			
24-03849			
Drawing No.:		Sheet No.:	
Z7006			

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11/15/2028



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△		
△		
△		
REV	DATE	Description



Submitted By: _____ Approved By: _____



Designed By	C. ORTEGA
Drawn By	C. ORTEGA
Checked By	J. MITCHELL
Approved By	D. NGUYEN

S-LINE EXTENSION PROJECT

SIGNALS
TRACK CIRCUIT ARRANGEMENT

Scale	NTS
CADD Filename	SL-C-2-7-007.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Z7007
Sheet No.	

ROUTE	SIGNAL REQUESTS	PREVENTS	AUTO ROUTE	APPROACH TRACK	DETECTOR TRACK	SIGNAL ASPECT	LOCKING	SWITCHES LOCKED	SECTIONAL RELEASE	PUSH BUTTON REQUEST	REMARKS
18-20	18	20, 22	NO	18AT	1T	VERTICAL BAR	APPROACH	1N	NO	NO	MODIFY PROGRAM TO REMOVE AUTO ROUTING ON THIS ROUTE
18-22	18	20, 22	YES	18AT	1T, 1AT	DIAGONAL RIGHT BAR	APPROACH	1R	NO	NO	AUTO ROUTING THIS ROUTE ONLY
20-18	20	18, 22	NO	20AT	1T	VERTICAL BAR	APPROACH	1N	NO	YES	
22-18	22	18, 20	NO	22AT	1AT, 1T	DIAGONAL RIGHT BAR	APPROACH	1R	NO	YES	ROUTE REQUESTED FROM LCP OR OCC

LI, SIG & CC WB 199+88

PS WB 200+13

LI & SIG WB 201+90

EDP WB 202+05

EDP WB 202+65

LI TK1 WB 202+73

LI TK2 WB 202+74

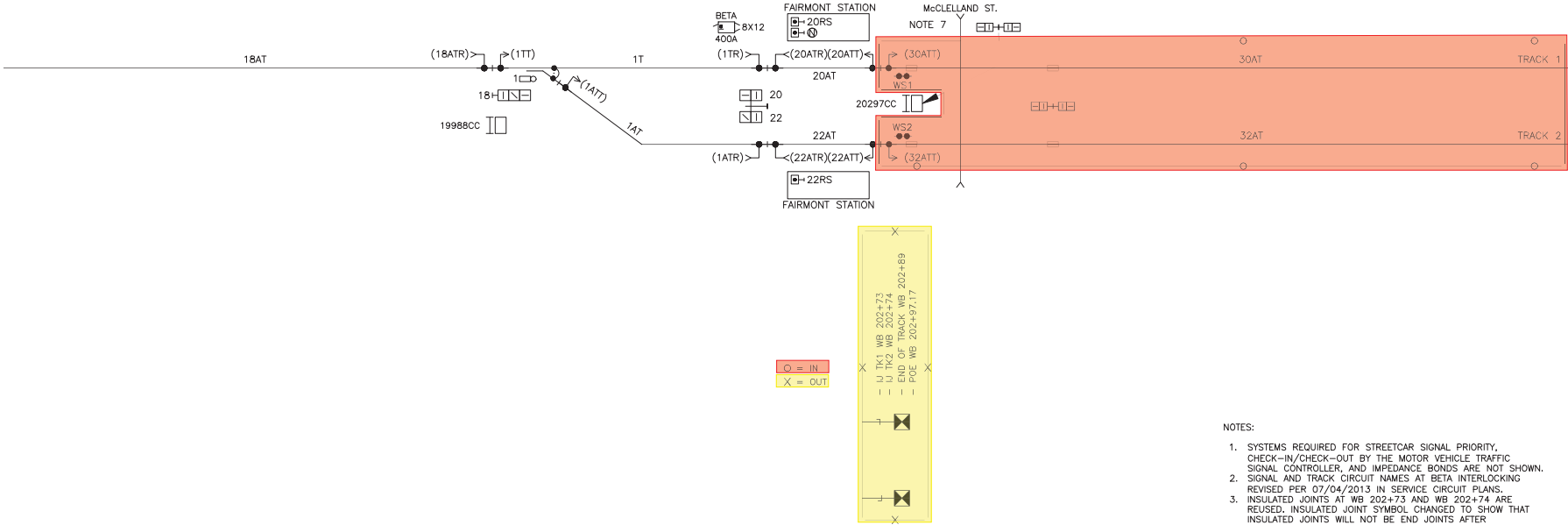
CC WB 203+07

EDP WB 202+97

LRT LOOP-SIG WB 202+97

LI XING WB 203+32

LRT LOOP-SIG WB 204+00



- NOTES:
- SYSTEMS REQUIRED FOR STREETCAR SIGNAL PRIORITY. CHECK-IN/CHECK-OUT BY THE MOTOR VEHICLE TRAFFIC SIGNAL CONTROLLER, AND IMPEDANCE BONDS ARE NOT SHOWN.
 - SIGNAL AND TRACK CIRCUIT NAMES AT BETA INTERLOCKING REVISED PER 07/04/2013 IN SERVICE CIRCUIT PLANS.
 - INSULATED JOINTS AT WB 202+73 AND WB 202+74 ARE REUSED. INSULATED JOINT SYMBOL CHANGED TO SHOW THAT INSULATED JOINTS WILL NOT BE END JOINTS AFTER CONSTRUCTION.

1/15/2028

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REV	DATE	Description

PROFESSIONAL ENGINEER
No. 13791208
CHRISTOPHER ORTEGA
STATE OF UTAH

PKS

Kiewit

U T A

UTAH TRANSIT AUTHORITY

Submitted By:

Approved By:

Designed By:
C. ORTEGA

Drawn By:
C. ORTEGA

Checked By:
J. MITCHELL

Approved By:
D. NGUYEN

S-LINE EXTENSION PROJECT

SIGNALS
ROUTE AND ASPECT CHART
BETA INTERLOCKING

Sheet No.
Z7008

Drawn No.
24-03849

Submittal Date
01-16-26

CADD Filename:
SL-C-27-008.dwg

State
NTS

ROUTE	SIGNAL REQUESTS	PREVENTS	AUTO ROUTE	APPROACH TRACK	DETECTOR TRACK	SIGNAL ASPECT	LOCKING	SWITCHES LOCKED	SECTIONAL RELEASE	PUSH BUTTON REQUEST	REMARKS
30-34	30	34	NO	30AT	1BT	VERTICAL BAR	APPROACH	3N, 1N	NO	NO	
30-36	30	32, 34, 36	NO	30AT	1BT, 1BXT	DIAGONAL RIGHT BAR	APPROACH	3R, 1N	NO	NO	
32-34	32	30, 34, 36	YES*	32AT	1AT, 1BXT	DIAGONAL LEFT BAR	APPROACH	1R, 3N	NO	NO	ROUTE AUTO-CALLED ONLY WITH 36AT OCCUPIED
32-36	32	36	YES	32AT	1AT	VERTICAL BAR	APPROACH	1N, 3N	NO	NO	
34-30	34	30	YES	34AT	1BT	VERTICAL BAR	APPROACH	1N, 3N	NO	YES	
34-32	34	30, 32, 36	NO	34AT	1BT, 1BXT	DIAGONAL LEFT BAR	APPROACH	1R, 3N	NO	NO	
36-30	36	30, 32, 34	YES	36AT	1AT, 1BXT	DIAGONAL RIGHT BAR	APPROACH	3R, 1N	NO	YES	
36-32	36	32	NO	36AT	1AT	VERTICAL BAR	APPROACH	3N, 1N	NO	NO	

DETECTOR LOOP WB 208+46

PEDESTRIAN XING WB 208+77

DETECTOR LOOP WB 209+07

PEDESTRIAN XING WB 209+35

WS WB 210+30

WS WB 211+90

PEDESTRIAN XING WB 212+47

WS & SIG WB 212+87

WS WB 212+95.63

WS WB 213+36

WS WB 214+75.18

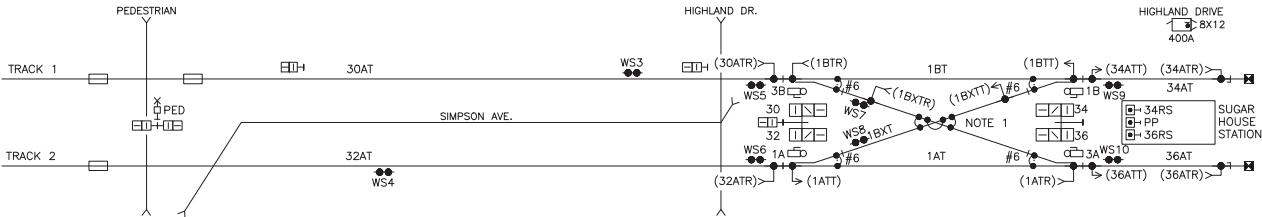
WS & SIG WB 214+82

EDP WB 215+05.18

EDP WB 215+65.18

WS WB 215+75

EDL WB 215+84.18



NOTE:
1. INSULATED JOINTS FOR 1BXT OMITTED FOR CLARITY.

1/15/2028

REV

DATE

Description

PROFESSIONAL ENGINEER

No. 15791208

CHRISTOPHER ORTEGA

STATE OF UTAH

PKS

Kiewit

U T A

UTAH TRANSIT AUTHORITY

Designed By

C. ORTEGA

Drawn By

C. ORTEGA

Checked By

J. MITCHELL

Approved By

D. NGUYEN

S-LINE EXTENSION PROJECT

SIGNALS

ROUTE AND ASPECT CHART

HIGHLAND DRIVE INTERLOCKING

State

NTS

CADD Filename

SL-C-Z-7-009.dwg

Submittal Date

01-16-26

UTA Contract No.

24-03849

Drawing No.

Z7009

Sheet No.



1. REUSE EXISTING BETA SIGNAL HOUSE, SWITCH MACHINES, SIGNALS, INSULATED JOINTS AND COUPLER CASES.
2. NEW CABLE FROM BETA INTERLOCKING HOUSE TO COUPLER CASE 20297CC FOR NEW AUDIO FREQUENCY TRACK CIRCUITS AND WHEEL SENSORS.
3. NEW CONDUIT AND CABLE FROM 20297CC TO TRACK FOR NEW TRACK CONNECTION BOXES.
4. PREPARE FOR FUTURE IMPEDANCE BONDS AT 202+73, BUT DO NOT INSTALL IMPEDANCE BONDS ON THIS PROJECT.
5. RETIRE BUMPING POSTS AT CURRENT END OF LINE.

- _____
 Approved By: _____

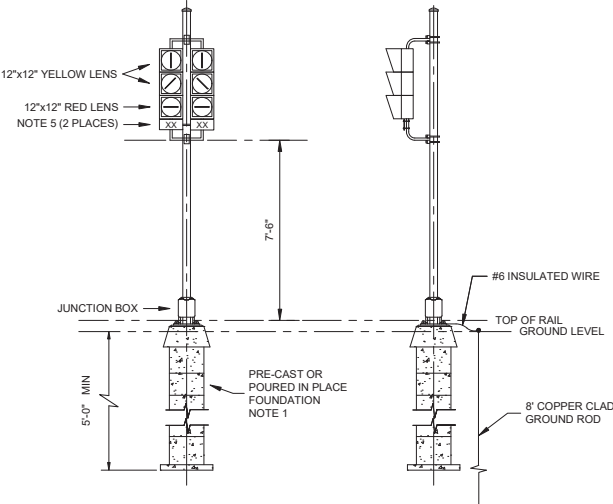
S-LINE EXTENSION PROJECT

SIGNALS TRACK AND CABLE PLANS

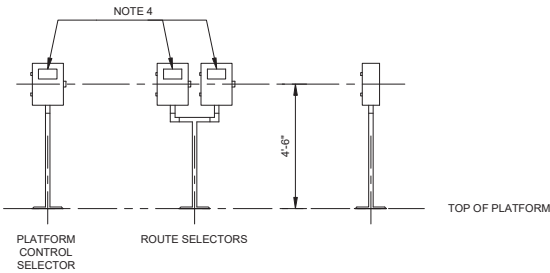
1 OF 2

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Submittal Date	01-16-26	
UTA Contract No.:	24-03849	
Drawing No.:	Z8001	Sheet No.

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1/15/2028

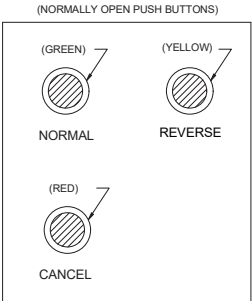


LRV SIGNAL ON STANDARD SIGNAL POLE



PLATFORM CONTROL SELECTOR AND ROUTE SELECTOR DETAIL

- 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.



ROUTE SELECTOR
PUSH BUTTON FACEPLACE

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REV	DATE	Description

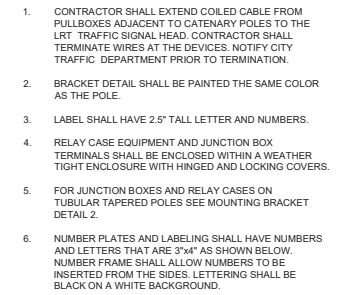


Designed By	J. MITCHELL
Drawn By	J. HOWARD
Checked By	C. ORTEGA
Approved By	D. NGUYEN

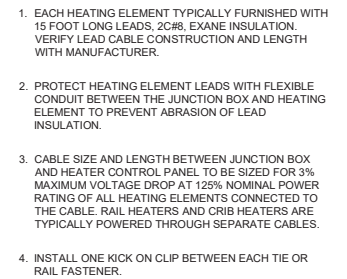
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
SIGNALS WAYSIDE
SIGNALING DETAILS 1 OF 2

State	NTS
CADD Filename	SL-C-Z-3-001.dwg
Submitted Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Z3001
Sheet No.	

Submitted By: _____ Approved By: _____

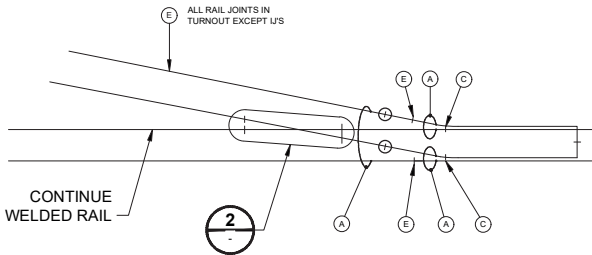


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Submittal Date		01-16-26	
UTA Contract No.:		24-03849	
Drawing No.:		Z3002	Sheet No.

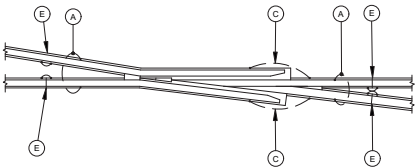


ISOMETRIC VIEW 3
NOT TO SCALE

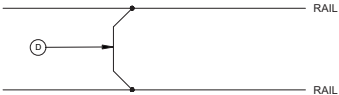
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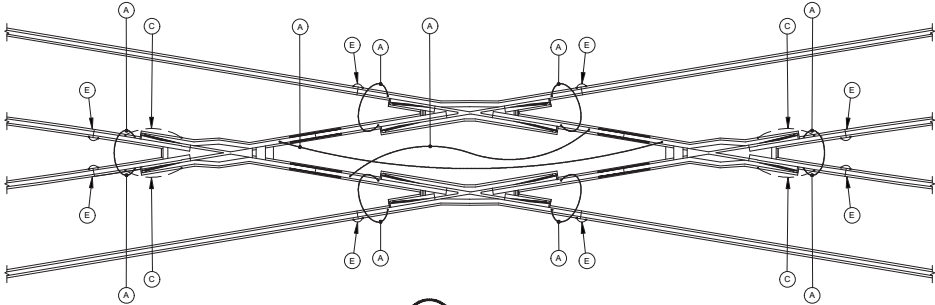
DETAIL 1
TYPICAL POWER BONDING - TURNOUT
MAIN TRACK TO MAIN TRACK



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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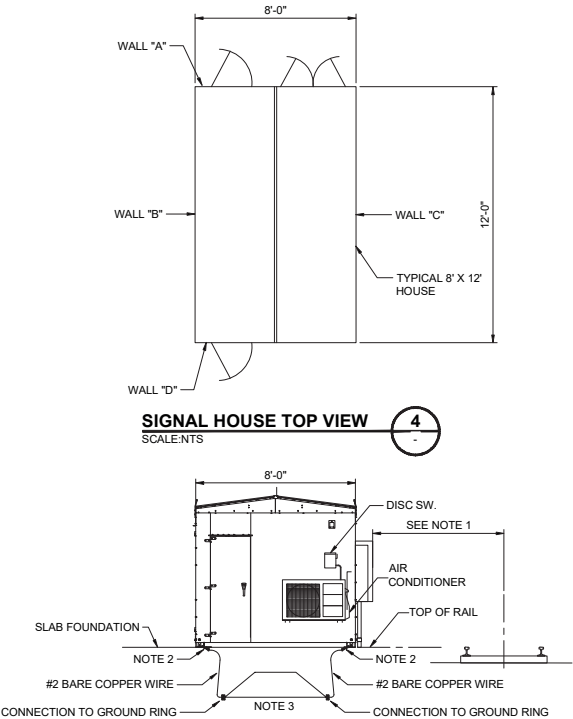


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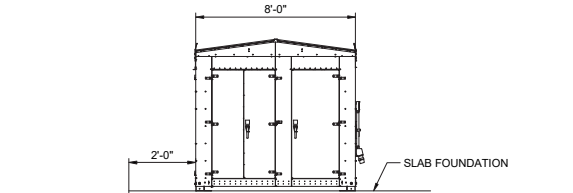
Designed By: J. MITCHELL
Drawn By: J. HOWARD
Checked By: C. ORTEGA
Approved By: D. NGUYEN

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
SIGNAL TYPICAL BONDING DETAILS

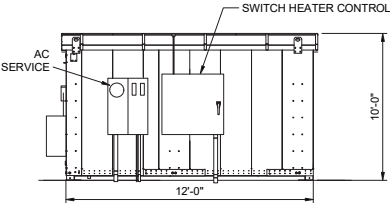
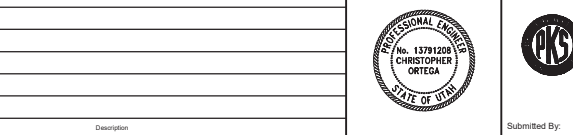
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Submittal Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Z3004
Sheet No.:



WALL ELEVATION "D"
SCALE: NTS



WALL ELEVATION "A"
SCALE: NTS



WALL ELEVATION "C"
SCALE: NTS

- NOTE:**
1. PREFERRED DISTANCE FOR WAYSIDE SIGNAL HOUSE IS 25'-0" FROM CENTER LINE OF NEAREST TRACK.
 2. HOUSE GROUND CONNECTION TO GROUNDING PLATE AT EACH CORNER OF HOUSE. GROUNDING PLATE TO BE BURNDY YGF292N OR EQUIVALENT.
 3. #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



Submitted By: _____

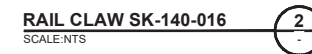
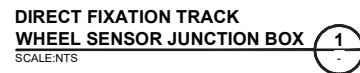


Approved By: _____

Designed By: J. MITCHELL
Drawn By: J. HOWARD
Checked By: C. ORTEGA
Approved By: D. NGUYEN

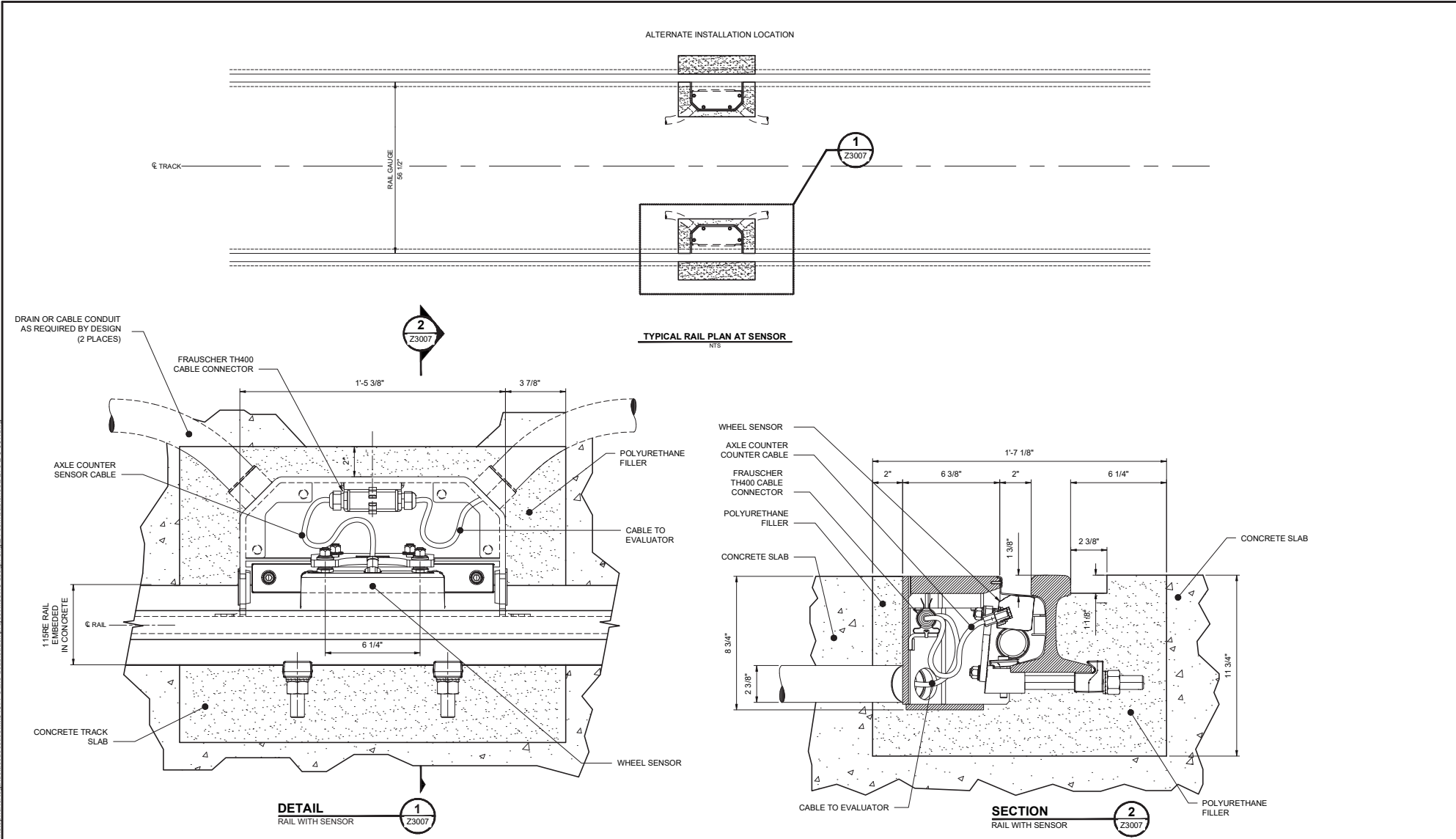
S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
SIGNALS
HOUSE INSTALLATION DETAILS

State: NTS
CADD Filename: SL-C-2-3-005.dwg
Submittal Date: 01-16-26
UTA Contract No.: 24-03849
Drawing No.: Z3005
Sheet No.:



1. NO GROUNDING CONNECTION REQUIRED FOR WHEEL SENSOR INSTALLATION.
2. PROTECTIVE HOSE PER SIGNAL SYSTEM SPECIFICATION.

C-001 PROFESSIONAL ENGINEER No. 15791208 CHRISTOPHER ORTEGA STATE OF UTAH			Kiewit	U T A UTAH TRANSIT AUTHORITY	Designed By: J. MITCHELL	S-LINE EXTENSION PROJECT STANDARD DRAWINGS SIGNALS TYPICAL WHEEL SENSOR INSTALLATION	Sheet: NTS
					Drawn By: J. HOWARD		CADD Filename: SL-C-Z-3-006.dwg
					Checked By: C. ORTEGA		Submitted Date: 01-16-26
					Approved By: D. NGUYEN		UTAH Contract No.: 24-03849
							Drawing No.: Z3006
							Sheet No.: Z3006
REV	DATE	Description	Submitted By:	Approved By:			



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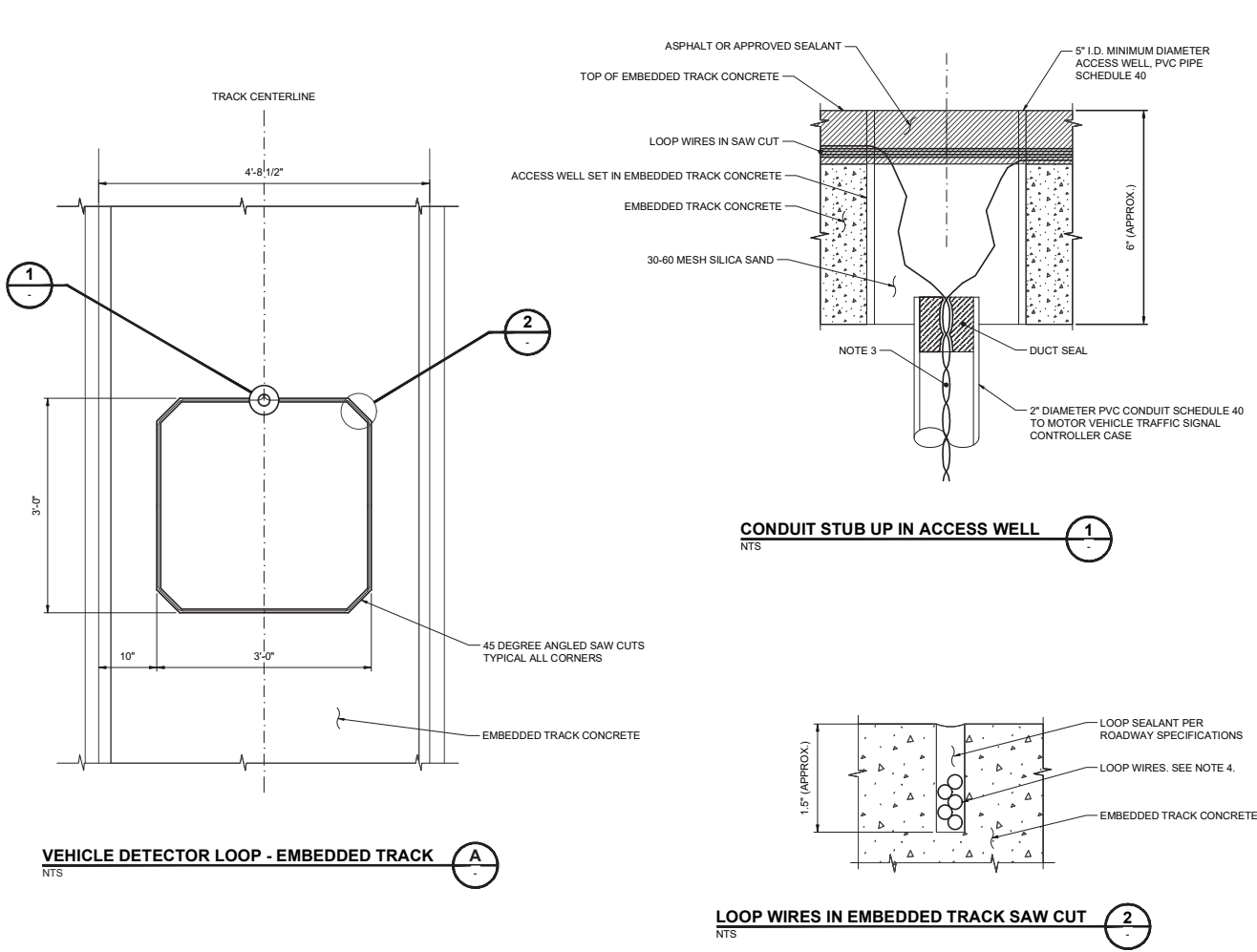


Designed By	J. MITCHELL
Drawn By	J. HOWARD
Checked By	C. ORTEGA
Approved By	D. NGUYEN

S-LINE EXTENSION PROJECT
STANDARD DRAWINGS
SIGNALS
TYPICAL WHEEL SENSOR
EMBEDDED TRACK INSTALLATION

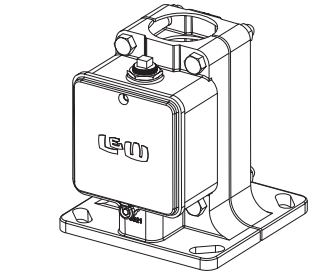
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Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Z3007
Sheet No.	

Submitted By: _____ Approved By: _____

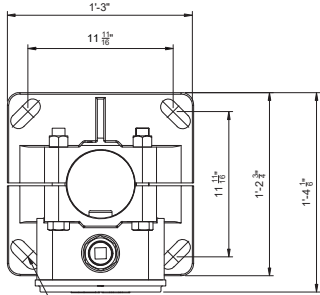


- NOTES:
1. PRIOR TO LOOP INSTALLATION, SUBCONTRACTOR TO COORDINATE WITH ENGINEER FOR EXACT LOCATION OF LIGHT RAIL DETECTOR LOOP PLACEMENT.
 2. SAW CUT GROOVES TO BE FREE OF DEBRIS AND WATER PRIOR TO WIRE INSTALLATION AND SEALING.
 3. LOOP WIRE 1C#14 XHHW OR AS RECOMMENDED PER VEHICLE LOOP DETECTOR MANUFACTURER. 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.

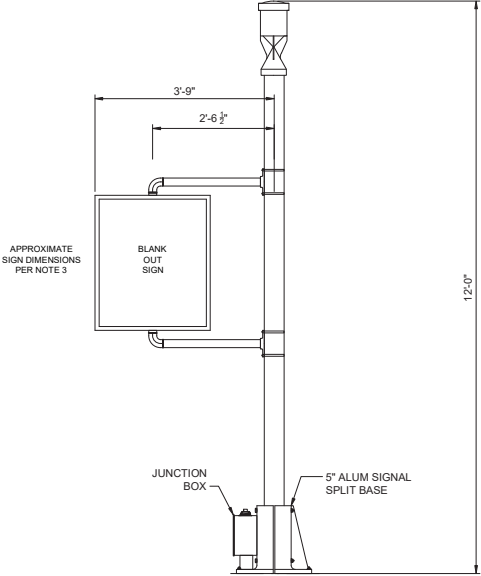
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						Drawn By: J. MITCHELL	CADD Filename: SL-C-Z-3-008.dwg		
						Checked By: C. ORTEGA	Submittal Date: 01-16-26		
						Approved By: D. NGUYEN	UTA Contract No.: 24-03849		
							Drawing No.: Z3008		Sheet No.:



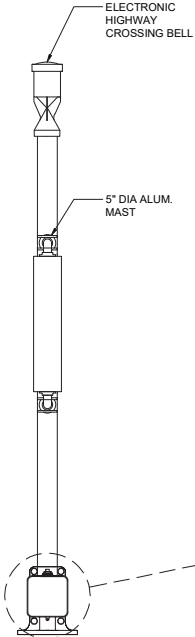
ISOMETRIC VIEW SIGNAL BASE
SCALE: NTS



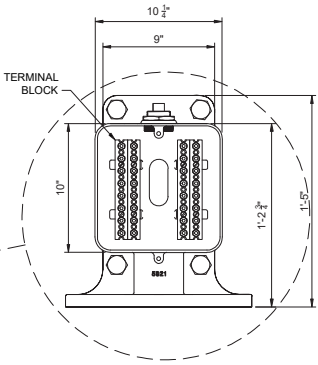
TOP VIEW SIGNAL BASE
SCALE: NTS



PEDESTRIAN CROSSING SIGN
SCALE: NTS



PEDESTRIAN CROSSING SIGN
SCALE: NTS



TERMINAL BLOCK VIEW
SCALE: NTS

- NOTES:**
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.

1/15/2028			
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
PEDESTRIAN CROSSING BLANK OUT SIGN

State	NTS
CADD Filename	SL-C-2-3-009.dwg
Submittal Date	01-16-26
UTA Contract No.	24-03849
Drawing No.	Z3009
Sheet No.	

EXHIBIT C – EMERGENCY CONTACTS

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