

Community Services Department

Planning and Building

SPECIAL USE PERMIT

(see page 7)

SPECIAL USE PERMIT FOR GRADING

(see page 9)

SPECIAL USE PERMIT FOR STABLES

(see page 12)

APPLICATION



Community Services Department
Planning and Building
1001 E. Ninth St., Bldg. A
Reno, NV 89512-2845

Telephone: 775.328.6100

Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Building staff at 775.328.6100.

Project Information		Staff Assigned Case No.: _____	
Project Name:			
Project Description:			
Project Address:			
Project Area (acres or square feet):			
Project Location (with point of reference to major cross streets AND area locator):			
Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
Indicate any previous Washoe County approvals associated with this application: Case No.(s).			
Applicant Information (attach additional sheets if necessary)			
Property Owner:		Professional Consultant:	
Name:		Name:	
Address:		Address:	
Zip:		Zip:	
Phone: Fax:		Phone: Fax:	
Email:		Email:	
Cell: Other:		Cell: Other:	
Contact Person:		Contact Person:	
Applicant/Developer:		Other Persons to be Contacted:	
Name:		Name:	
Address:		Address:	
Zip:		Zip:	
Phone: Fax:		Phone: Fax:	
Email:		Email:	
Cell: Other:		Cell: Other:	
Contact Person:		Contact Person:	
For Office Use Only			
Date Received: Initial:		Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	

Property Owner Affidavit

Applicant Name: Washoe County Community Services Department

The receipt of this application at the time of submittal does not guarantee the application complies with all requirements of the Washoe County Development Code, the Washoe County Master Plan or the applicable area plan, the applicable regulatory zoning, or that the application is deemed complete and will be processed.

STATE OF NEVADA)
)
COUNTY OF WASHOE)

I, DWAYNE SMITH
(please print name)

being duly sworn, depose and say that I am the owner* of the property or properties involved in this application as listed below and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true, and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by members of Planning and Building.

(A separate Affidavit must be provided by each property owner named in the title report.)

Assessor Parcel Number(s): 142-020-06

Printed Name DWAYNE SMITH

Signed [Signature]

Address 1001 E. 9th ST. RENO, NV 89511

Subscribed and sworn to before me this 8 day of December, 2021.

(Notary Stamp)

Lacey Kerfoot

Notary Public in and for said county and state

My commission expires: 01/27/2025



*Owner refers to the following: (Please mark appropriate box.)

- Owner
- Corporate Officer/Partner (Provide copy of record document indicating authority to sign.)
- Power of Attorney (Provide copy of Power of Attorney.)
- Owner Agent (Provide notarized letter from property owner giving legal authority to agent.)
- Property Agent (Provide copy of record document indicating authority to sign.)
- Letter from Government Agency with Stewardship

Special Use Permit Application Supplemental Information

(All required information may be separately attached)

1. What is the project being requested?

Add a deceleration lane in the ROW and approximately 0.4 acres of pavement on the parcel to provide access for a new truck effluent water fill facility at the existing County reclaim water reservoir and pump station site. This project also requests a modification to vary land use standards to modify landscape requirements of

2. Provide a site plan with all existing and proposed structures (e.g. new structures, roadway improvements, utilities, sanitation, water supply, drainage, parking, signs, etc.)
residential buffering by providing for double the required landscaping of 20% of the parcel project area.

See plans for the site layout.

3. What is the intended phasing schedule for the construction and completion of the project?

This project is intended to be constructed in one phase in 2022.

4. What physical characteristics of your location and/or premises are especially suited to deal with the impacts and the intensity of your proposed use?

The site is generally flat for truck access, adjacent to a collector roadway, and has existing effluent infrastructure and matches the existing use.

5. What are the anticipated beneficial aspects or affects your project will have on adjacent properties and the community?

This site will provide a local construction water truck-fill site that provides reclaimed water which will reduce the community need on precious potable water higher value uses than construction, and may also reduce truck traffic in some instances by bringing construction water access closer to where it is needed.

6. What are the anticipated negative impacts or affect your project will have on adjacent properties? How will you mitigate these impacts?

7. Provide specific information on landscaping, parking, type of signs and lighting, and all other code

Two flood lights are specified and will include side shields and occupancy sensors to limit the time that they are on. Only small roadway, as required by MUTCD, and effluent warning signs, as required by NPED permit, are proposed. Landscaping has been developed to shield the minimal above grade improvements from the roadway and adjacent homes. This project is requesting a modification to the required residential landscape buffering. In lieu of one tree every twenty feet of parcel bordering residential parcels this project is providing an additional landscaping above the 20% requirement.

8. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that apply to the area subject to the special use permit request? (If so, please attach a copy.)

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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9. Utilities:

a. Sewer Service	
b. Electrical Service	
c. Telephone Service	
d. LPG or Natural Gas Service	
e. Solid Waste Disposal Service	
f. Cable Television Service	
g. Water Service	

For most uses, Washoe County Code, Chapter 110, Article 422, Water and Sewer Resource Requirements, requires the dedication of water rights to Washoe County. Please indicate the type and quantity of water rights you have available should dedication be required.

h. Permit #		acre-feet per year	
i. Certificate #		acre-feet per year	
j. Surface Claim #		acre-feet per year	
k. Other #		acre-feet per year	

Title of those rights (as filed with the State Engineer in the Division of Water Resources of the Department of Conservation and Natural Resources).

NA

10. Community Services (provided and nearest facility):

a. Fire Station	
b. Health Care Facility	
c. Elementary School	
d. Middle School	
e. High School	
f. Parks	
g. Library	
h. Citifare Bus Stop	

**Special Use Permit Application
for Grading
Supplemental Information**
(All required information may be separately attached)

1. What is the purpose of the grading?

To provide driveway access to and from the fill station pads and grading for fill station pads themselves.

2. How many cubic yards of material are you proposing to excavate on site?

2,500 +/- CY

3. How many square feet of surface of the property are you disturbing?

43,100 +/- SF including new landscaping.

4. How many cubic yards of material are you exporting or importing? If none, how are you managing to balance the work on-site?

684 CY of import for driveway pavement section (AB and AC)

5. Is it possible to develop your property without surpassing the grading thresholds requiring a Special Use Permit? (Explain fully your answer.)

Yes, the work associated with this project does not meet the requirements for a Special Use Permit for grading, see below.

6. Has any portion of the grading shown on the plan been done previously? (If yes, explain the circumstances, the year the work was done, and who completed the work.)

The existing project area is partially developed. Portions of the proposed grading have been done in accordance with the 1996/1997 SUPs that created the access driveway for the existing facility. The the grading plan was strategically developed to closely match existing grades and lie within the existing access way on site.

7. Have you shown all areas on your site plan that are proposed to be disturbed by grading? (If no, explain your answer.)

Yes

8. Can the disturbed area be seen from off-site? If yes, from which directions and which properties or roadways?

Yes, the disturbed area will be slightly visible from Arrowcreek Parkway south of the project area and will be constructed over the existing unpaved road; however the proposed grading is very close to the existing grading and will now be shielded by strategically located landscaping.

9. Could neighboring properties also be served by the proposed access/grading requested (i.e. if you are creating a driveway, would it be used for access to additional neighboring properties)?

No

10. What is the slope (horizontal/vertical) of the cut and fill areas proposed to be? What methods will be used to prevent erosion until the revegetation is established?

The proposed minor fill slope (1'+/-) adjacent to the driveway is 3:1 and there will be a silt fence installed prior to construction at the toe of slope. All existing inlets will be protected using BMPs.

11. Are you planning any berms?

Yes	No	If yes, how tall is the berm at its highest?
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12. If your property slopes and you are leveling a pad for a building, are retaining walls going to be required? If so, how high will the walls be and what is their construction (i.e. rockery, concrete, timber, manufactured block)?

N/A

13. What are you proposing for visual mitigation of the work?

The proposed work will be visually mitigated with strategic landscaping, brown paint matching existing infrastructure, and downcast shielded lights on occupancy sensors and access controls.

14. Will the grading proposed require removal of any trees? If so, what species, how many and of what size?

No

15. What type of revegetation seed mix are you planning to use and how many pounds per acre do you intend to broadcast? Will you use mulch and, if so, what type?

No revegetation is proposed due to minimal disturbance to the site.

16. How are you providing temporary irrigation to the disturbed area?

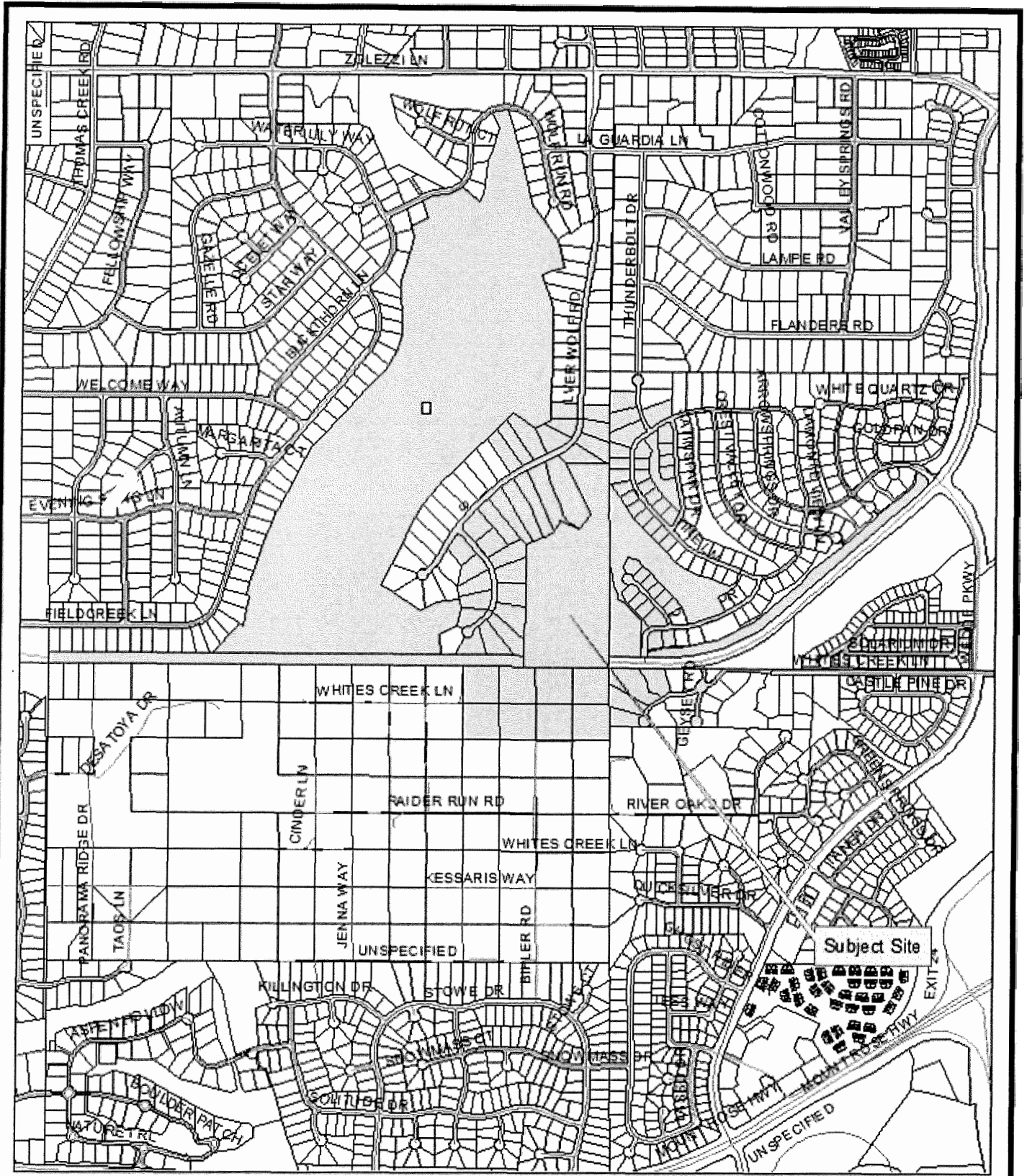
Water trucks will be used by contractor to provide dust suppression. Permanent irrigation for landscape improvements included on the plans.

17. Have you reviewed the revegetation plan with the Washoe Storey Conservation District? If yes, have you incorporated their suggestions?

N/A

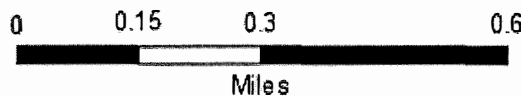
18. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that may prohibit the requested grading?

Yes	No	If yes, please attach a copy.
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Mailing and Vicinity Map

WSUP21-0034 Notice Map
 94 parcels selected at 500 feet



Community Services
 Department



1201 S. Nevada St.
 Reno, Nevada 89502 (775) 328-3600

FIELD CREEK EFFLUENT FILL STATION AND ARROWCREEK PARKWAY IMPROVEMENT PROJECT WASHOE COUNTY COMMUNITY SERVICES DEPARTMENT PUBLIC WORK PROJECT NO. PWP-WA-2021-279

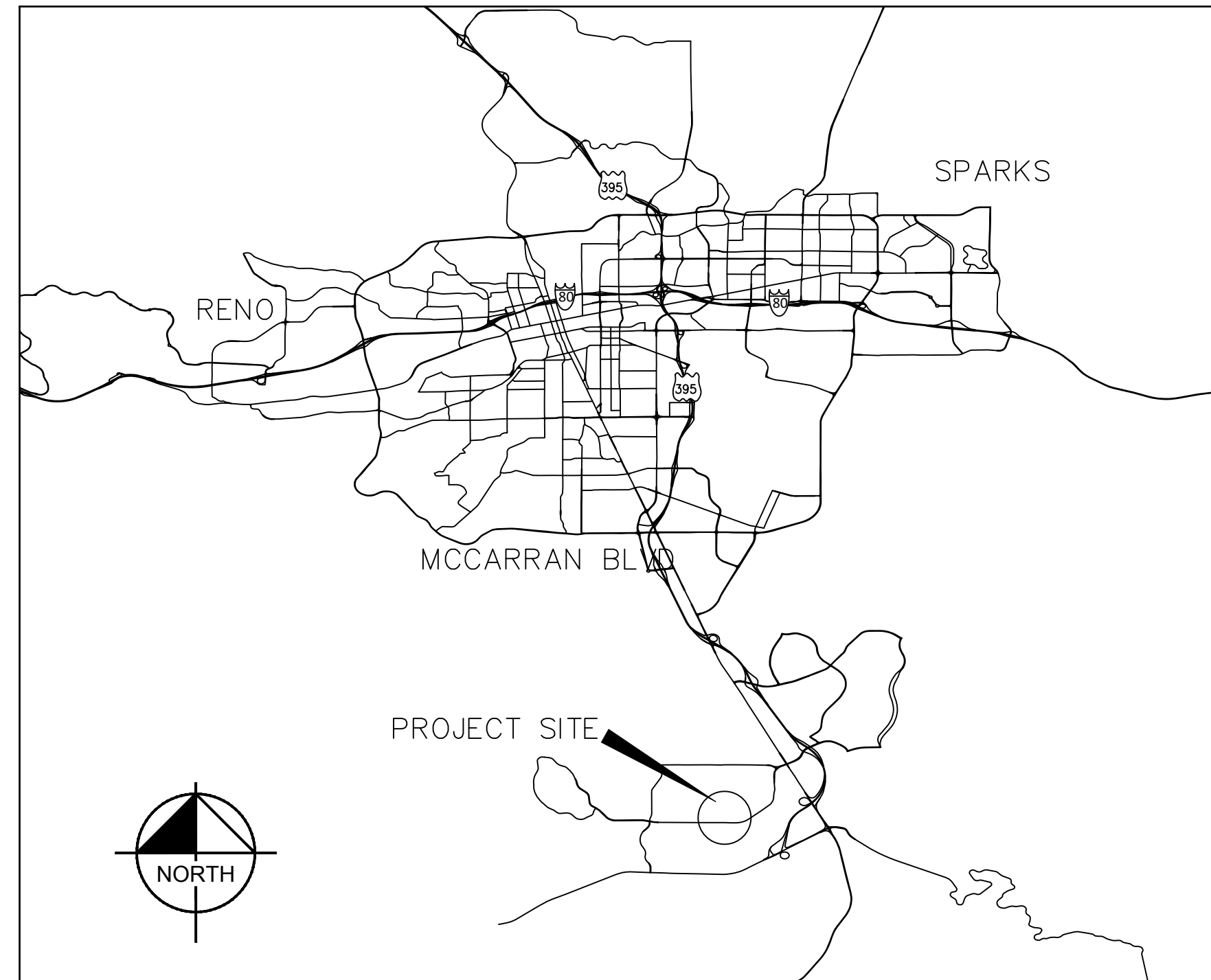
PROJECT CONTACTS

Kimley»Horn

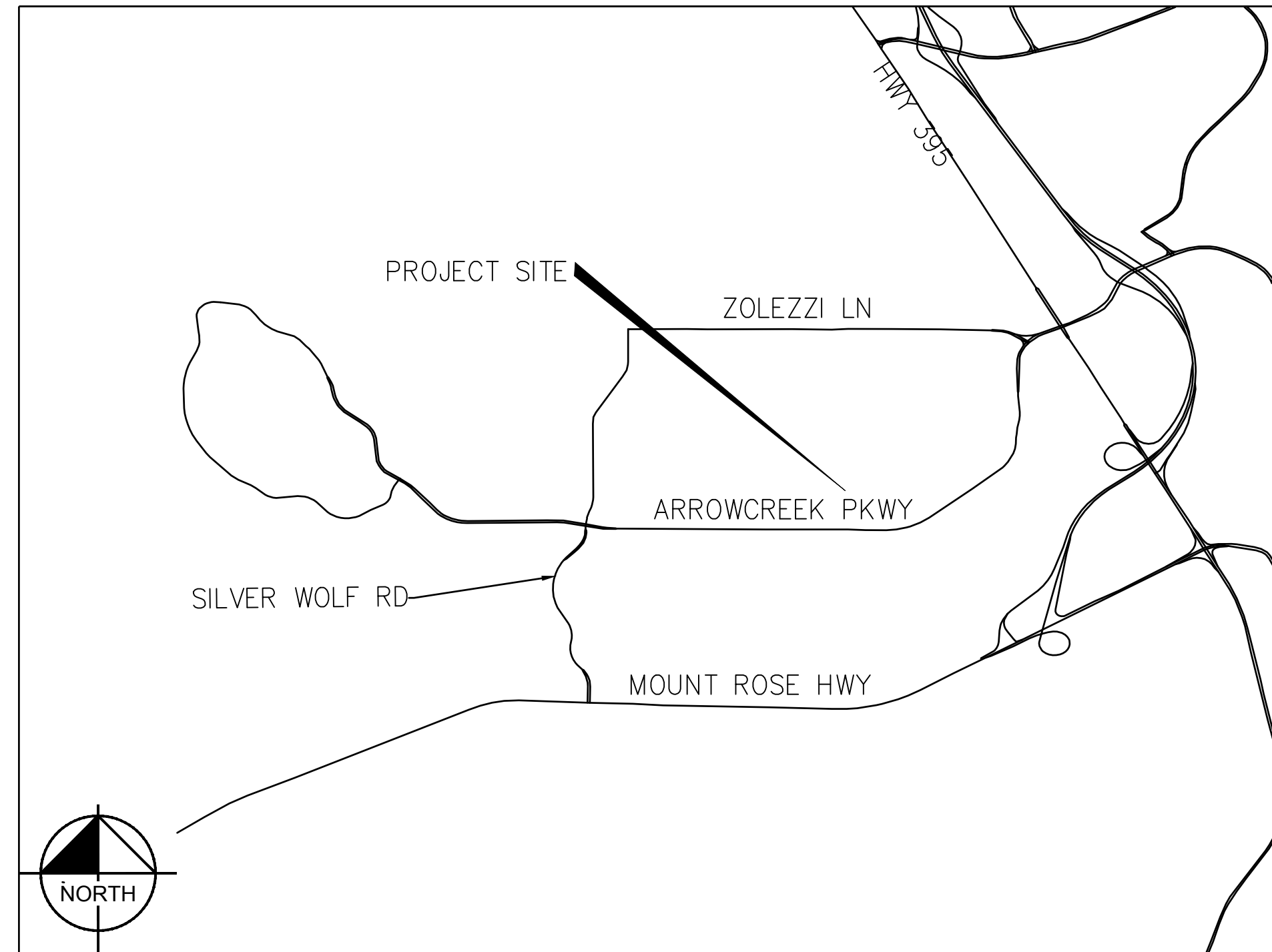
CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
5370 KIETZKE LANE, RENO, NV 89511 SUITE 100
CONTACT: CHRISTIAN HEINBAUGH, PE
PHONE: (775) 200-1967



WASHOE COUNTY COMMUNITY SERVICES DEPARTMENT
1001 E. NINTH STREET
RENO, NV 89512
PHONE: (775) 328-2003



VICINITY MAP - N.T.S.



SITE MAP - N.T.S.

NOTES:

- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE PROJECT SPECIFICATIONS, THE PROJECT GEOTECHNICAL REPORT (CME, MARCH 2, 2020), THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC) ORANGE BOOK (CURRENT EDITION), AND THESE PROJECT PLANS.
- THE SCALES INDICATED ON THESE PLANS ARE BASED ON A 22"x34" SHEET SIZE.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND/OR ENGINEER OF DISCREPANCIES BETWEEN THE INFORMATION SHOWN ON THESE DRAWINGS AND THE CONDITIONS EXISTING IN THE FIELD. THE CONTRACTOR SHALL COMPARE ALL DRAWINGS TO VERIFY THE FIGURES BEFORE LAYOUT OF THE WORK AND WILL BE RESPONSIBLE FOR ANY ERRORS WHICH MAY HAVE BEEN AVOIDED THEREBY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CONSTRUCTION WATER AND SECURING STAGING AREA LOCATION(S).
- DURING THE ENTIRE DURATION OF THIS CONSTRUCTION CONTRACT, THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES IN ACCORDANCE WITH WASHOE COUNTY RULES AND REGULATIONS. THE CONTRACTOR IS REQUIRED TO SUPPRESS DUST AT ALL TIMES, REGARDLESS OF WHEN CONSTRUCTION ACTIVITIES ARE OCCURRING. THE CONTRACTOR SHALL OBTAIN A STORMWATER GENERAL OR A SURFACE AREA DISTURBANCE PERMIT FROM THE NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS REQUIRED, AND SHALL COMPLY WITH ITS REQUIREMENTS FOR DUST CONTROL ON ALL APPLICABLE PROJECTS.
- THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES AND OTHER INFRASTRUCTURE THROUGHOUT CONSTRUCTION. DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S OWN EXPENSE.
- CONTRACTOR SHALL ENSURE NO ENCROACHMENT INTO ADJACENT PROPERTIES OCCURS
- TRAFFIC CONTROL, CONSTRUCTION SIGNS, AND BARRICADES SHALL CONFORM TO THE REQUIREMENTS OF THE MUTCD, LATEST EDITION (MAY, 2012).
- THE CONTRACTOR SHALL COOPERATE WITH ANY OTHER CONTRACTORS OR UTILITY AGENCIES WORKING WITHIN THE CONSTRUCTION AREA.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH SSPWC, THE FINAL GEOTECHNICAL REPORT AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS. THE COUNTY SPECIFICATIONS SHALL GOVERN WHERE OTHER SPECIFICATIONS DO NOT EXIST. IN CASE OF CONFLICTING SPECIFICATIONS OR DETAILS, THE MORE RESTRICTIVE SPECIFICATION AND DETAIL SHALL BE FOLLOWED.
- THE CONTRACTOR SHALL FURNISH ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE AUTHORITIES' SPECIFICATIONS AND REQUIREMENTS.
- THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE EXISTING CONDITIONS.
- THE EXISTING CONDITIONS SHOWN ON THESE PLANS WERE PROVIDED BY THE TOPOGRAPHIC SURVEY PREPARED BY THE PROJECT SURVEYOR, AND ARE BASED ON THE BENCHMARKS SHOWN. THE CONTRACTOR SHALL REFERENCE THE SAME BENCHMARKS.
- THE CONTRACTOR SHALL REVIEW AND VERIFY THE EXISTING TOPOGRAPHIC SURVEY SHOWN ON THE PLANS REPRESENTS EXISTING FIELD CONDITIONS PRIOR TO CONSTRUCTION, AND SHALL

REPORT ANY DISCREPANCIES FOUND TO THE OWNER AND ENGINEER IMMEDIATELY.

- IF THE CONTRACTOR DOES NOT ACCEPT THE EXISTING TOPOGRAPHIC SURVEY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY AT THEIR OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED PROFESSIONAL LAND SURVEYOR TO THE OWNER AND ENGINEER FOR REVIEW.
- THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS, ELEVATIONS, AND FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE ARCHITECT, ENGINEER, AND IF APPLICABLE THE COUNTY AND OWNER. NO CONSIDERATION WILL BE GIVEN TO CHANGE ORDERS FOR WHICH THE COUNTY, ENGINEER, AND OWNER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK TO HAVE THEM LOCATE THEIR EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL USE EXTREME CAUTION AS THE SITE CONTAINS VARIOUS KNOWN AND UNKNOWN PUBLIC AND PRIVATE UTILITIES.
- THE LOCATIONS, ELEVATIONS, DEPTH, AND DIMENSIONS OF EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE UTILITY COMPANY MAPS AND PLANS, AND ARE CONSIDERED APPROXIMATE AND INCOMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE PRESENCE, LOCATION, ELEVATION, DEPTH, AND DIMENSION OF EXISTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION SO THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE ENGINEER SHALL BE NOTIFIED WHEN A PROPOSED IMPROVEMENT CONFLICTS WITH AN EXISTING UTILITY.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED BY THE CONTRACTOR AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED CONSTRUCTION PERMITS, APPROVALS, AND BONDS PRIOR TO CONSTRUCTION. A CITY OF RENO EXCAVATION AND ENCROACHMENT PERMIT WILL BE REQUIRED.
- THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES A COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, GEOTECHNICAL REPORT AND ADDENDA, PROJECT AND COUNTY SPECIFICATIONS, AND SPECIAL CONDITIONS, COPIES OF ANY REQUIRED CONSTRUCTION PERMITS, EROSION CONTROL PLANS, SWPPP AND INSPECTION REPORTS.
- ALL SHOP DRAWINGS AND OTHER DOCUMENTS THAT REQUIRE ENGINEER REVIEW SHALL BE SUBMITTED BY THE CONTRACTOR SUFFICIENTLY IN ADVANCE OF CONSTRUCTION OF THAT ITEM, SO THAT NO LESS THAN 10 BUSINESS DAYS FOR REVIEW AND RESPONSE IS AVAILABLE.
- CONTRACTOR SHALL PROVIDE A COMPLETE SYSTEM CONSISTING OF PUMPS, FUEL MANAGEMENT

UNIT, SUPPLY POWER, AND SYSTEM CONTROLS SUITABLE FOR A COMPLETE AND FULLY FUNCTIONING FILL STATION SYSTEM.

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE MATERIALS, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND COUNTY SPECIFICATIONS.
- ALL CONTRACTORS MUST CONFINE THEIR ACTIVITIES TO THE WORK AREA. NO ENCROACHMENTS OUTSIDE OF THE WORK AREA WILL BE ALLOWED. ANY DAMAGE RESULTING THEREFROM SHALL BE CONTRACTOR'S SOLE RESPONSIBILITY TO REPAIR.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, UTILITIES, MANHOLES, POLES, GUY WIRES, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, COMMUNICATION BOXES/PEDESTALS, AND OTHER FACILITIES TO REMAIN AND SHALL REPAIR ANY DAMAGES AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PRIVATE PROPERTY OR PUBLIC IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCES, WALLS, SIGNS, PAVEMENT, CURBS, UTILITIES, SIDEWALKS, GRASS, TREES, LANDSCAPING, AND IRRIGATION SYSTEMS, ETC... TO ORIGINAL CONDITION OR BETTER AT NO COST TO THE OWNER.
- ALL AREAS IN EXISTING RIGHT-OF-WAY DISTURBED BY SITE CONSTRUCTION SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER, INCLUDING AS NECESSARY GRADING, LANDSCAPING, CULVERTS, AND PAVEMENT.
- THE CONTRACTOR SHALL REMOVE AND PROTECT ALL EXISTING POWER POLES, SIGNS, WATER VALVES, FIRE HYDRANTS, METERS, ETC. THAT ARE TO BE REMOVED DURING CONSTRUCTION. THESE FACILITIES SHALL BE PROVIDED TO THE FACILITY OWNER IF THEY ARE NOT CALLED TO BE REINSTALLED ON SITE.
- CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING DITCHES OR CULVERTS FREE OF OBSTRUCTIONS AT ALL TIMES. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.
- SITE SAFETY IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
- THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE ENGINEER'S SEAL HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF ALL REQUIRED SAFETY PROCEDURES AND PROGRAMS.
- SIGNS RELATED TO SITE OPERATION OR SAFETY ARE NOT INCLUDED IN THESE PLANS.
- CONTRACTOR OFFICE AND STAGING AREA SHALL BE AGREED ON BY THE OWNER AND CONTRACTOR PRIOR TO BEGINNING OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING REQUIREMENTS FOR THE CONSTRUCTION OFFICE, TRAILER, STORAGE, AND STAGING OPERATIONS AND LOCATIONS.
- CONTRACTOR SHALL KEEP A NEAT AND ACCURATE RECORD OF CONSTRUCTION, INCLUDING ANY DEVIATIONS OR VARIANCES FROM THE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS TO THE ENGINEER AND COUNTY IDENTIFYING ALL DEVIATIONS AND VARIATIONS FROM THESE PLANS MADE DURING CONSTRUCTION.

SHEET LIST	
SHEET NUMBER	SHEET TITLE
G1	TITLE SHEET
C1	EROSION CONTROL AND DEMOLITION
C2	SITE PLAN
C3	FILL STATION PLAN AND SECTION
C4	DRIVEWAY PLAN & PROFILE
C5	EFFULENT LINE PLAN & PROFILE
C6	STRIPING AND SIGNAGE
D1	DETAIL 01 OF 04
D2	DETAIL 02 OF 04
D3	DETAIL 03 OF 04
D4	DETAIL 04 OF 04
E1	ELECTRICAL PLAN
E2	ELECTRICAL PLAN
E3	ELECTRICAL DETAILS
E4	ELECTRICAL DETAILS
E5	ELECTRICAL DETAILS
L1	LANDSCAPE PLAN
L2	LANDSCAPE DETAILS
L3	IRRIGATION PLAN
L4	IRRIGATION DETAILS
L5	SPECIFICATIONS
S1	FILL STATION STRUCTURAL DETAILS

ABBREVIATIONS

AWWA	AMERICAN WATER WORKS ASSOCIATION	(P)	PROPOSED
BMP	BEST MANAGEMENT PRACTICE	PROP	PROPERTY
BVCE	BEGIN VERTICAL CURVE ELEVATION	PVC	POINT OF VERTICAL CURVE
BVCS	BEGIN VERTICAL CURVE STATION	PVI	POINT OF VERTICAL INTERSECTION
CMP	CORRUGATED METAL PIPE	RCP	REINFORCED CONCRETE PIPE
DIP	DUCTILE IRON PIPE	RMJ	RESTRAINED MECHANICAL JOINT
DR	DIMENSION RATIO	ROW	RIGHT-OF-WAY
ELEC	ELECTRIC	PRC	POINT OF REVERSE CURVE
ELEV	ELEVATION	RT	RIGHT
EG	EXISTING GROUND	SD	STORM DRAIN
E/P / EOP	EDGE OF PAVEMENT	SDMH	STORM DRAIN MANHOLE
(E) / EX	EXISTING	SF	SILT FENCE
EVCE	END VERTICAL CURVE ELEVATION	SIP	SITE IMPROVEMENT PERMIT
EVCS	END VERTICAL CURVE STATION	S.L.	STREET LIGHT
FL	FLANGE	SS	SANITARY SEWER
IE	INVERT ELEVATION	SSMH	SANITARY SEWER MANHOLE
K	CURVATURE COEFFICIENT	STA	STATION
KH	KIMLEY-HORN	SWPPP	STORM WATER POLLUTION PREVENTION PLAN
LAT	LATERAL		
LT	LEFT	T/TELE	TELEPHONE
MAX	MAXIMUM	TYP	TYPICAL
MH	MANHOLE	VC	VERTICAL CURVE
MIN	MINIMUM	W/WM	WATER MAIN
NDEP	NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION PAVEMENT		
P			

LEGEND

EXISTING	PROPOSED	NOTES
		STORM DRAIN MANHOLE
		SEWER MANHOLE
		WATER VALVE
		WATER METER
		IV
		CONTOUR LINES
		DRIVEWAY (4" HMA ON 8" AB)
		PCC
		TMWA EASEMENT LIMITS
		TYPE 2 SLURRY
		PIPELINE

SYMBOLS:

	DETAIL NUMBER
	SHEET NUMBER

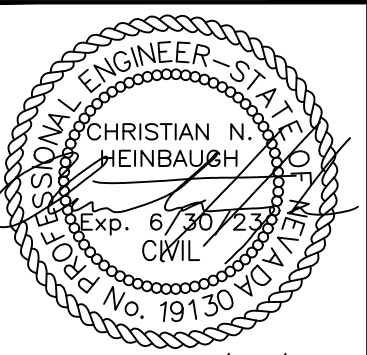
SURVEY INFORMATION

HORIZONTAL DATUM:
NEVADA STATE PLANE COORDINATE SYSTEM NAD 83/94 (HARN), WEST ZONE, MODIFIED BY A GRID TO GROUND COMBINED SCALE FACTOR OF 1.000197939 BASED ON THE WASHOE COUNTY GPS NETWORK

VERTICAL DATUM:
NAVD 88 BASED ON CITY OF RENO BENCHMARK #2887, ELEVATION 4533.36 1-1/2" STEEL BOLT

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2015 KIMLEY-HORN AND ASSOCIATES, INC.
5370 KIETZKE LANE, SUITE 100, RENO, NV 89511
PHONE: 775-200-1967
WWW.KIMLEY-HORN.COM



KHA PROJECT	192049002
DATE	05/03/2021
SCALE:	AS SHOWN
DESIGNED BY:	CNH
DRAWN BY:	IML
CHECKED BY:	CNH

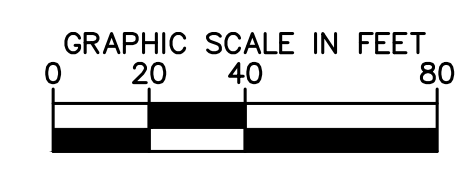
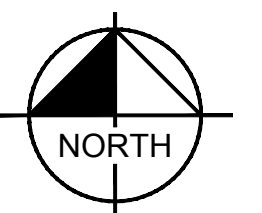
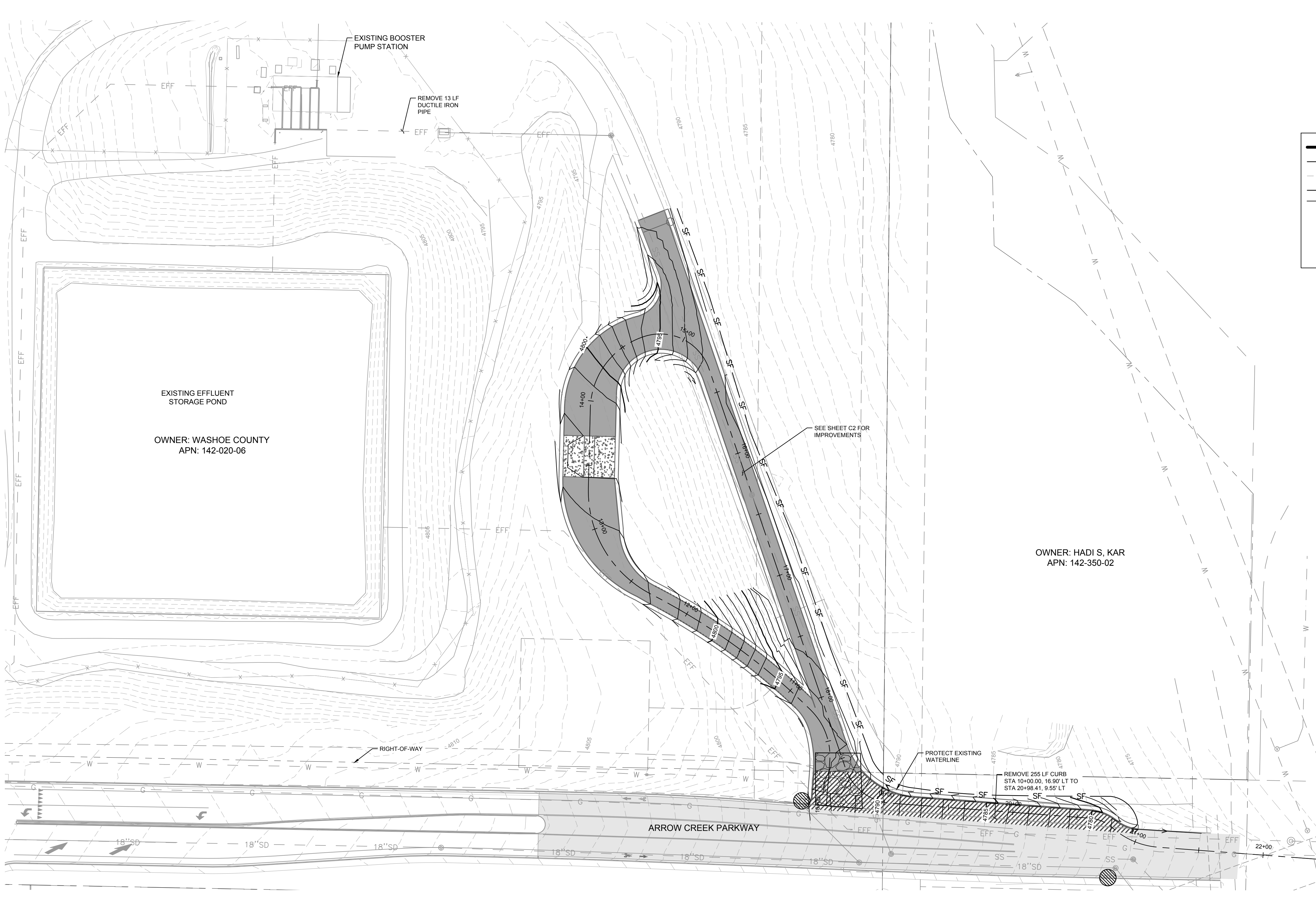
TITLE SHEET

FIELD CREEK
EFFLUENT FILL
STATION
RENO, NV

SHEET NUMBER
G1



Plotted By: Larkin, Illinois (Brown), Date: May 03, 2021, 04:15:04pm, File Path: K:\REN_Civil\192049 - Washoe County\002 - Field Creek Effluent Fill Station\07 CAD\Plansheets\C-Eros.dwg
 This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



LEGEND

	PROPERTY LINE
	PROPOSED CONTOUR
	EXISTING CONTOUR
	SILT FENCE
	GUTTER PROTECTION
	INLET PROTECTION
	CONSTRUCTION ENTRANCE

STANDARD EROSION CONTROL GENERAL NOTES

1. EROSION CONTROL DEVICES SHOWN ON THIS PLAN SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBING ACTIVITIES ON THE PROJECT.
2. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THIS PROJECT. CHANGES ARE TO BE APPROVED BEFORE CONSTRUCTION BY THE DESIGN ENGINEER AND OWNER.
3. IF THE EROSION CONTROL PLAN AS APPROVED CANNOT CONTROL EROSION AND OFF-SITE SEDIMENTATION FROM THE PROJECT, THE EROSION CONTROL PLAN WILL BE REQUIRED TO BE REVISED AND/OR ADDITIONAL EROSION CONTROL DEVICES WILL BE REQUIRED ON SITE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTAL OF N.O.I., N.O.T. AND ANY ADDITIONAL INFORMATION REQUIRED BY THE NDEP. CONTRACTOR SHALL COMPLY WITH ALL NDEP STORMWATER POLLUTION PREVENTION REQUIREMENTS.

BMP MAINTENANCE SCHEDULE

TEMPORARY CONSTRUCTION ENTRANCE/EXIT:
 INSPECTIONS SHALL BE MADE WEEKLY AND AFTER RAIN STORM EVENTS TO ENSURE THAT THE FACILITY IS FUNCTIONING PROPERLY. AGGREGATE PAD SHALL BE WASHED DOWN OR REPLACED WHEN SEDIMENT OR MUD HAS CLOGGED THE VOID SPACES BETWEEN THE STONES OR MUD IS BEING TRACKED ONTO THE PUBLIC ROADWAY. RUNOFF FROM WASHDOWN OPERATION SHALL BE FILTERED THROUGH ANOTHER B.M.P. PRIOR TO DRAINING OFF-SITE.

SILT FENCE:
 INSPECTIONS SHALL BE MADE WEEKLY AND AFTER RAIN STORM EVENTS. SEDIMENT SHALL BE REMOVED FROM BEHIND THE FENCE WHEN THE DEPTH OF SEDIMENT HAS BUILT UP TO ONE-THIRD THE HEIGHT OF THE FENCE ABOVE GRADE. FENCE SHALL BE INSPECTED FOR GAPS AT BASE. INSPECT SUPPORTING POSTS AND FILTER FABRIC. REPLACE IF REQUIRED.

CURB INLET/GRATE INLET/WYE INLET:
 INSPECTIONS SHALL BE MADE WEEKLY AND AFTER ALL RAIN EVENTS TO ENSURE THAT THE DEVICE IS FUNCTIONING PROPERLY. REMOVE SEDIMENT FROM THE STORAGE AREA SURROUNDING THE INLET/GRATE WHEN THE DEPTH OF SEDIMENT HAS BUILT UP TO ONE-HALF OF THE PROTECTION HEIGHT. DEVICE SHALL BE INSPECTED FOR GAPS AT BASE, AND SHALL BE REPLACED AS NEEDED.

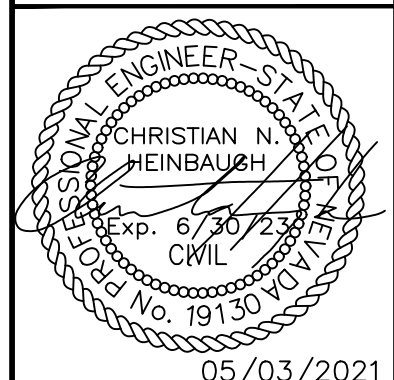
- NOTE:**
1. CONTRACTOR SHALL PROTECT EDGE OF EXISTING PAVEMENT DURING CURB AND GUTTER REMOVAL TO ALLOW FOR ROADWAY WIDENING.
 2. SEE C4 FOR HORIZONTAL CONTROL ALIGNMENT LINE AND CURVE TABLE/
 3. TOTAL DISTURBANCE AREA = 36,785+/- SF

OWNER: HADI S, KAR
 APN: 142-350-02

EXISTING EFFLUENT STORAGE POND
 OWNER: WASHOE COUNTY
 APN: 142-020-06

No.	REVISIONS	DATE	BY

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KHA PROJECT	192049002
DATE	05/03/2021
SCALE	AS SHOWN
DESIGNED BY	CNH
DRAWN BY	IML
CHECKED BY	CNH

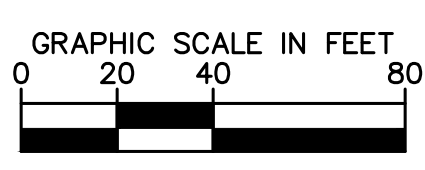
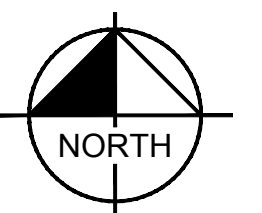
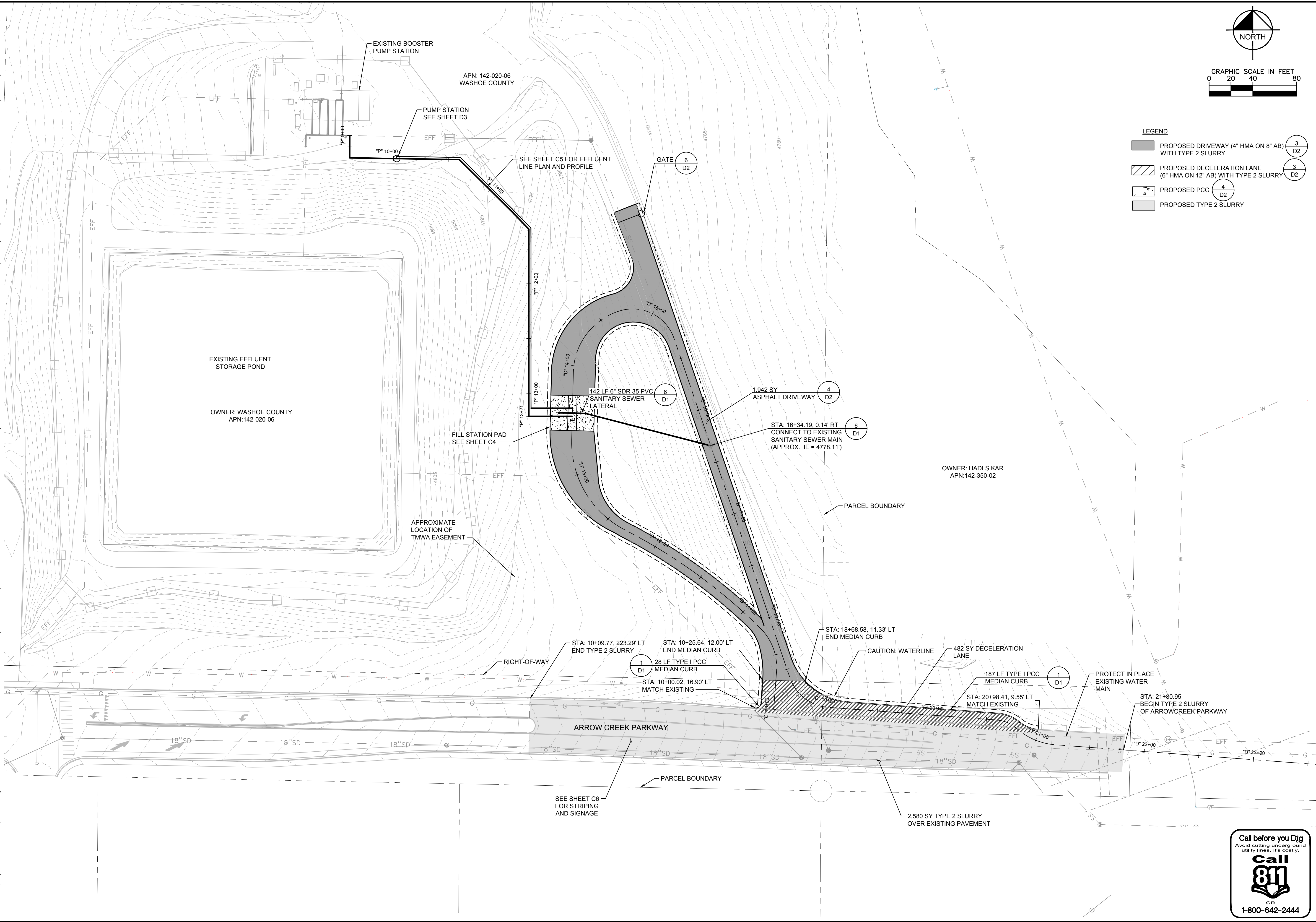
EROSION CONTROL AND DEMOLITION

FIELD CREEK EFFLUENT FILL STATION RENO, NV



SHEET NUMBER
C1

Plotted By: Larkin, Illinois (Brown), Date: May 04, 2021, 08:00:15am. File Path: K:\REN_Civil\192049 - Washoe County\002 - Field Creek Effluent Fill Station\07 CAD\Plansheets\C-Site.dwg
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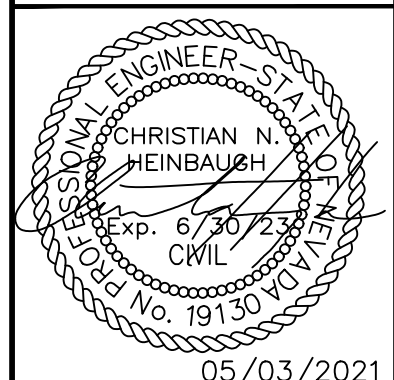


- LEGEND**
- PROPOSED DRIVEWAY (4" HMA ON 8" AB) WITH TYPE 2 SLURRY 3
D2
 - PROPOSED DECELERATION LANE (6" HMA ON 12" AB) WITH TYPE 2 SLURRY 3
D2
 - PROPOSED PCC 4
D2
 - PROPOSED TYPE 2 SLURRY

No.	REVISIONS	DATE	BY

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KHA PROJECT	192049002
DATE	05/03/2021
SCALE:	AS SHOWN
DESIGNED BY:	CNH
DRAWN BY:	IML
CHECKED BY:	CNH

SITE PLAN

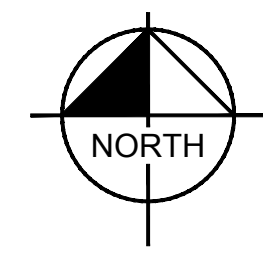
**FIELD CREEK
 EFFLUENT FILL
 STATION
 RENO, NV**

SHEET NUMBER
C2



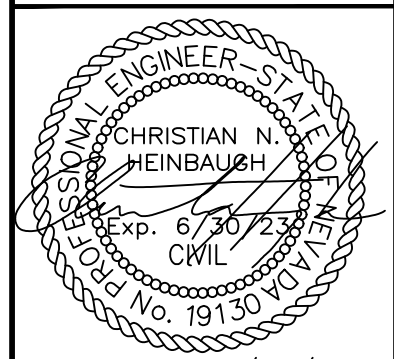
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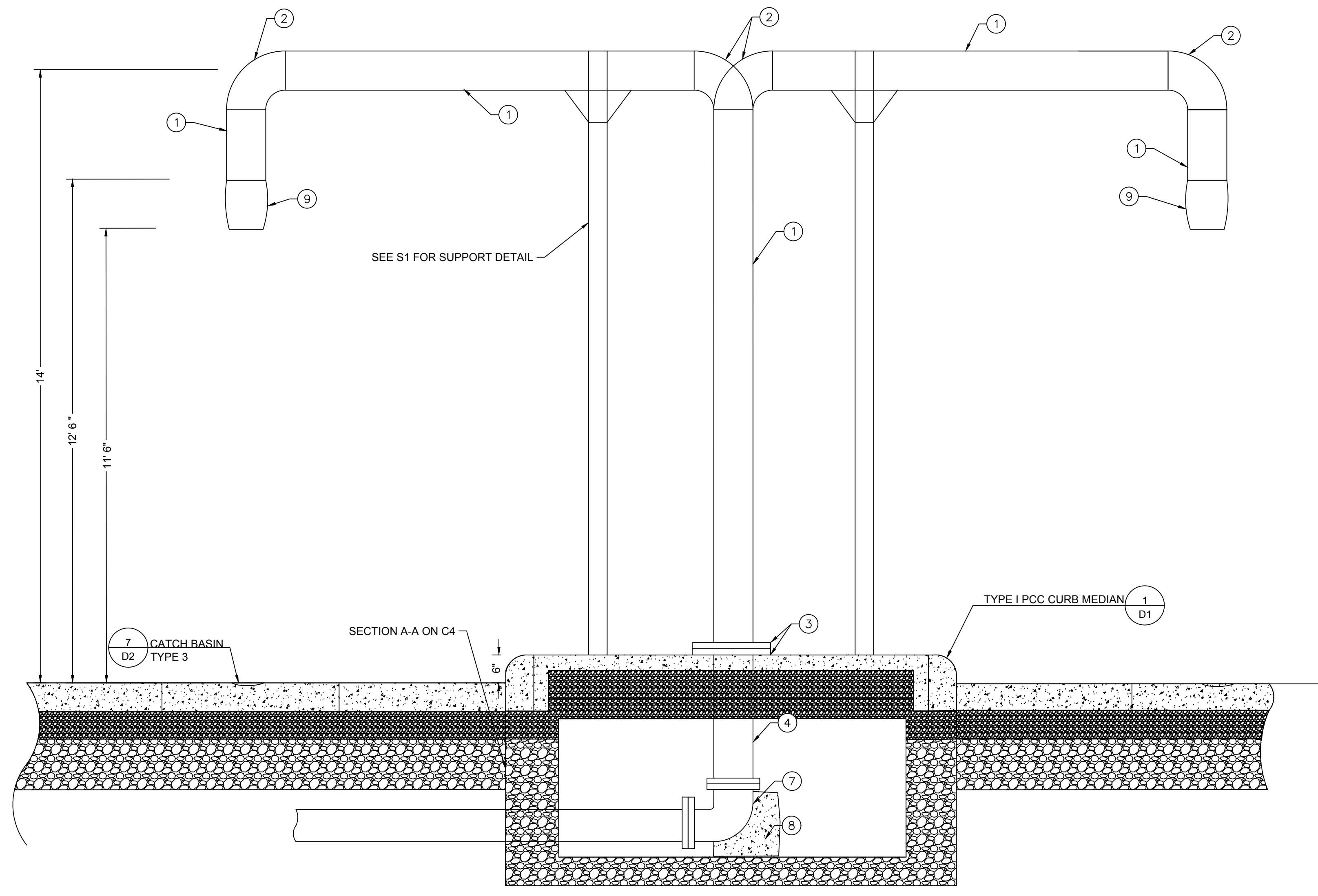
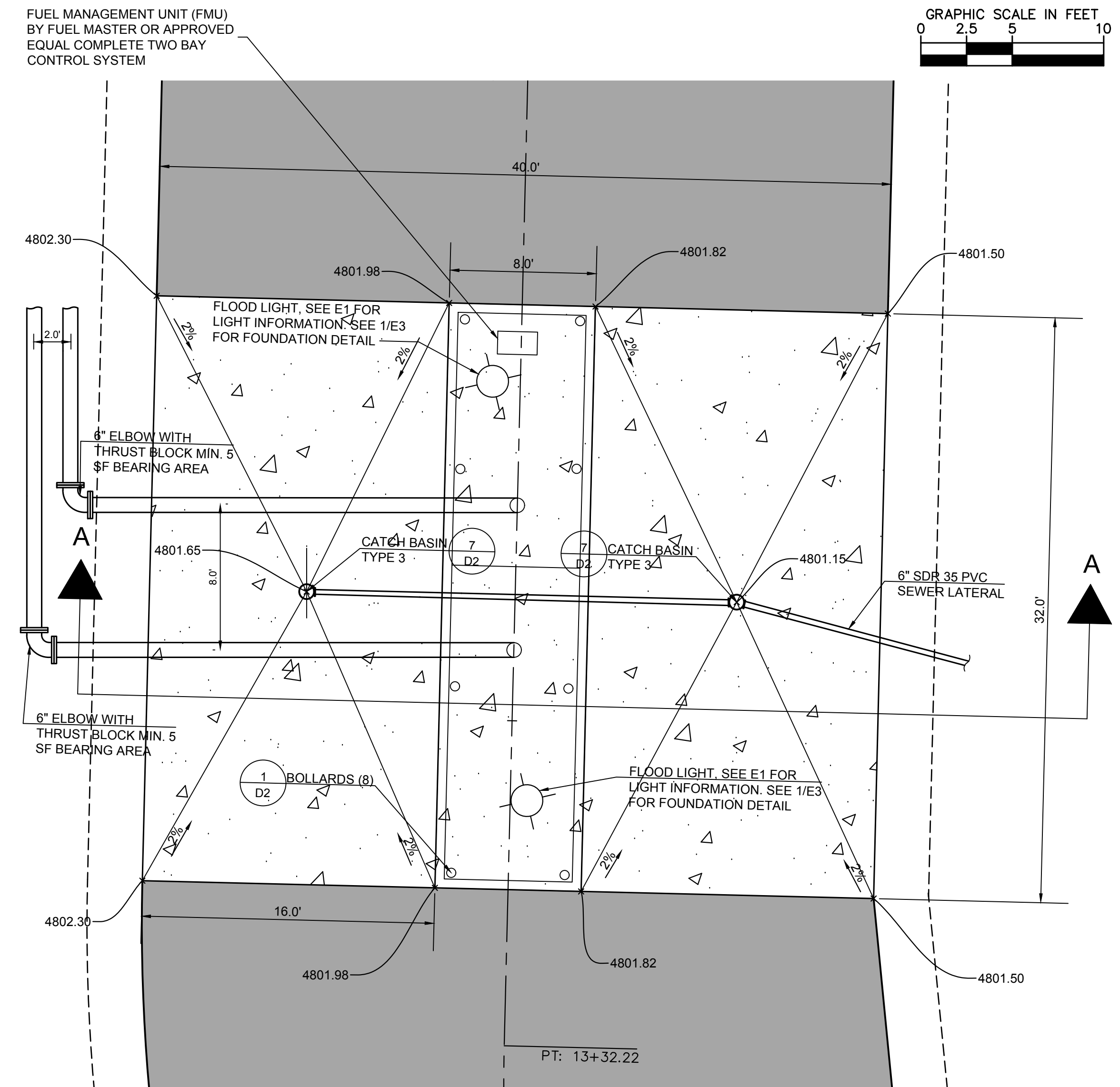


KHA PROJECT	192049002
DATE	05/03/2021
SCALE	AS SHOWN
DESIGNED BY	CNH
DRAWN BY	IML
CHECKED BY	CNH

FILL STATION PLAN AND SECTION

FIELD CREEK EFFLUENT FILL STATION RENO, NV

SHEET NUMBER
C3



SECTION A-A NOT TO SCALE

PROPOSED MATERIAL LIST

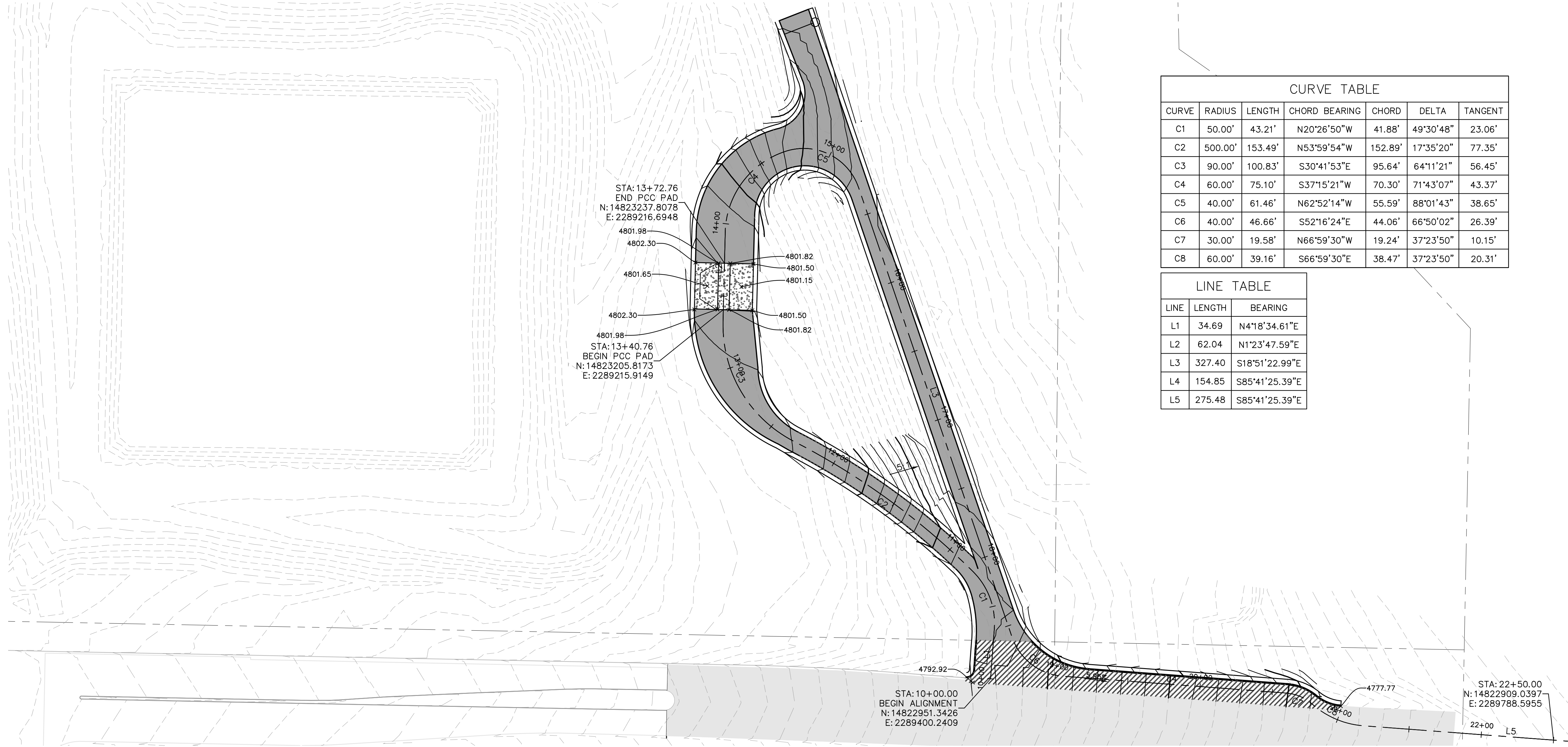
- ① 6" STANDARD STEEL PIPE
- ② 6" STEEL 90° WELD ELBOW
- ③ 6" SLIP-ON ELD FLANGE
- ④ 6" FLANGE X PLAIN END DUCTILE IRON SPOOL. CUT TO FIT
- ⑤ 6" DUCTILE IRON FLANGE 90° ELBOW
- ⑥ CONCRETE THRUST BLOCK. MINIMUM 5 SQUARE FEET BEARING AREA
- ⑦ FLEXIBLE SOCK, SECURE WITH STAINLESS STEEL HARDWARE

NOTES:

1. ALL EXPOSED STEEL PIPE, HARDWARE, AND APPURTENANCES ARE TO RECEIVE TWO FIELD-APPLIED COATS OF BROWN CARBOLINE 801, OR APPROVED EQUAL. APPLY ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

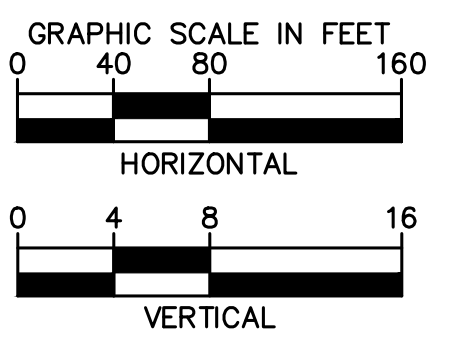
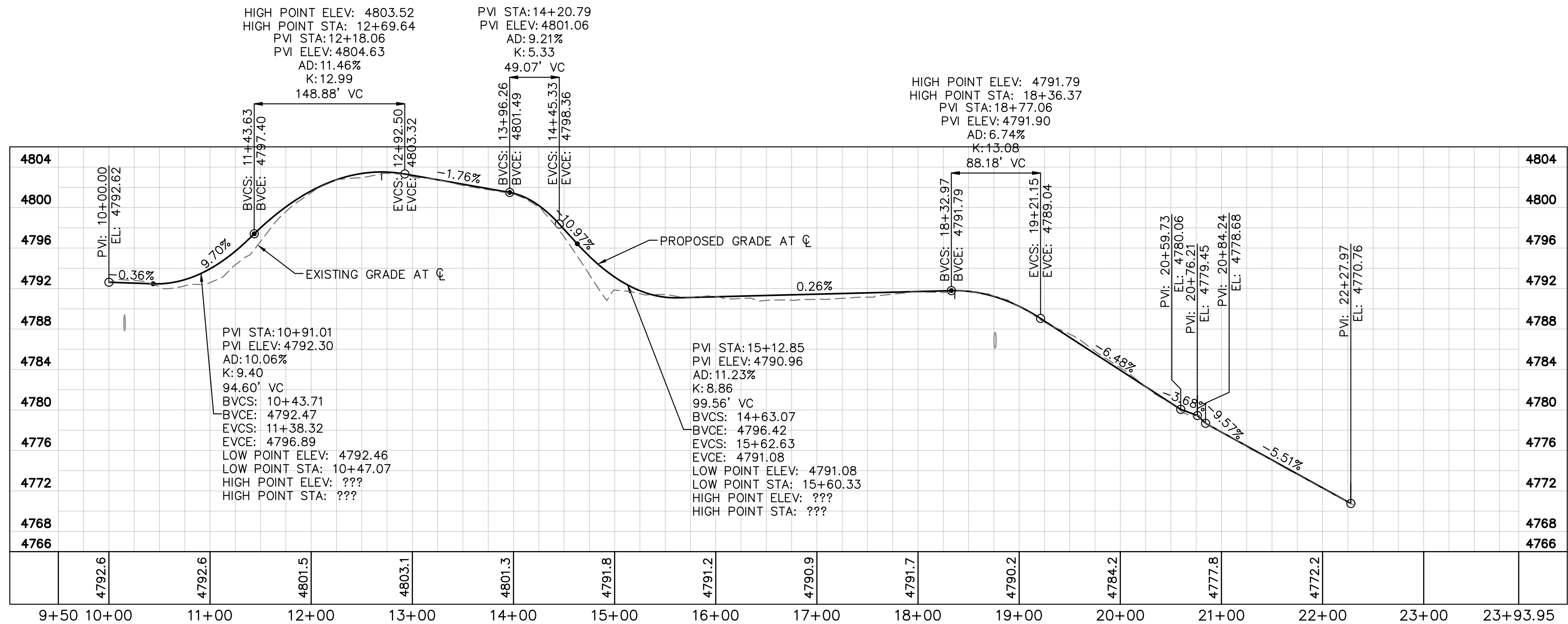
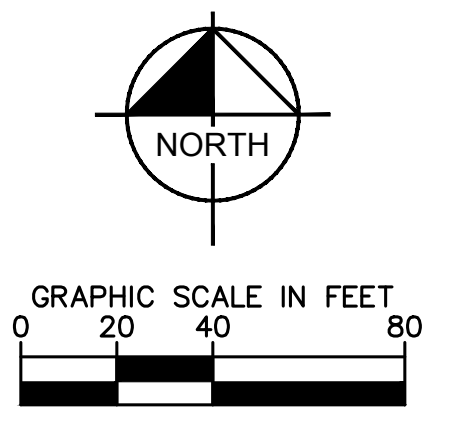


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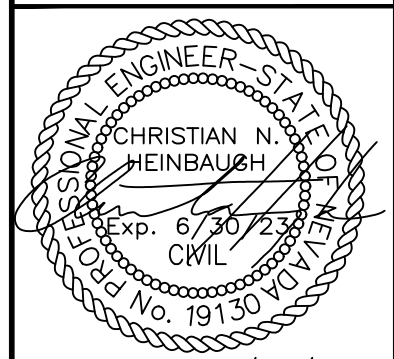
CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	50.00'	43.21'	N20°26'50"W	41.88'	49°30'48"	23.06'
C2	500.00'	153.49'	N53°59'54"W	152.89'	17°35'20"	77.35'
C3	90.00'	100.83'	S30°41'53"E	95.64'	64°11'21"	56.45'
C4	60.00'	75.10'	S37°15'21"W	70.30'	71°43'07"	43.37'
C5	40.00'	61.46'	N62°52'14"W	55.59'	88°01'43"	38.65'
C6	40.00'	46.66'	S52°16'24"E	44.06'	66°50'02"	26.39'
C7	30.00'	19.58'	N66°59'30"W	19.24'	37°23'50"	10.15'
C8	60.00'	39.16'	S66°59'30"E	38.47'	37°23'50"	20.31'

LINE TABLE		
LINE	LENGTH	BEARING
L1	34.69	N4°18'34.61"E
L2	62.04	N1°23'47.59"E
L3	327.40	S18°51'22.99"E
L4	154.85	S85°41'25.39"E
L5	275.48	S85°41'25.39"E



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KHA PROJECT	192049002
DATE	05/03/2021
SCALE	AS SHOWN
DESIGNED BY	CNH
DRAWN BY	IML
CHECKED BY	CNH

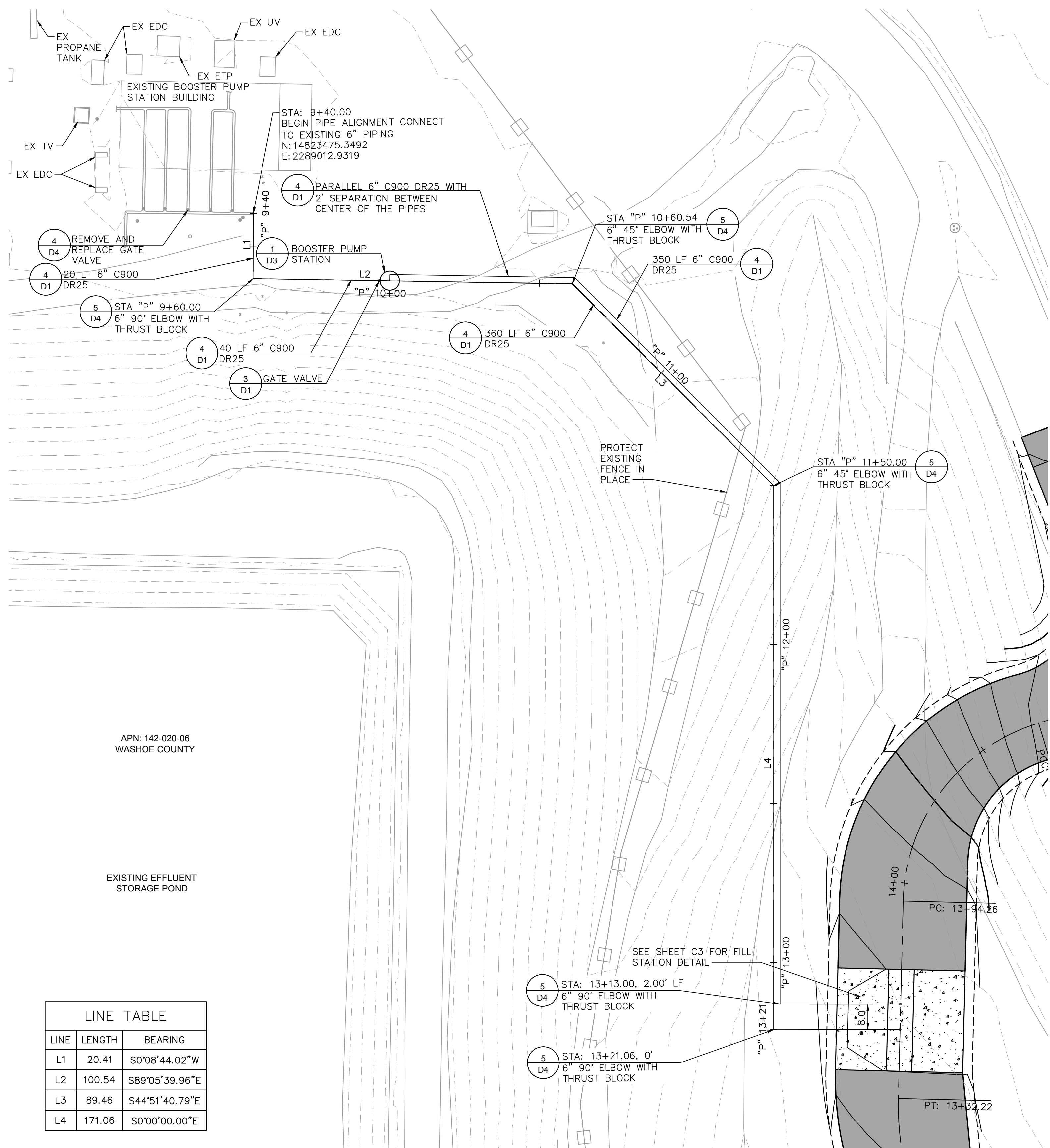
DRIVEWAY PLAN & PROFILE

FIELD CREEK EFFLUENT FILL STATION RENO, NV

SHEET NUMBER
C4



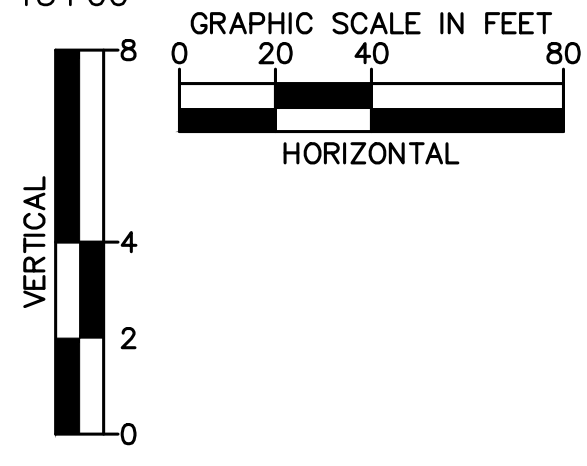
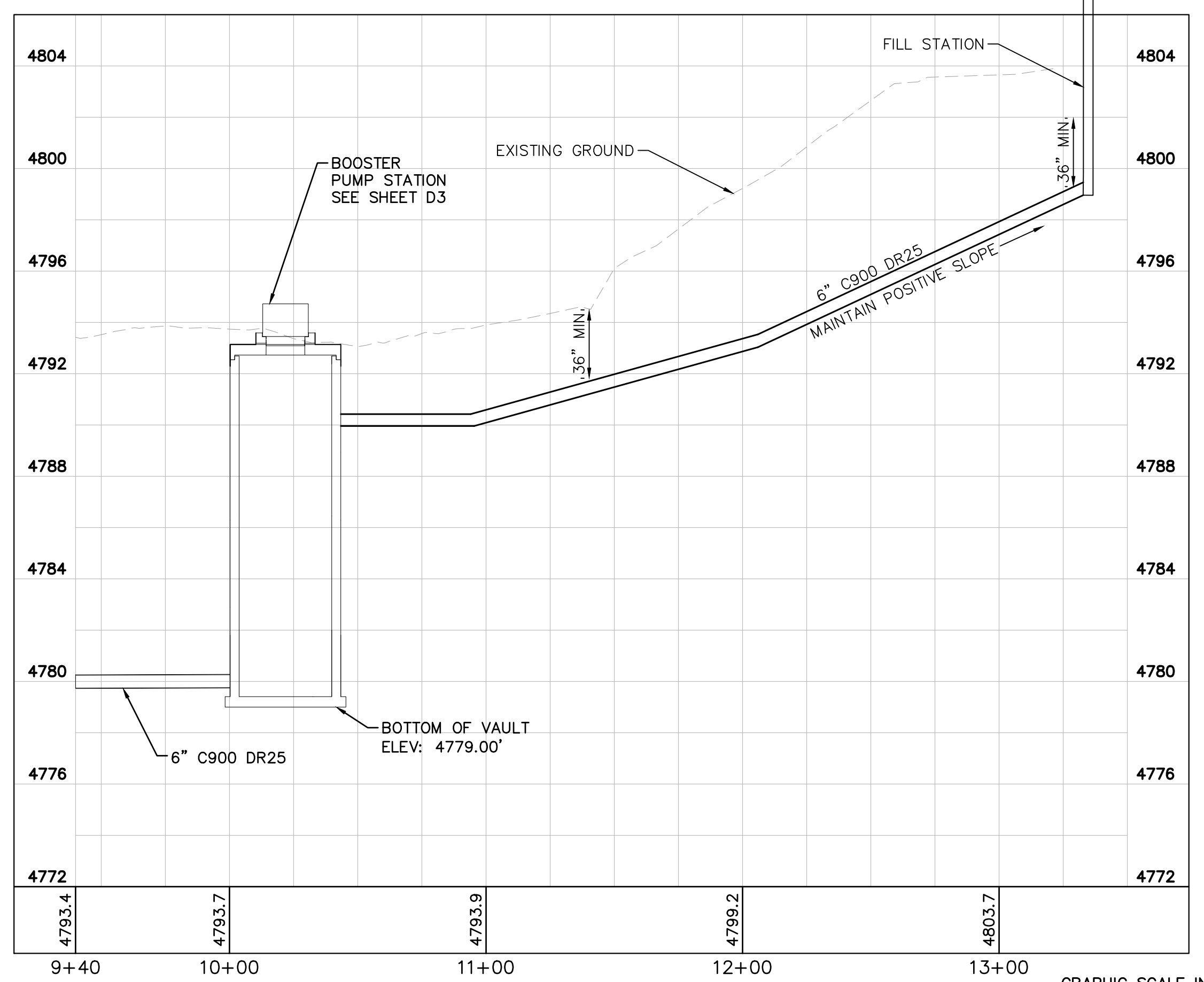
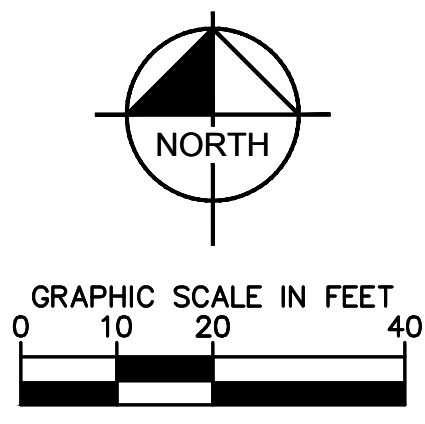
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LINE TABLE		
LINE	LENGTH	BEARING
L1	20.41	S0°08'44.02"W
L2	100.54	S89°05'39.96"E
L3	89.46	S44°51'40.79"E
L4	171.06	S0°00'00.00"E

APN: 142-020-06
WASHOE COUNTY

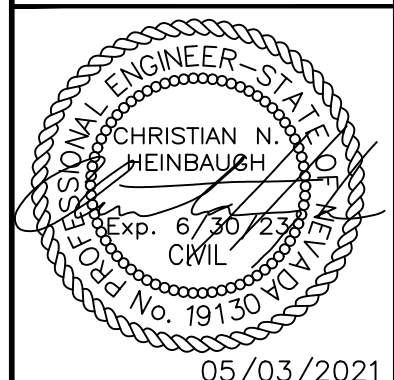
EXISTING EFFLUENT STORAGE POND



NOTE:
FOR MINOR CHANGES IN THE VERTICAL OR HORIZONTAL ALIGNMENT CONTRACTOR SHALL DEFLECT THE WATER MAIN IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.

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KHA PROJECT	192049002
DATE	05/03/2021
SCALE:	AS SHOWN
DESIGNED BY:	CNH
DRAWN BY:	IML
CHECKED BY:	CNH

**EFFLUENT LINE
PLAN & PROFILE**

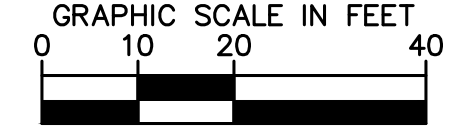
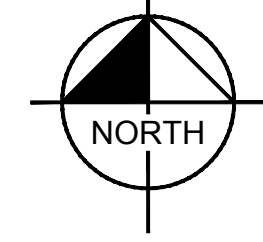
**FIELD CREEK
EFFLUENT FILL
STATION
RENO, NV**

SHEET NUMBER
C5

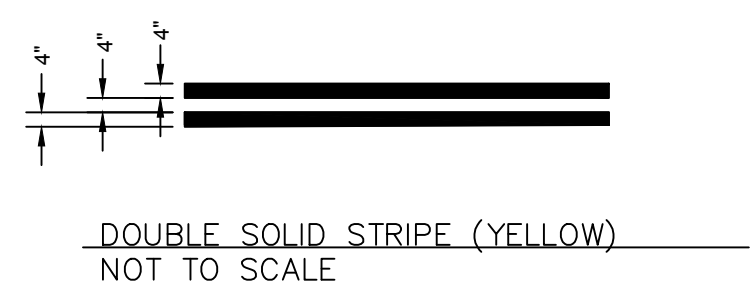
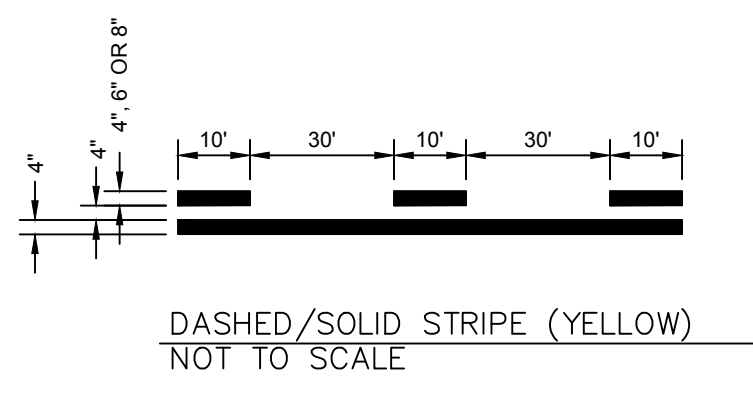
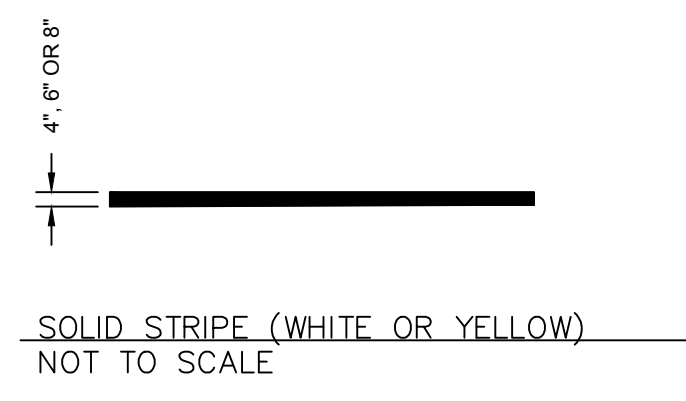
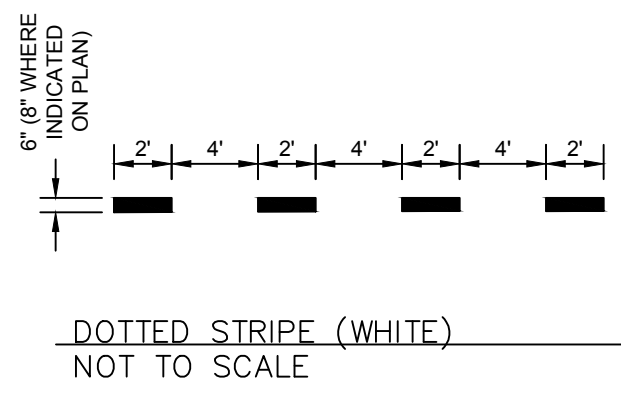
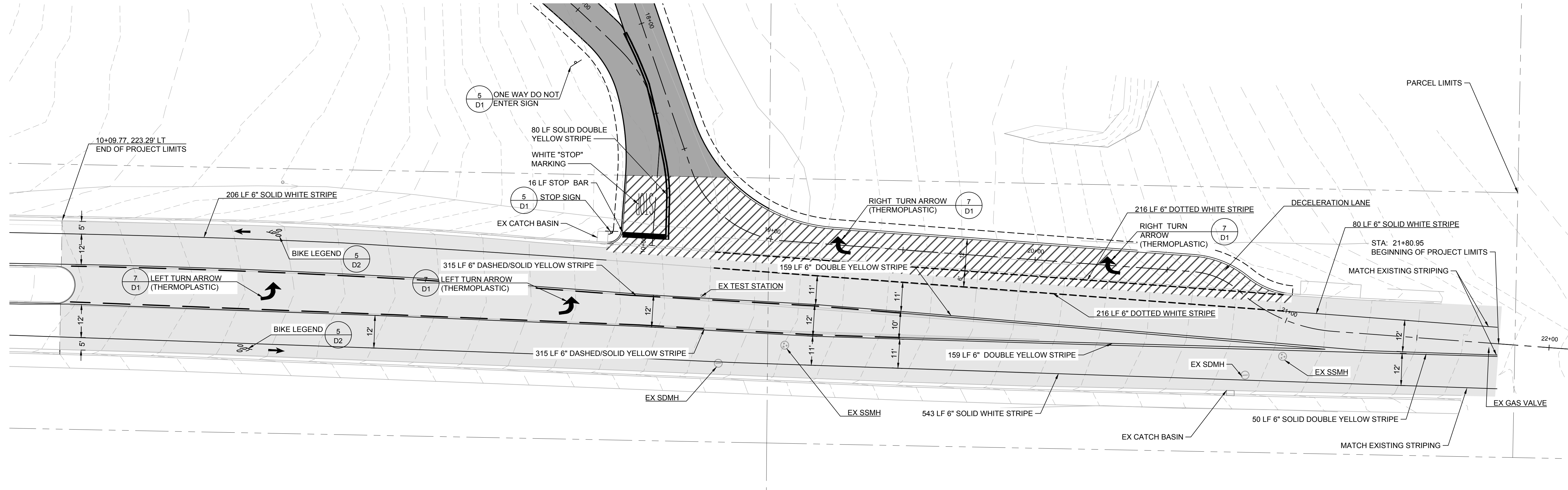


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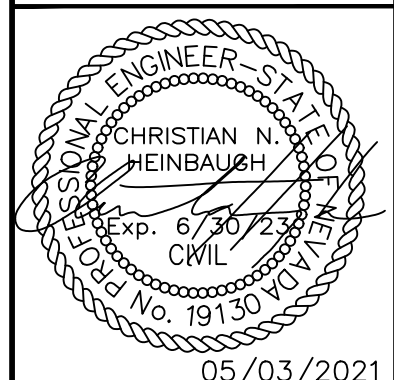
- LEGEND**
- PROPOSED DRIVEWAY (4" HMA ON 8" AB) WITH TYPE 2 SLURRY
 - PROPOSED DECELERATION LANE (6" HMA ON 12" AB) WITH TYPE 2 SLURRY
 - PROPOSED TYPE 2 SLURRY



No.	REVISIONS	DATE	BY

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KHA PROJECT	192049002
DATE	05/03/2021
SCALE:	AS SHOWN
DESIGNED BY:	CNH
DRAWN BY:	IML
CHECKED BY:	CNH

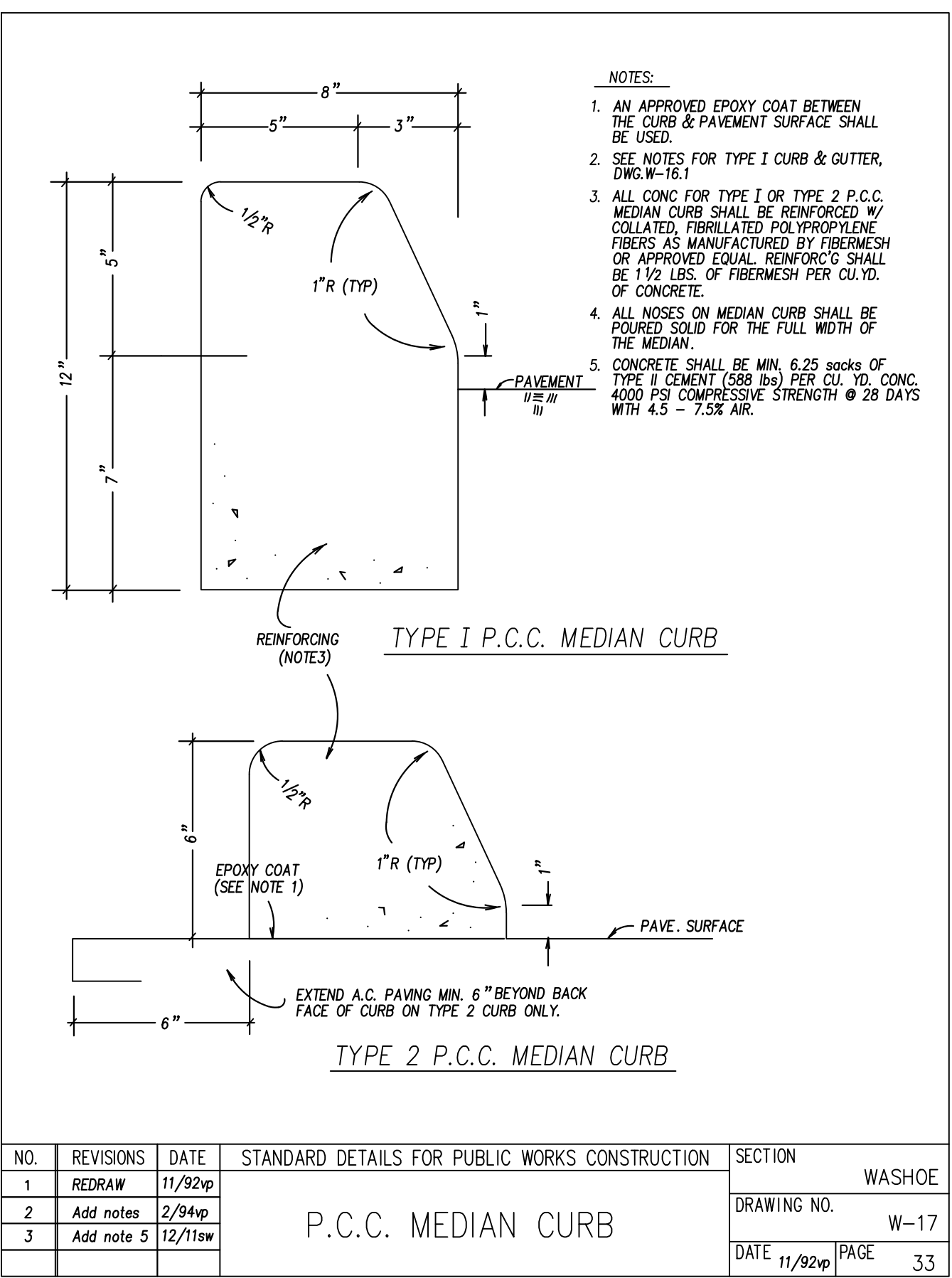
STRIPING AND SIGNAGE

FIELD CREEK EFFLUENT FILL STATION RENO, NV

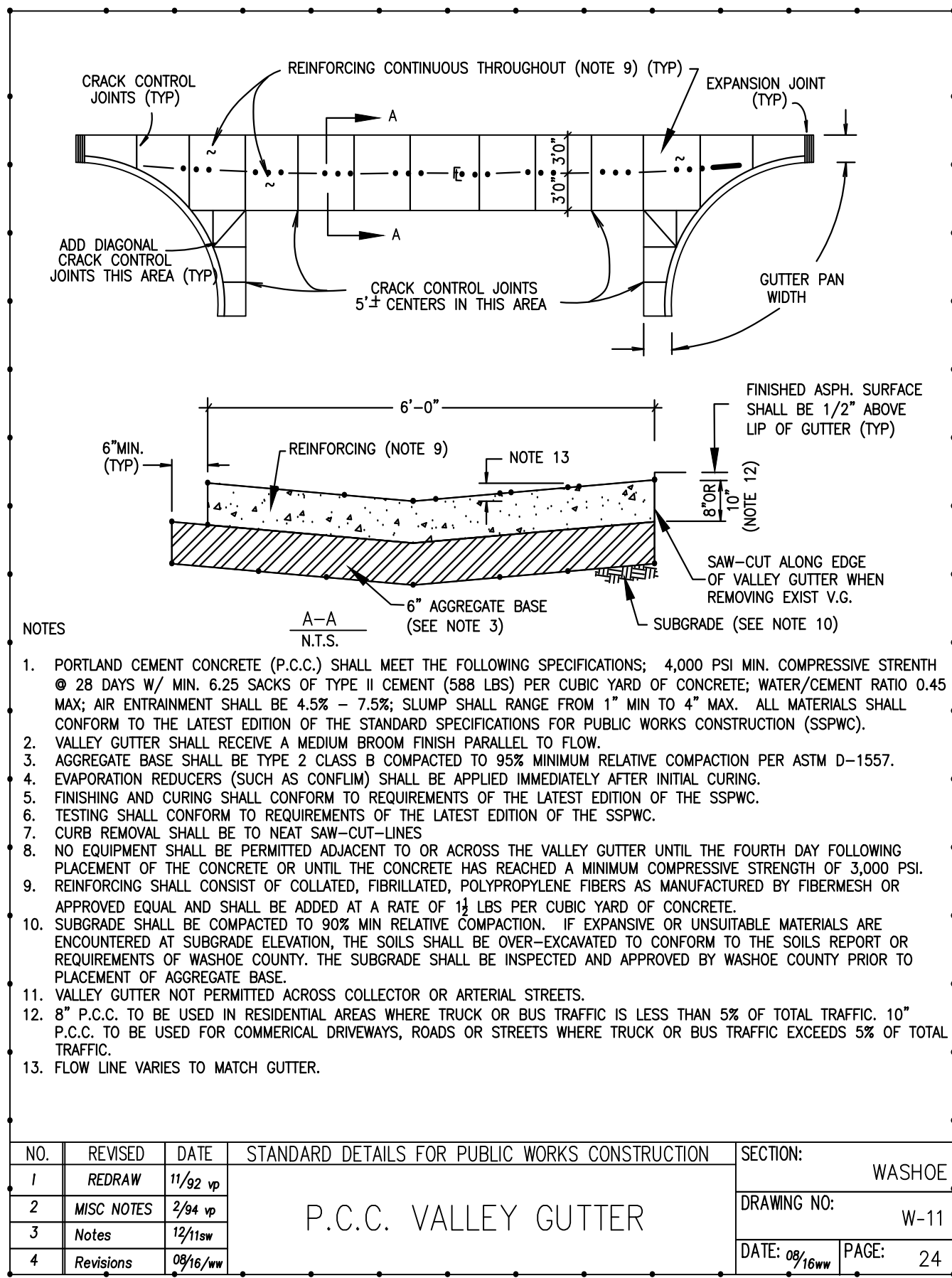
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C6



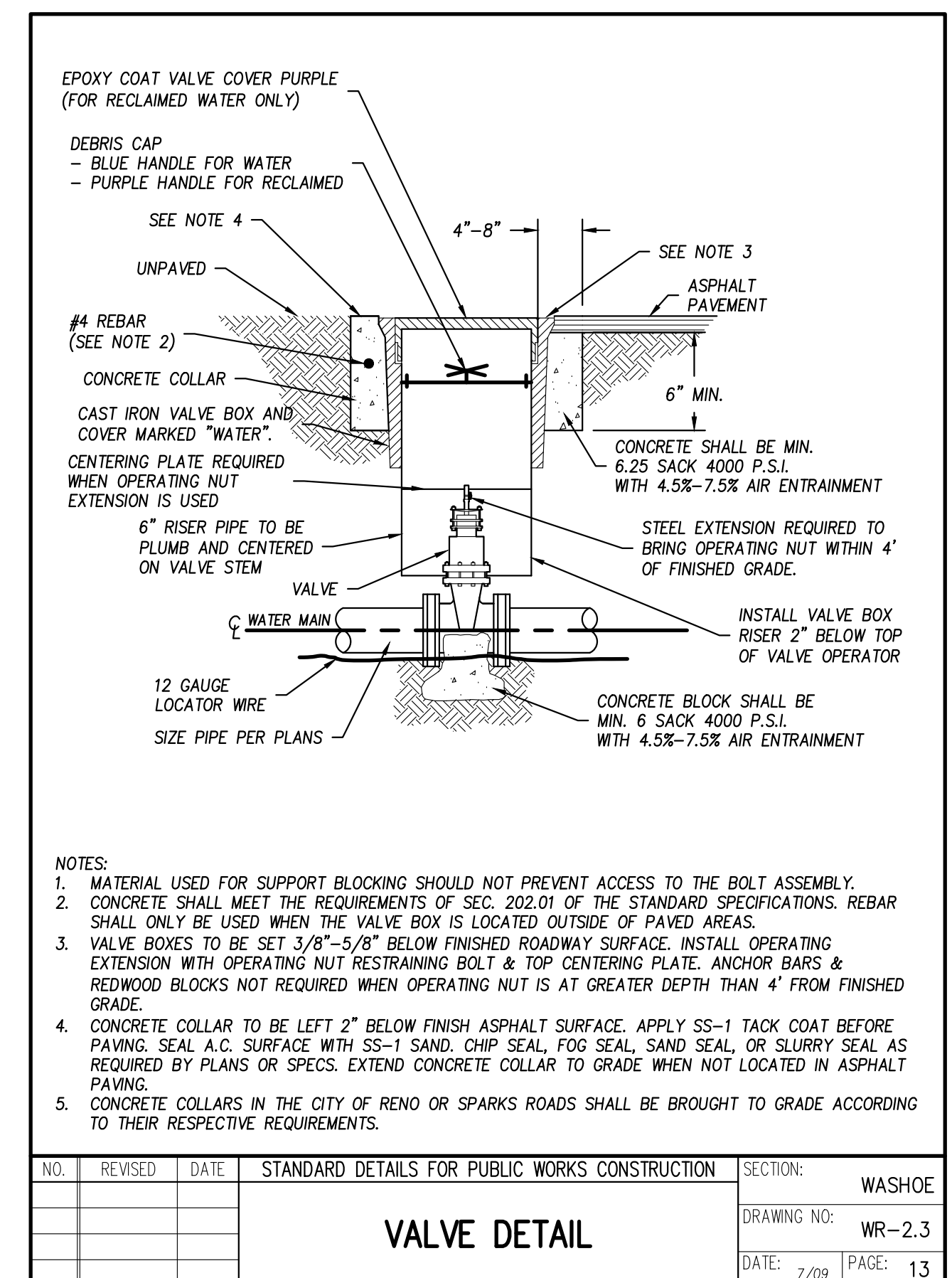
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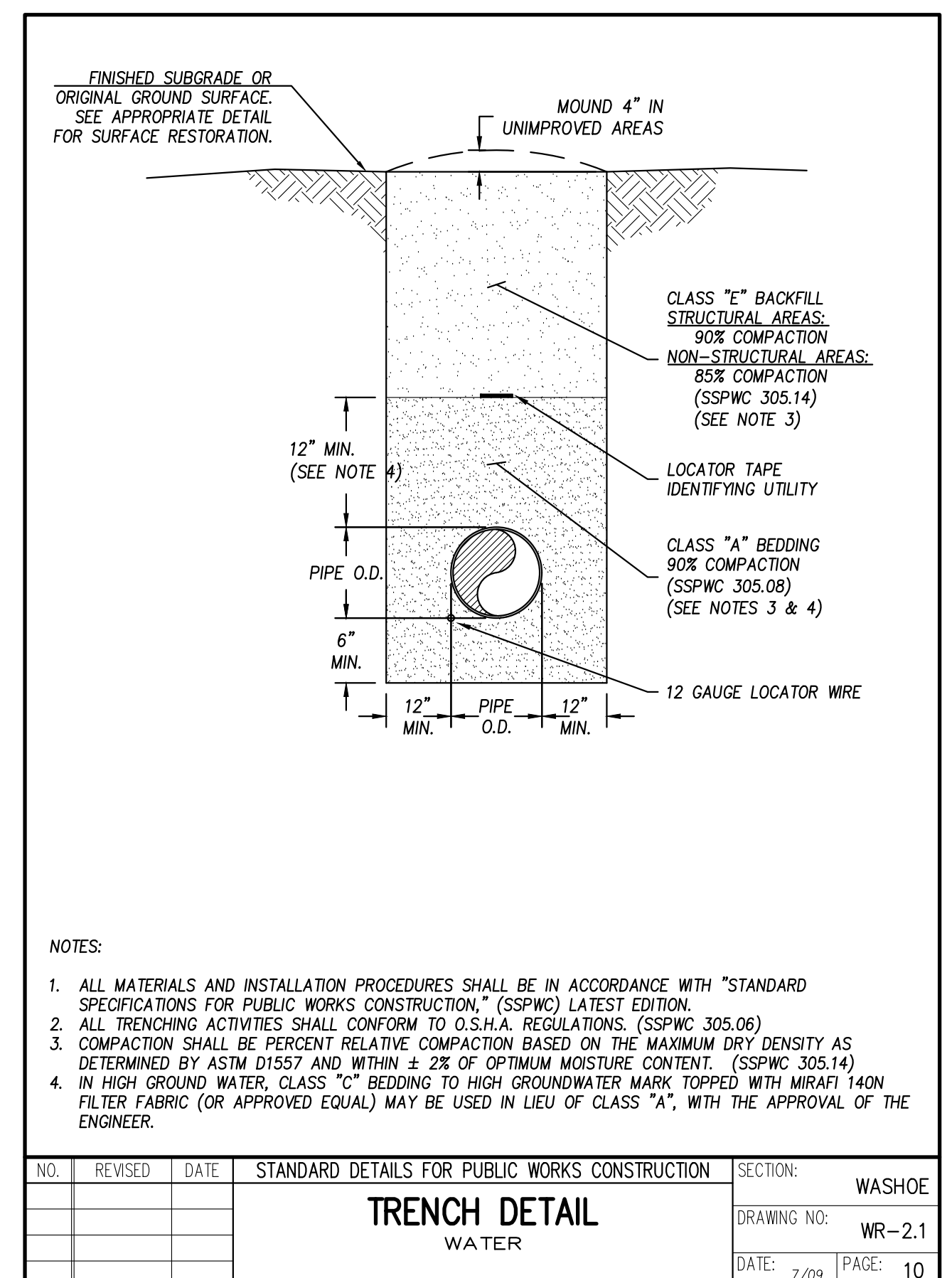
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2	Add notes	2/94sp	P.C.C. MEDIAN CURB	DATE:	11/92sp
3	Add note 5	12/11sw		PAGE:	33



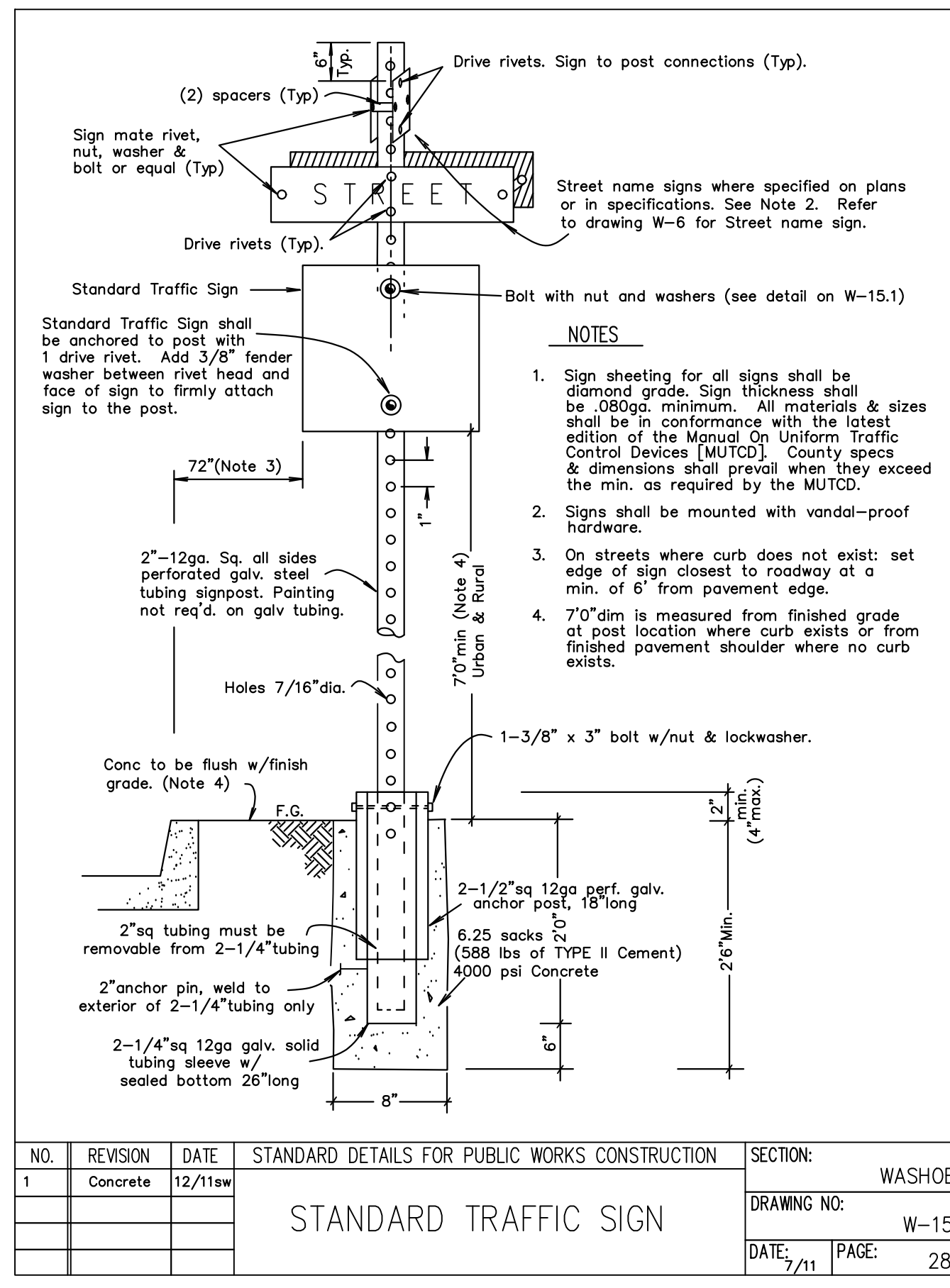
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3	Notes	12/11sw		PAGE:	24
4	Revisions	09/16sw			



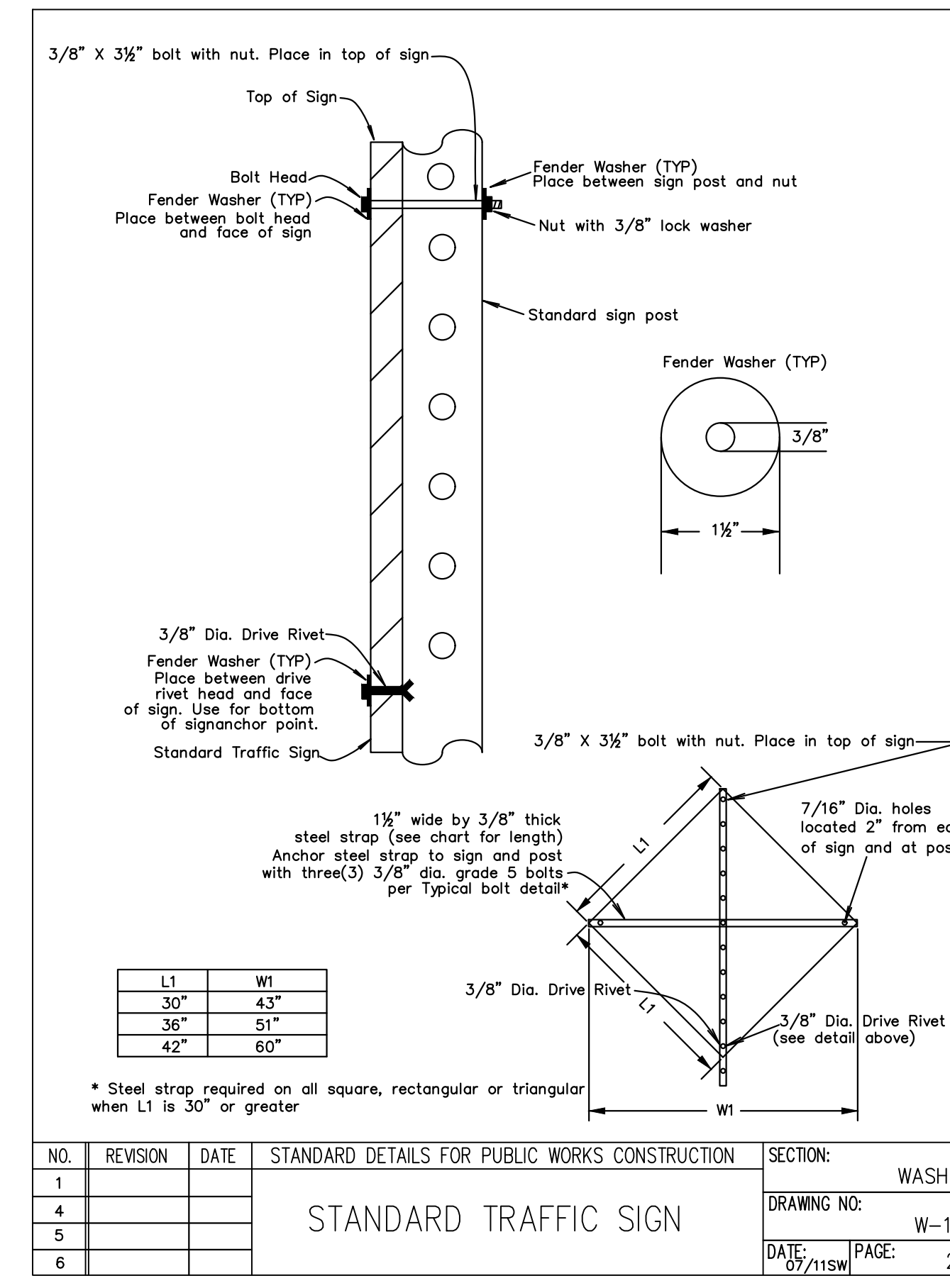
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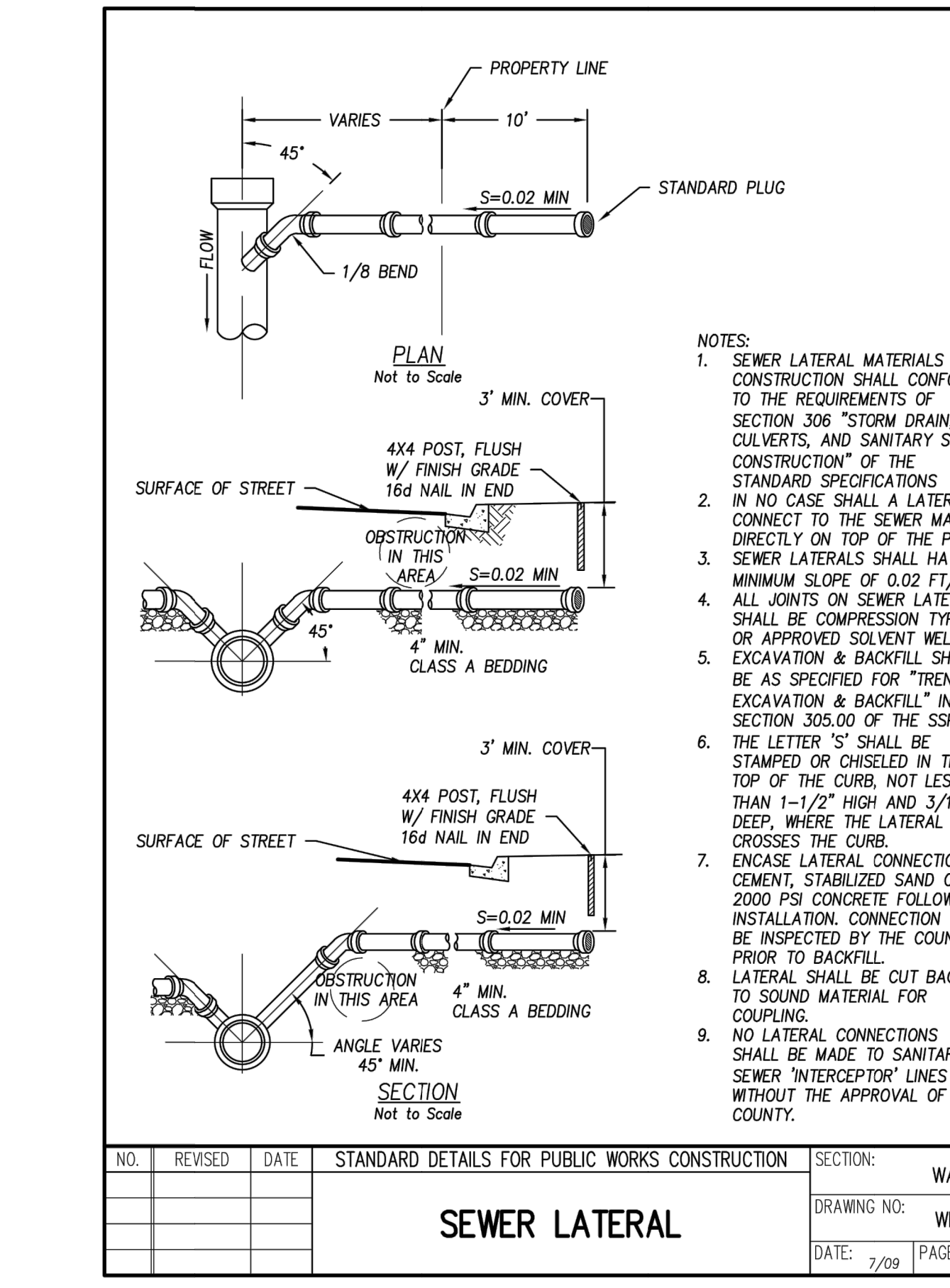
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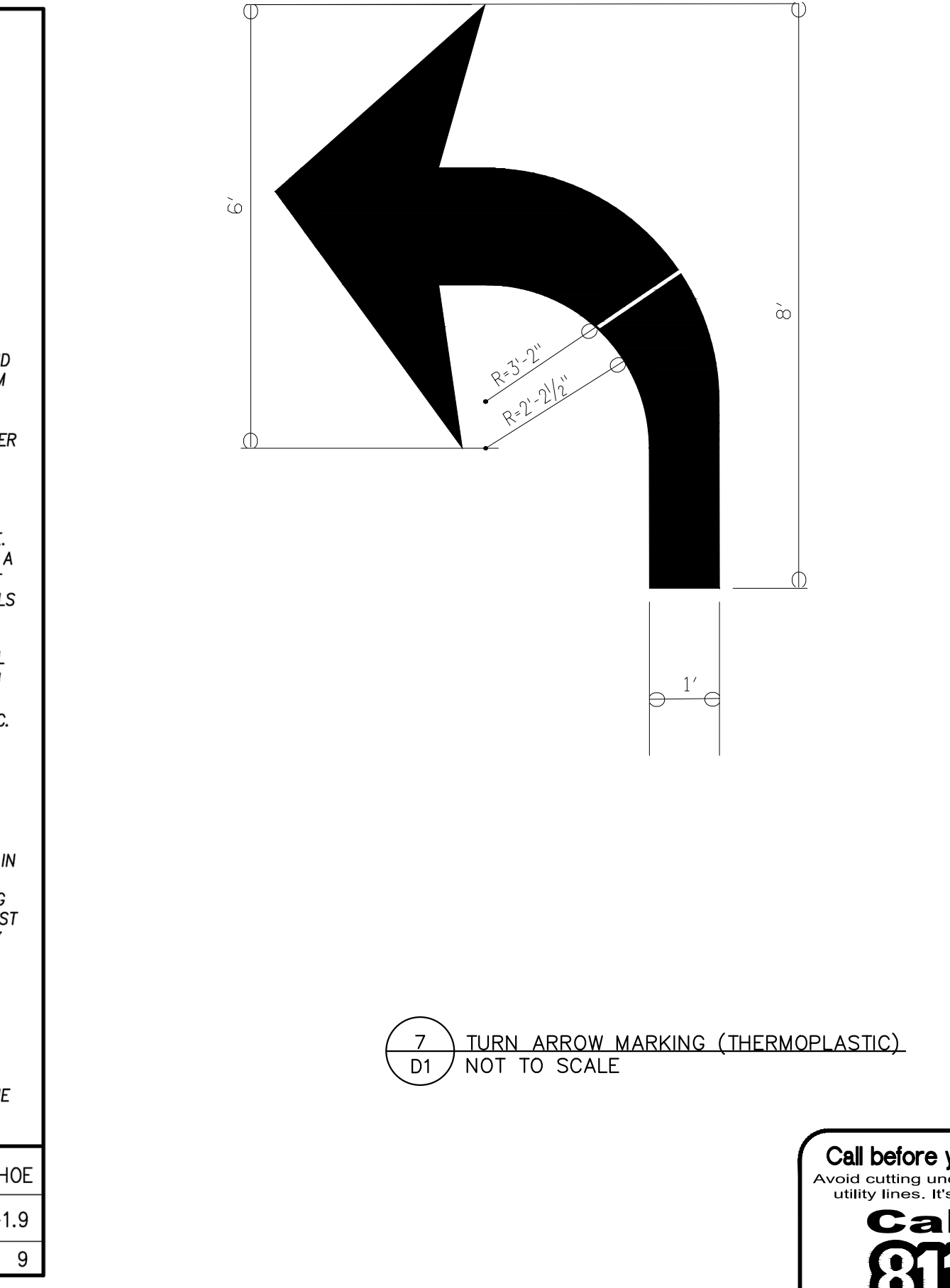
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				PAGE:	28



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4				DATE:	07/11sw
5				PAGE:	28
6					



NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION:	WASHOE
				DRAWING NO.:	WR-1.9
				DATE:	7/09
				PAGE:	9



NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION:	WASHOE
				DRAWING NO.:	WR-1.9
				DATE:	7/09
				PAGE:	9

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REGISTERED PROFESSIONAL ENGINEER - STATE OF NEVADA
 CHRISTIAN HEINBAUGH
 LICENSE NO. 63073
 CIVIL

05/03/2021

KHA PROJECT: 192049002
 DATE: 05/03/2021
 SCALE: AS SHOWN
 DESIGNED BY: CNH
 DRAWN BY: IML
 CHECKED BY: CNH

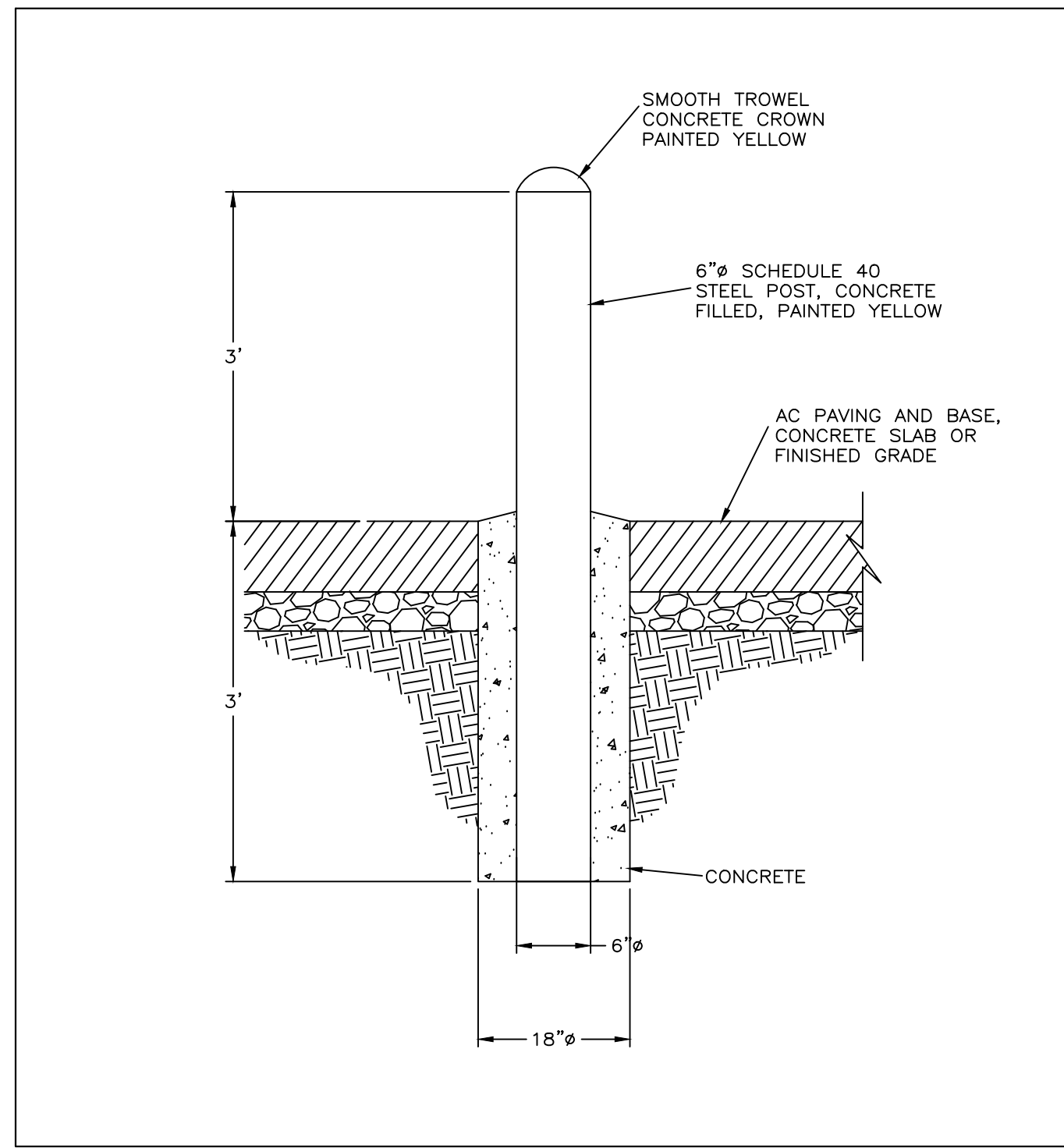
FIELD CREEK EFFLUENT FILL STATION RENO, NV

DETAIL 01 OF 04

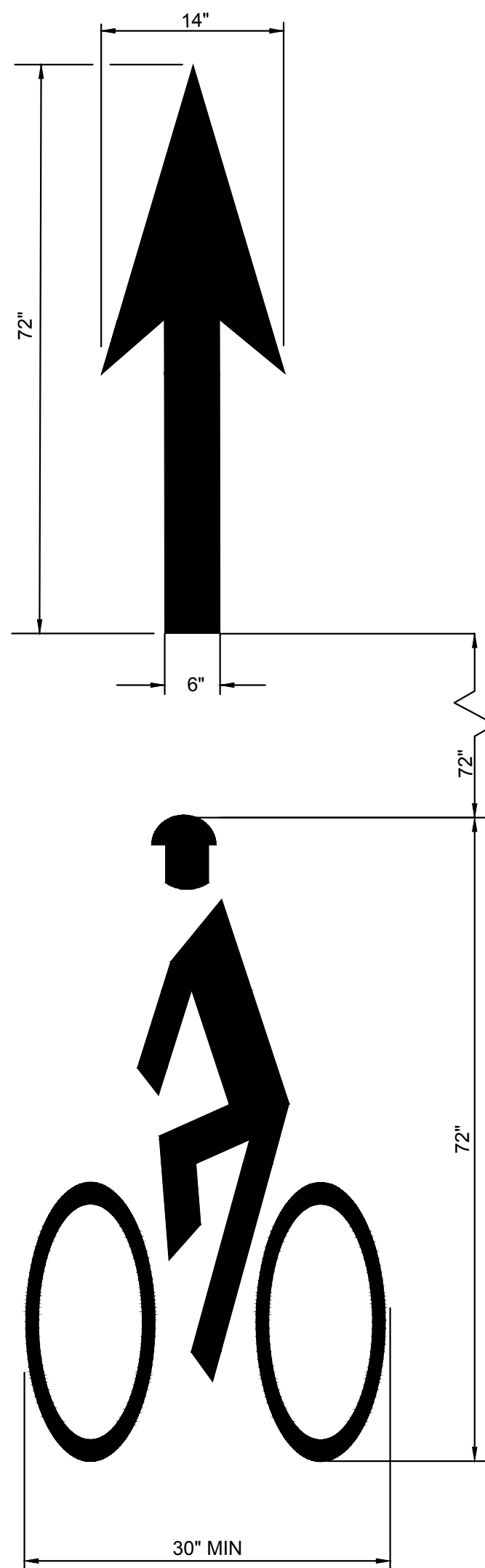
811
 Call before you Dig
 Avoid cutting underground utility lines. It's costly.
 1-800-642-2444

SHEET NUMBER
D1

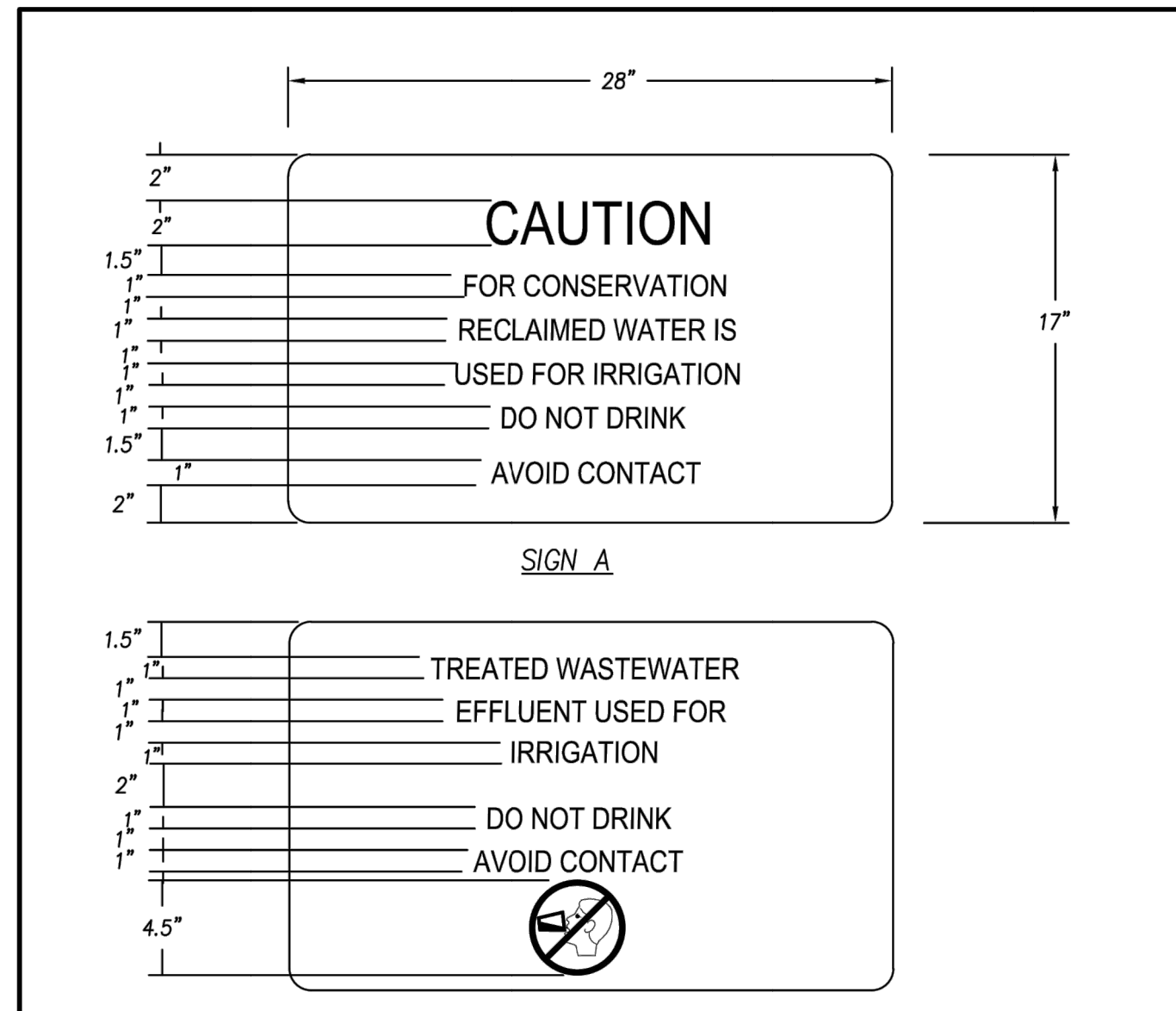
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1 BOLLARD
D2 NOT TO SCALE



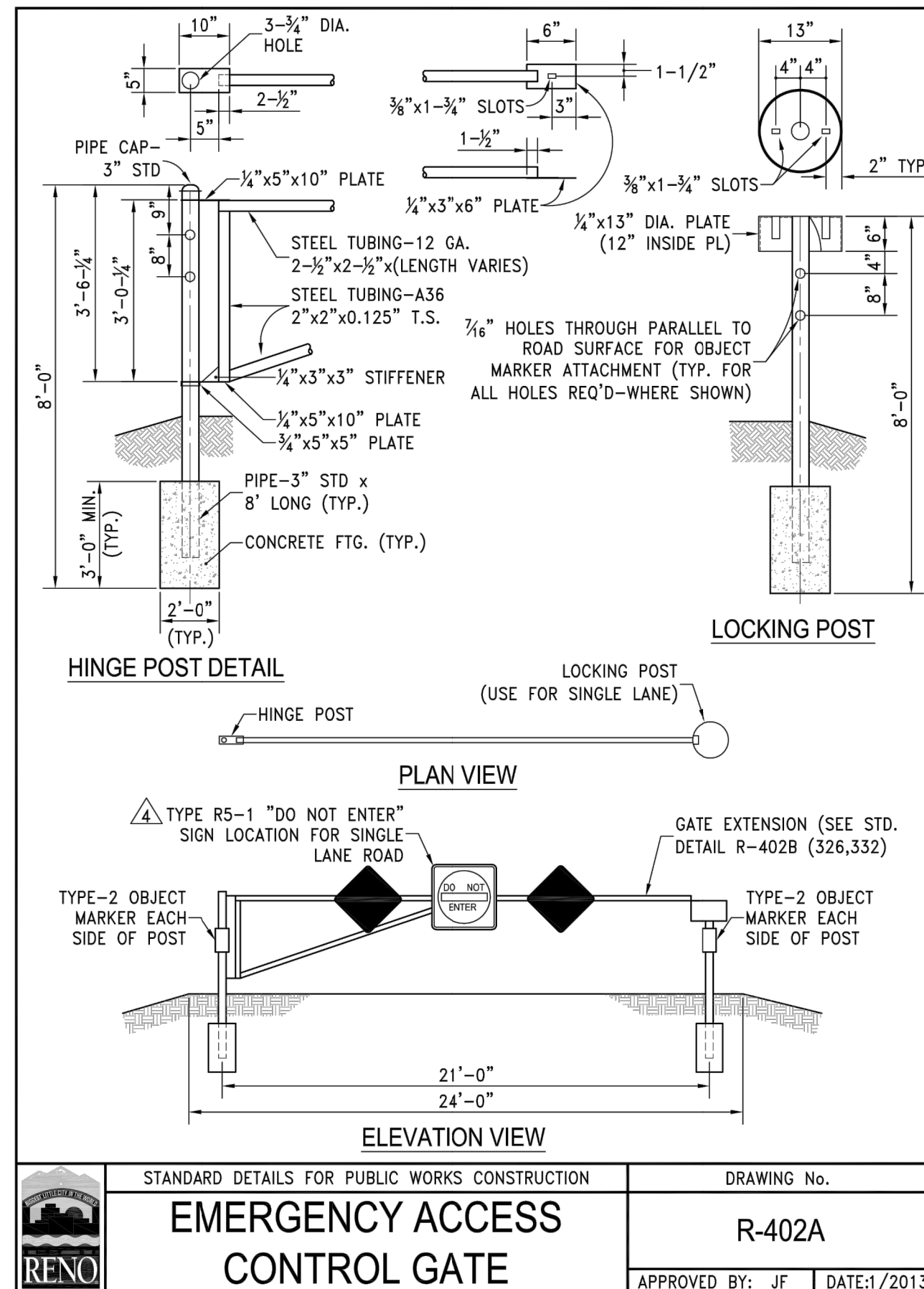
5 BIKE SYMBOL
D2 NOT TO SCALE



NOTES:
 1. LETTERING IS WHITE. BACKGROUND IS PURPLE. SIGN A IS TO BE USED IN CONJUNCTION WITH ANY FENCED RECLAIMED FACILITY; SIGN B TO BE USED WHEN ADVERTISING LANDSCAPE ISLANDS, MEDIANS, ETC.
 2. SIGN MATERIAL SHALL BE 0.1 INCH THICK ALUMINUM. ALUMINUM SHALL BE DEGREASED BEFORE PAINTING. PAINT SHALL BE ALKYD ENAMEL.
 3. MAXIMUM SPACING FOR ROADWAY LANDSCAPING SHALL BE 500 FEET.
 4. SIGN A TO BE POSTED AT EACH ENTRANCE TO THE PROPERTY.
 5. SIGN SIZE MAY BE SCALED DOWN TO 8" X 12" WHEN REQUIRED BY DWR.

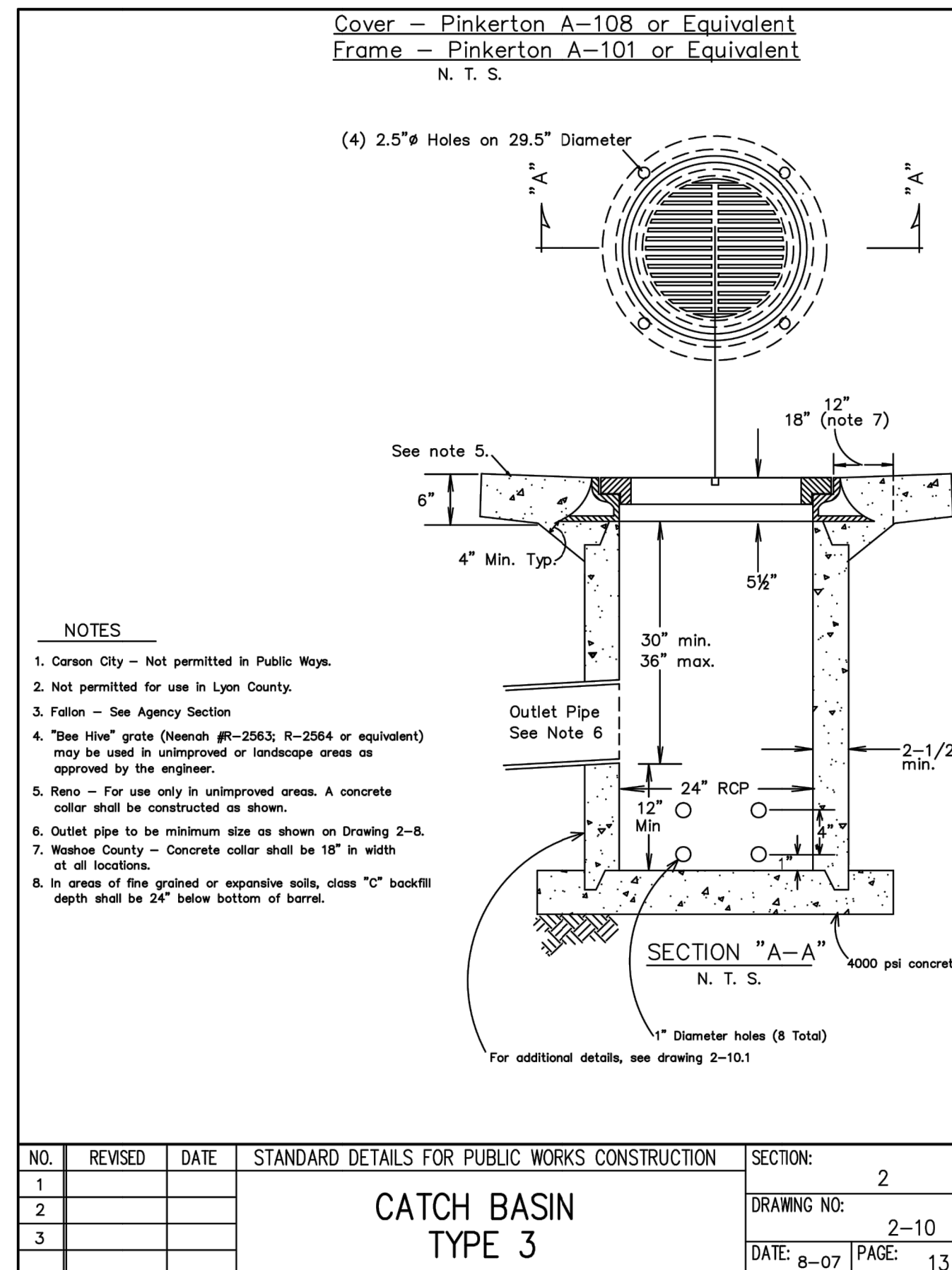
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			RECLAIMED WATER SIGNAGE REQUIREMENTS	WASHOE
				DRAWING NO: WR-2.21
				DATE: 5/09 PAGE: 36

2 RECLAIMED WATER SIGNAGE REQUIREMENT
D2 NOT TO SCALE



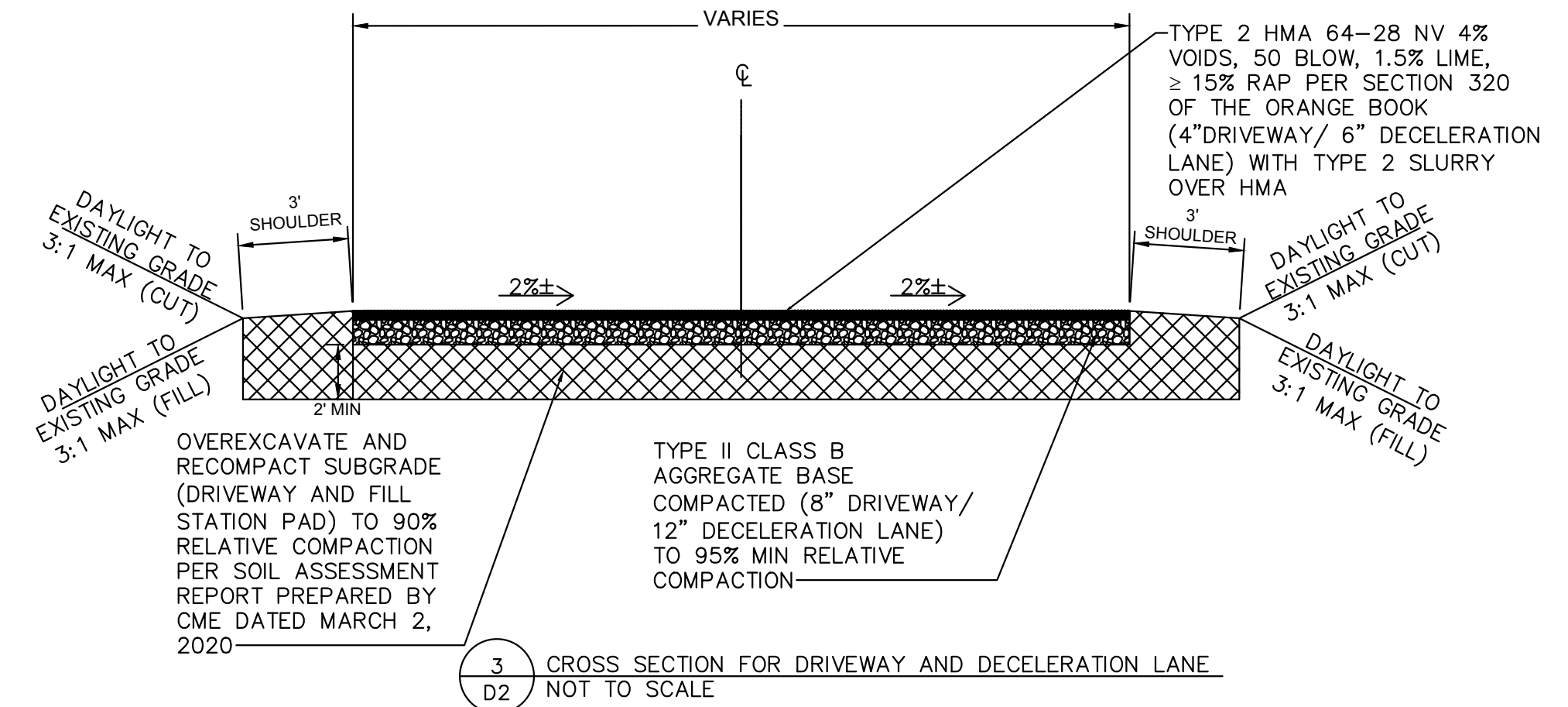
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			EMERGENCY ACCESS CONTROL GATE	2
				DRAWING NO: R-402A
			APPROVED BY: JF DATE: 1/2013	DATE: 8-07 PAGE: 13

6 GATE
D2 NOT TO SCALE

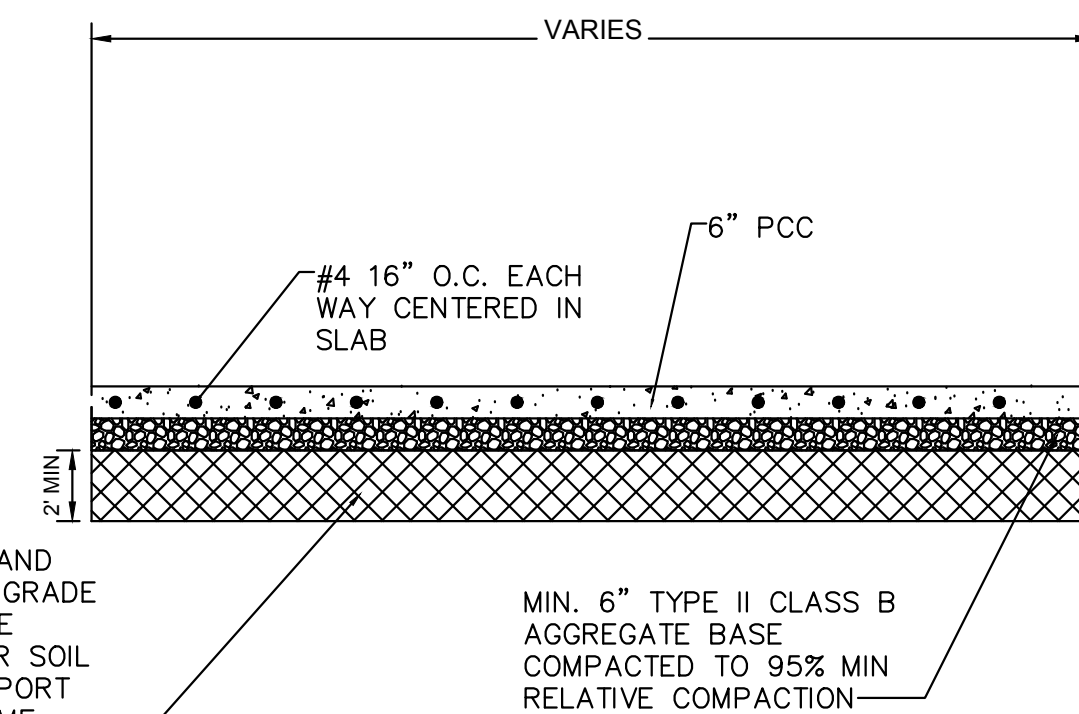


NO.	REVISED	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION:
			CATCH BASIN TYPE 3	2
				DRAWING NO: 2-10
				DATE: 8-07 PAGE: 13

7 CATCH BASIN
D2 NOT TO SCALE



3 CROSS SECTION FOR DRIVEWAY AND DECELERATION LANE
D2 NOT TO SCALE

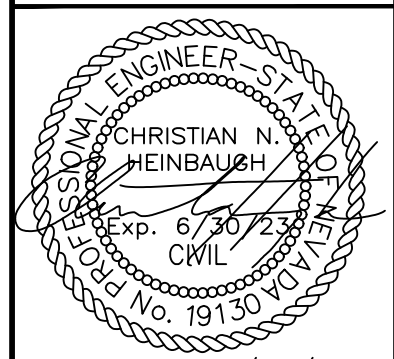


4 CROSS SECTION FOR CONCRETE SECTION
D2 NOT TO SCALE

- NOTES:
- PORTLAND CEMENT CONCRETE (P.C.C.) SHALL MEET THE FOLLOWING SPECIFICATIONS: 4,000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS W/ MIN. 6.25 SACKS OF TYPE II CEMENT (688 LBS) PER CUBIC YARD OF CONCRETE; WATER/CEMENT RATIO 0.45 MAX; AIR ENTRAINMENT SHALL BE 4.5% - 7.5%; SLUMP SHALL RANGE FROM 1" MIN TO 4" MAX. IF P.C.C. DRIVEWAY APRON IS COLORED CONCRETE, CONCRETE SHALL BE A MINIMUM OF 7 SACKS OF TYPE II CEMENT (688 LBS) PER CU. YD. OF CONCRETE - 4000 PSI COMPRESSIVE STRENGTH @ 28 DAYS WITH 4.5 - 7.5% AIR.
 - ALL MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC) EXCEPT WHERE SPECIFIED IN WASHOE COUNTY DETAILS/SPECIFICATIONS.
 - CONCRETE SHALL BE FINISHED AND CURED IN ACCORDANCE WITH METHODS FOUND IN THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
 - REINFORCING FOR ALL DRIVEWAY APRONS/CURB/GUTTERS SHALL CONSIST OF COLLATED, FIBRILLATED, POLYPROPYLENE FIBERS AS MFD. BY FIBERMESH OR APPROVED EQUAL. ADD 1 1/2 LBS FIBERMESH PER CU. YD. OF CONCRETE.
 - CONCRETE FOR DRIVEWAY APRON SHALL RECEIVE A MEDIUM BROOM FINISH.
 - TYPE 2 CLASS B AGGREGATE BASE SHALL BE COMPACTED TO 95% MINIMUM RELATIVE COMPACTION PER ASTM D-1557.
 - SUBGRADE SHALL BE COMPACTED TO 90% MIN RELATIVE COMPACTION. IF EXPANSIVE OR UNSUITABLE MATERIALS ARE ENCOUNTERED AT SUBGRADE ELEVATION, THE SOILS SHALL BE OVER-EXCAVATED TO CONFORM TO THE SOILS REPORT OR REQUIREMENTS OF WASHOE COUNTY. THE SUBGRADE SHALL BE INSPECTED AND APPROVED BY WASHOE COUNTY PRIOR TO PLACEMENT OF AGGREGATE BASE.
 - EVAPORATION REDUCERS (SUCH AS CONFLIM) SHALL BE APPLIED IMMEDIATELY AFTER INITIAL CURING.

NO.	REVISIONS	DATE	BY

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05/03/2021
 DESIGNED BY: CNH
 DRAWN BY: ML
 CHECKED BY: CNH

KHA PROJECT: 192049002
 DATE: 05/03/2021
 SCALE: AS SHOWN
 DESIGNED BY: CNH
 DRAWN BY: ML
 CHECKED BY: CNH

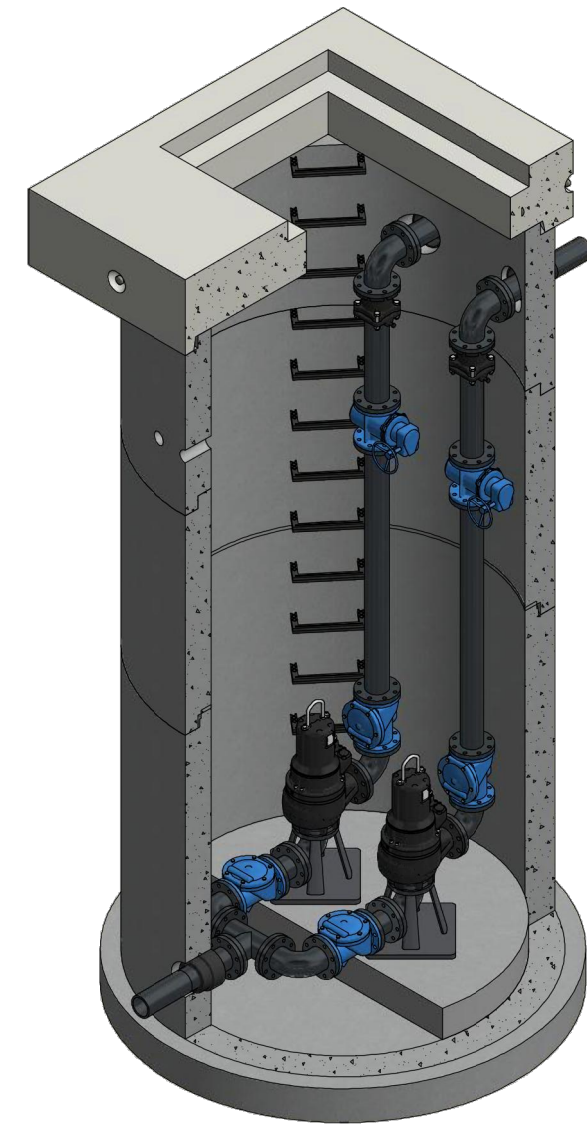
DETAIL 02 OF 04

FIELD CREEK EFFLUENT FILL STATION RENO, NV

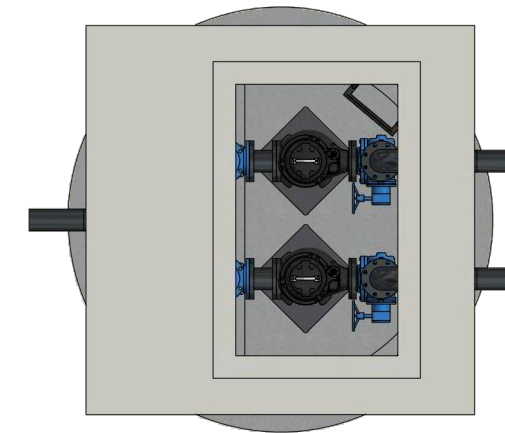
SHEET NUMBER
D2



FIELD CREEK FILL STATION DUPLX DRY PIT STATION



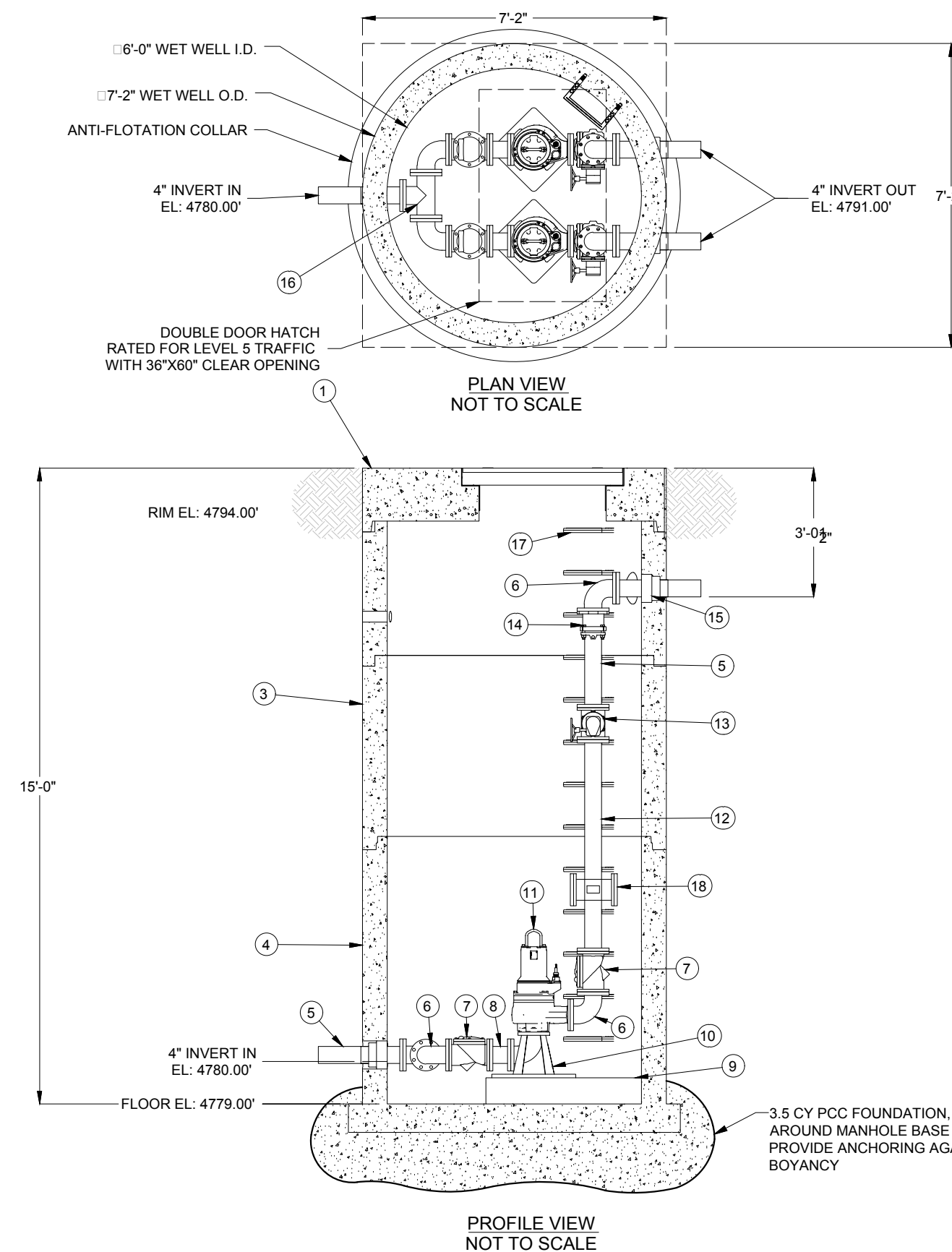
TOP LEFT ISOMETRIC VIEW w/ SECTION CUT
NOT TO SCALE



PLAN VIEW
NOT TO SCALE



PROFILE VIEW
NOT TO SCALE

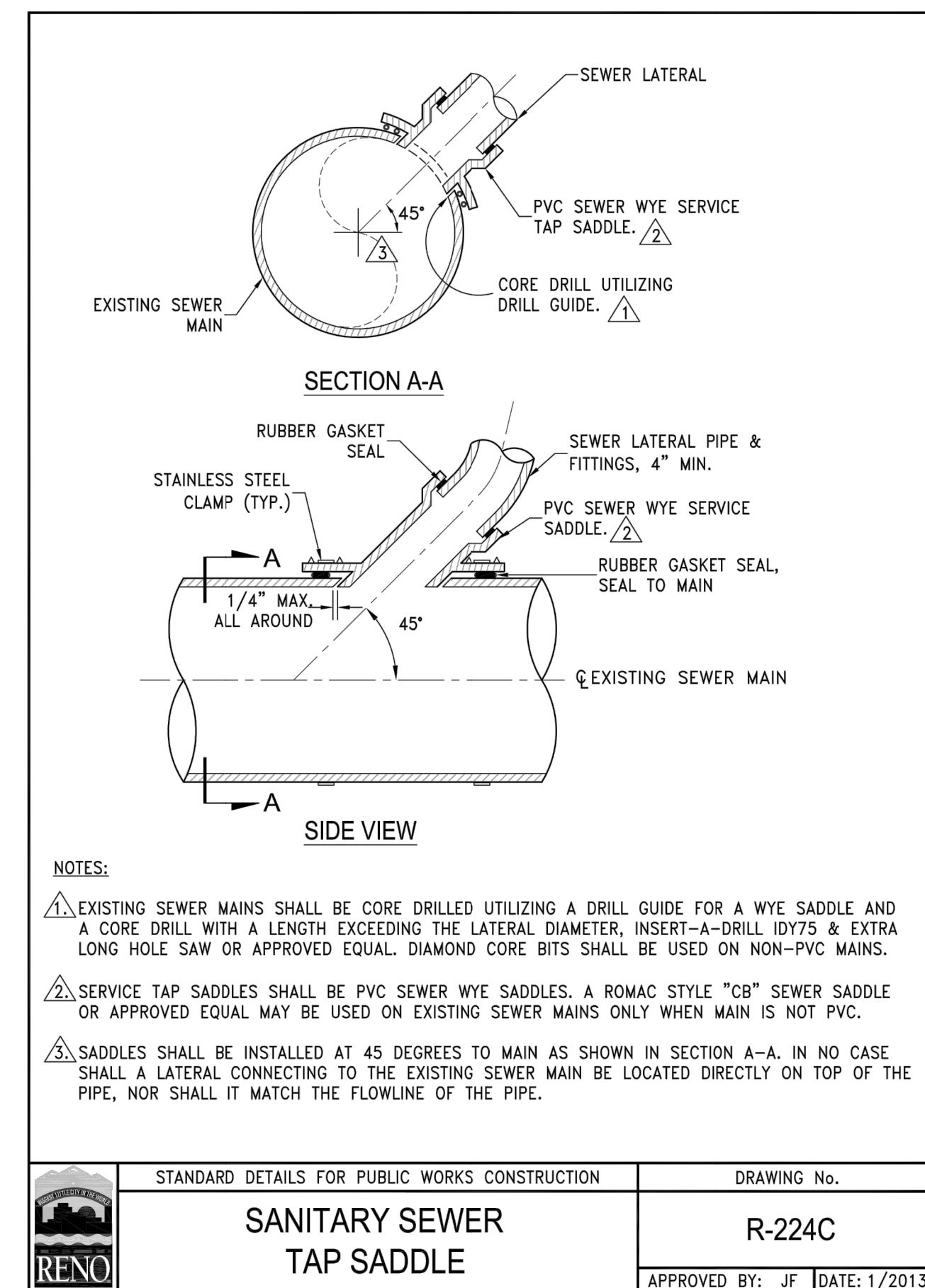


1 DUPLEX DRY PIT STATION
D3 NOT TO SCALE

BILL OF MATERIALS		
ITEM	QTY	DESCRIPTION
1	1	MANHOLE D728x15 FLAT TOP 3660 E
2	1	72IN MANHOLE FLAT TOP
3	3	72IN MANHOLE BARREL
4	1	72IN MANHOLE BASE
5	5	PIPE 4IN FLG X PE DUCTILE IRON SPOOL 2FT
6	8	90 DEG ELBOW 4IN DUCTILE IRON FLG
7	4	SWING CHECK VALVE 4IN VAL-MATIC 504A
8	2	PIPE 4IN FLG X FLG DUCTILE IRON SPOOL 6IN
9	1	PUMP PEDESTAL
10	2	PUMP STAND
11	2	SUBMERSIBLE PUMP HOMA AMX446-190/2.8T/C
12	2	PIPE 4IN FLG X FLG DUCTILE IRON SPOOL 9FT
13	2	PLUG VALVE 4IN FLG W/ HANDWHEEL FBE INT AND EXT VAL-MATIC 5804R2/7A08
14	2	RFC4 4IN W/ SS HARDWARE ROMAC
15	3	CONNECTOR BOOT S106-8SRWS CORE-SEAL ASTM C923/C1644 WEDGE SDR-35 HOLE-8 4 20-6.40
16	1	TEE 4IN DUCTILE IRON
17	14	LADDER STEP RUNG POLYMER MH ASTM-C478 9-3/16 X 13IN PS2-PF-DF
18	2	ELECTRIC OPERATOR 6" WATER SPECIALTIES MODEL ML04D FLOW METER

PUMP CHARACTERISTICS	
DESCRIPTION	VALUE
DUTY POINT	200 gpm @ 60.5' TDH
MANUFACTURER	HOMA
MODEL NUMBER	AVX444-210/13.0ET
PUMP TYPE	VERTICAL DRY INSTALLATION
MOTOR SIZE	13 HP
REQUIRED POWER SUPPLY	230 V / 3 Phase / 31.6 Amps

NOTE: DUPLEX DRY PIT STATION TO BE COMPLETE PACKAGE AS SHOWN OR ENGINEER APPROVED EQUAL CAPABLE OF PRODUCING 200 GPM @ 60.5' TDH WITH A SUPPLY SUCTION DEPTH OF APPROXIMATELY 14' BELOW EXISTING GRADE.



NOTES:
 1. EXISTING SEWER MAINS SHALL BE CORE DRILLED UTILIZING A DRILL GUIDE FOR A WYE SADDLE AND A CORE DRILL WITH A LENGTH EXCEEDING THE LATERAL DIAMETER, INSERT-A-DRILL ID75 & EXTRA LONG HOLE SAW OR APPROVED EQUAL DIAMOND CORE BITS SHALL BE USED ON NON-PVC MAINS.
 2. SERVICE TAP SADDLES SHALL BE PVC SEWER WYE SADDLES. A ROMAC STYLE "CB" SEWER SADDLE OR APPROVED EQUAL MAY BE USED ON EXISTING SEWER MAINS ONLY WHEN MAIN IS NOT PVC.
 3. SADDLES SHALL BE INSTALLED AT 45 DEGREES TO MAIN AS SHOWN IN SECTION A-A. IN NO CASE SHALL A LATERAL CONNECTING TO THE EXISTING SEWER MAIN BE LOCATED DIRECTLY ON TOP OF THE PIPE, NOR SHALL IT MATCH THE FLOWLINE OF THE PIPE.

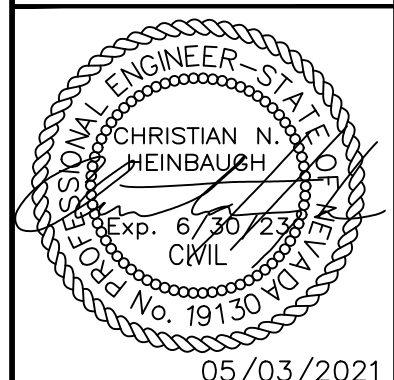
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
SANITARY SEWER TAP SADDLE	R-224C
APPROVED BY: JF	DATE: 1/2013

2 SANITARY SEWER TAP SADDLE
D3 NOT TO SCALE

Plotted By: Larkin, Illinois (Brown), Date: May 04, 2021, 08:02:36am, File Path: K:\REN_Civil\192049 - Washoe County\002 - Field Creek Effluent Fill Station\07 CAD\Plansheets\C-Details.dwg
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KHA PROJECT	192049002
DATE	05/03/2021
SCALE	AS SHOWN
DESIGNED BY	CNH
DRAWN BY	IML
CHECKED BY	CNH

DETAIL 03 OF 04

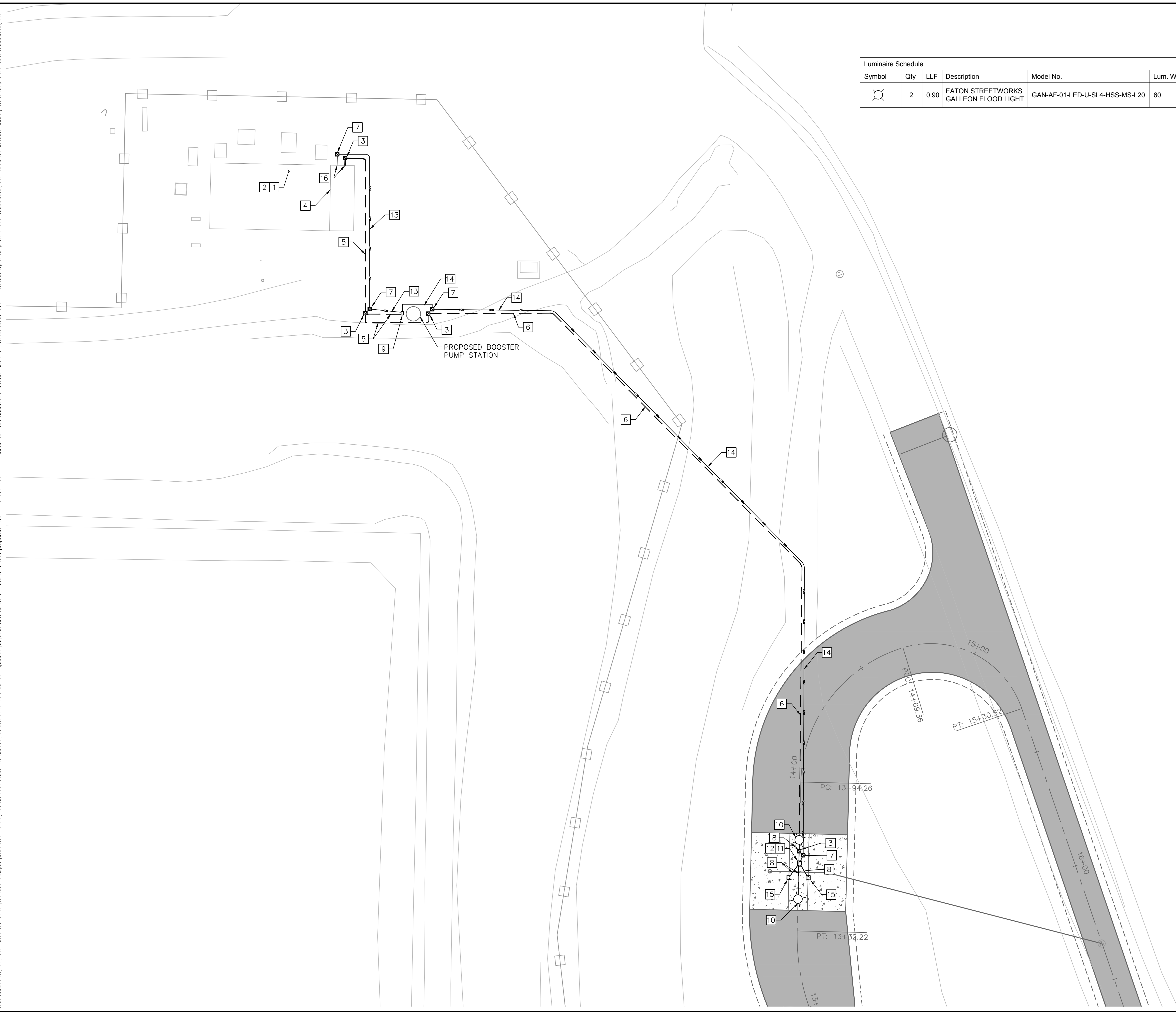
**FIELD CREEK
EFFLUENT FILL
STATION
RENO, NV**



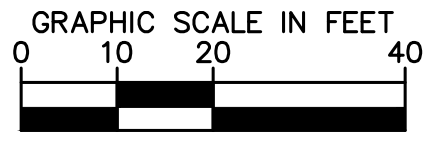
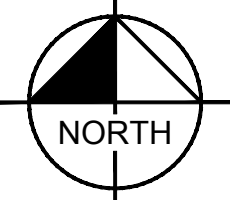
SHEET NUMBER
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Plotted By: Patrick, Tiffany Date: April 26, 2021 01:59:27pm File Path: \\venip01\MT_REN\REN_Civil\192049 - Washoe County\02 - Field Creek Effluent Fill Station\07 CAD\Plansheets\E-Layout.dwg

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Luminaire Schedule						
Symbol	Qty	LLF	Description	Model No.	Lum. Watts	Mtg Height
	2	0.90	EATON STREETWORKS GALLEON FLOOD LIGHT	GAN-AF-01-LED-U-SL4-HSS-MS-L20	60	15'

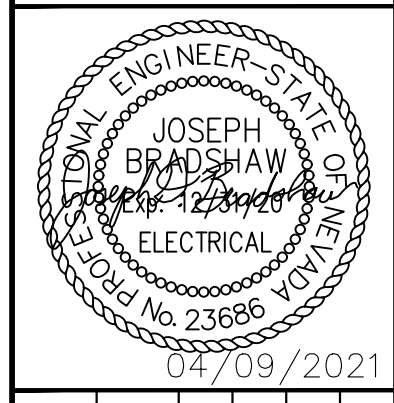


CONSTRUCTION NOTES

- 1 INSTALL NEW 480V TO 120/240V, SINGLE PHASE MINI POWER ZONE TO BE SERVICED FROM EXISTING MOTOR CONTROL CENTER B ON BREAKER SPACES CURRENTLY MARKED AS "SPACE". INSTALL (2) 20A/1P BREAKERS ON MINI POWER ZONE. SEE SHEET E2 FOR APPROXIMATE INSTALLATION LOCATION. SEE SYSTEM ONE-LINE DIAGRAM SHEET E4.
- 2 INSTALL NEW 80A/3P BREAKER ON MCC-B TO SERVICE VFD CONTROL CABINET. SEE SYSTEM ONE-LINE DIAGRAM SHEET E4.
- 3 INSTALL NEW NO. 5 POWER PULLBOX. SEE DETAIL 3 SHEET E3.
- 4 INSTALL NEW ANTENNA ON ROOF OF BUILDING FOR WIRELESS COMMUNICATION BETWEEN FMPlus SOFTWARE AND FUEL MANAGEMENT UNIT AT FILLING ISLAND. CONTROLS CONTRACTOR TO CONNECT FUEL MASTER ANTENNA TO EXISTING SCADA PANEL.
- 5 INSTALL NEW 4-2" SCH. 40 DIRECT BURIED PVC POWER CONDUIT. SEE SHEET E4 FOR CONDUIT FILL SCHEDULE.
- 6 INSTALL NEW 2-2" SCH. 40 DIRECT BURIED PVC POWER CONDUIT. SEE SHEET E4 FOR CONDUIT FILL SCHEDULE.
- 7 INSTALL NEW NO. 5 COMMUNICATIONS PULLBOX. SEE DETAIL 3 SHEET E3.
- 8 INSTALL NEW 1-2" SCH. 40 DIRECT BURIED PVC POWER CONDUIT. SEE SHEET E4 FOR CONDUIT FILL SCHEDULE.
- 9 INSTALL NEW VFD PUMP CONTROL PANEL MOUNTED ON NEW UNISTRUT RACK PER MANUFACTURER RECOMMENDATIONS. SEE SHEET E4 AND E5 FOR SYSTEM SINGLE-LINE DIAGRAM.
- 10 INSTALL NEW EATON STREETWORKS GALLEON FLOOD LIGHT WITH HOUSE-SIDE SHIELD AND OCCUPANCY SENSOR. SEE LUMINAIRE SCHEDULE THIS SHEET FOR FIXTURE INFORMATION. SEE DETAIL 1 SHEET E3 FOR FOUNDATION DETAIL.
- 11 INSTALL NEW FUEL MASTER PLUS FUEL MANAGEMENT UNIT PER MANUFACTURER RECOMMENDATIONS.
- 12 INSTALL NEW ANTENNA MOUNTED ON UNISTRUT RACK ADJACENT TO FUEL MANAGEMENT UNIT FOR WIRELESS COMMUNICATION TO FMPlus SOFTWARE AND EXISTING SCADA SYSTEM. INSTALL 12"x12"x4" NEMA 3R ENCLOSURE MOUNTED ON UNISTRUT RACK TO HOUSE FIBER MEDIA CONVERTER FOR COMMUNICATIONS CONNECTION BETWEEN THE VFD CONTROL PANEL AND FUEL MANAGEMENT UNIT. SEE SHEET E4 FOR CONTROLS DIAGRAM.
- 13 CONNECT COM 1 FROM THE PLC IN THE VFD CONTROL CABINET TO SCADA CONTROL SYSTEM IN ELECTRICAL BUILDING USING CAT-6 CABLE. CONTROLS CONTRACTOR TO INSTALL AN INTERIOR JUNCTION BOX ENCLOSURE AND OTHER EQUIPMENT AS NEEDED FOR INTEGRATING CAT-6 CABLE INTO EXISTING SCADA SYSTEM TO MAKE A COMPLETE AND OPERABLE SYSTEM. SEE SHEET E4 FOR CONTROLS DIAGRAM AND SHEET E5 FOR SYSTEM SINGLE-LINE DIAGRAM.
- 14 CONNECT COM 2 FROM THE PLC IN THE VFD CONTROL CABINET TO MASTER FUEL MANAGEMENT UNIT AT FILL STATION USING 12 STRAND MULTI-MODE FIBER OPTIC CABLE. INSTALL FIBER MEDIA CONVERTERS IN PUMP VFD ENCLOSURE AND AT FILL STATION ENCLOSURE. SEE SHEET E4 FOR CONTROLS DIAGRAM AND SHEET E5 FOR SYSTEM SINGLE-LINE DIAGRAM.
- 15 INSTALL NEW FUEL MASTER HOSE DISPENSER PER MANUFACTURER RECOMMENDATIONS.
- 16 INSTALL PVC COATED RIGID METAL CONDUIT ELBOW FOR TRANSITION OF DIRECT BURIED PVC CONDUIT TO RIGID METAL CONDUIT UP CMU BLOCK WALL. PUNCH THROUGH CMU BLOCK WALL WITH LB TO INTERIOR JUNCTION BOX. SEE SHEET E2 FOR INTERIOR CONDUIT ROUTING.

NO.	REVISIONS	DATE	BY

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KHA PROJECT	192049002
DATE	04/09/2021
SCALE:	AS SHOWN
DESIGNED BY:	JDB
DRAWN BY:	JPT
CHECKED BY:	JDB

ELECTRICAL PLAN

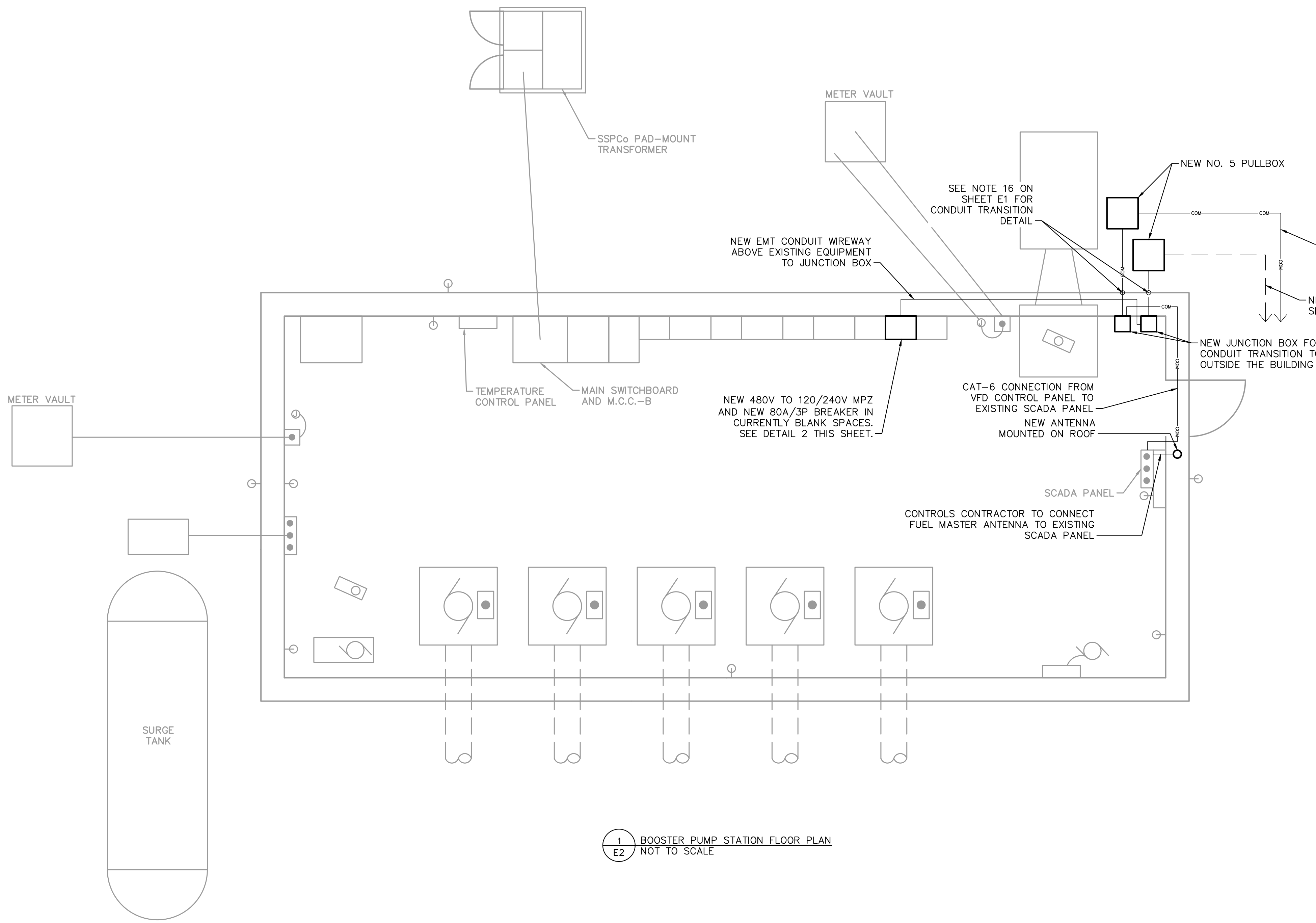
FIELD CREEK
RENO, NV

SHEET NUMBER
E1



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1 BOOSTER PUMP STATION FLOOR PLAN
E2 NOT TO SCALE

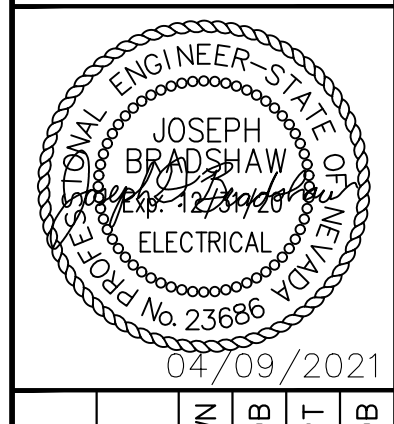


2 MOTOR CONTROL CENTER B
E2 NOT TO SCALE



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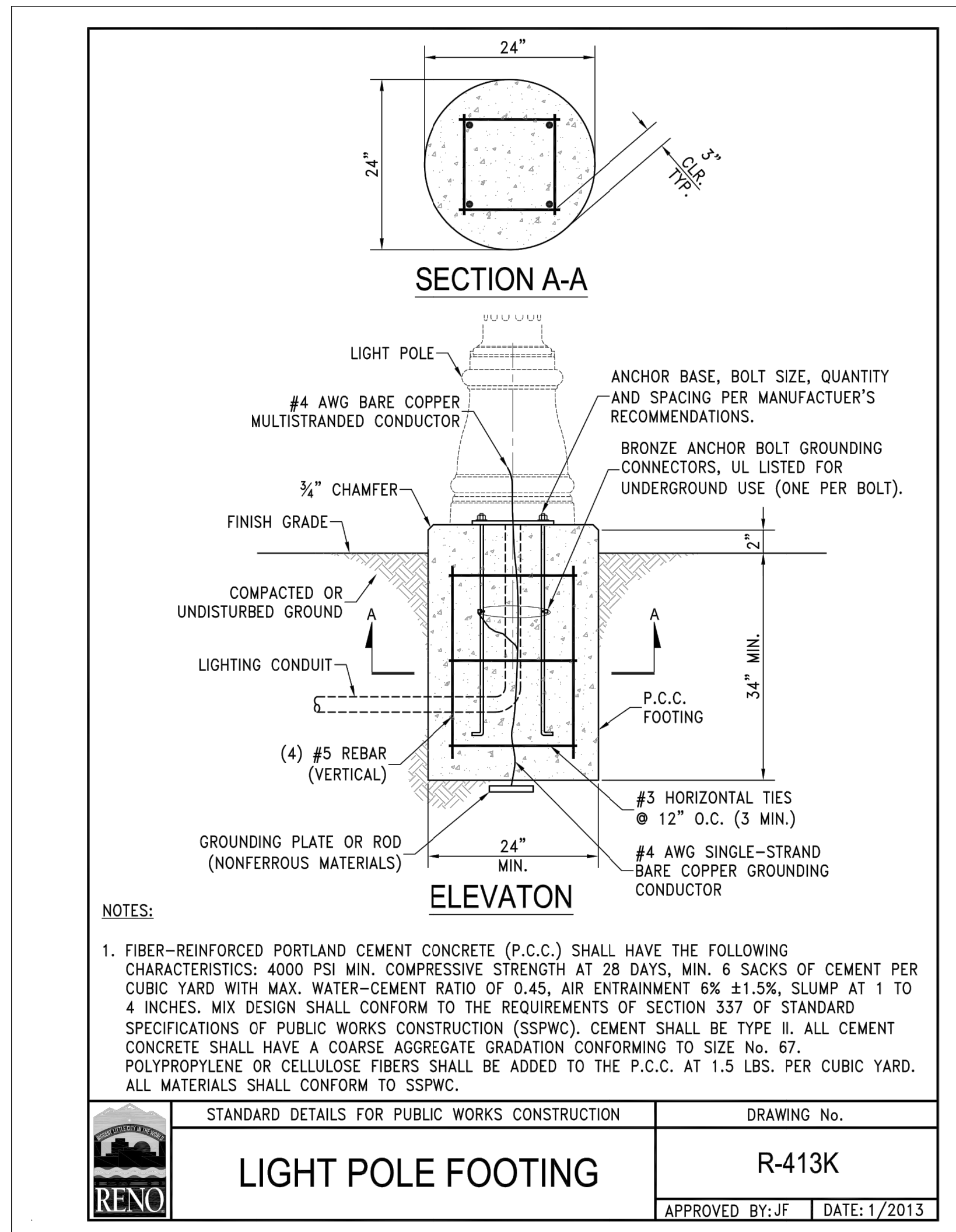
KHA PROJECT 192049002	DATE 04/09/2021	SCALE: AS SHOWN	DESIGNED BY: JDB	DRAWN BY: JPT	CHECKED BY: JDB
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ELECTRICAL PLAN

**FIELD CREEK
RENO, NV**

SHEET NUMBER
E2

Plotted By: Patrick, Tiffany Date: April 26, 2021 01:59:33pm File Path: \\yeni01\MT_REN\REN_Civil\192049 - Washoe County\002 - Field Creek Effluent Fill Station\07 CAD\Plansheets\E-Details.dwg
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NOTES:

1. FIBER-REINFORCED PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC). CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO SSPWC.

	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
	LIGHT POLE FOOTING	R-413K
APPROVED BY: JF		DATE: 1/2013

1 LIGHT POLE FOUNDATION DETAIL
NOT TO SCALE

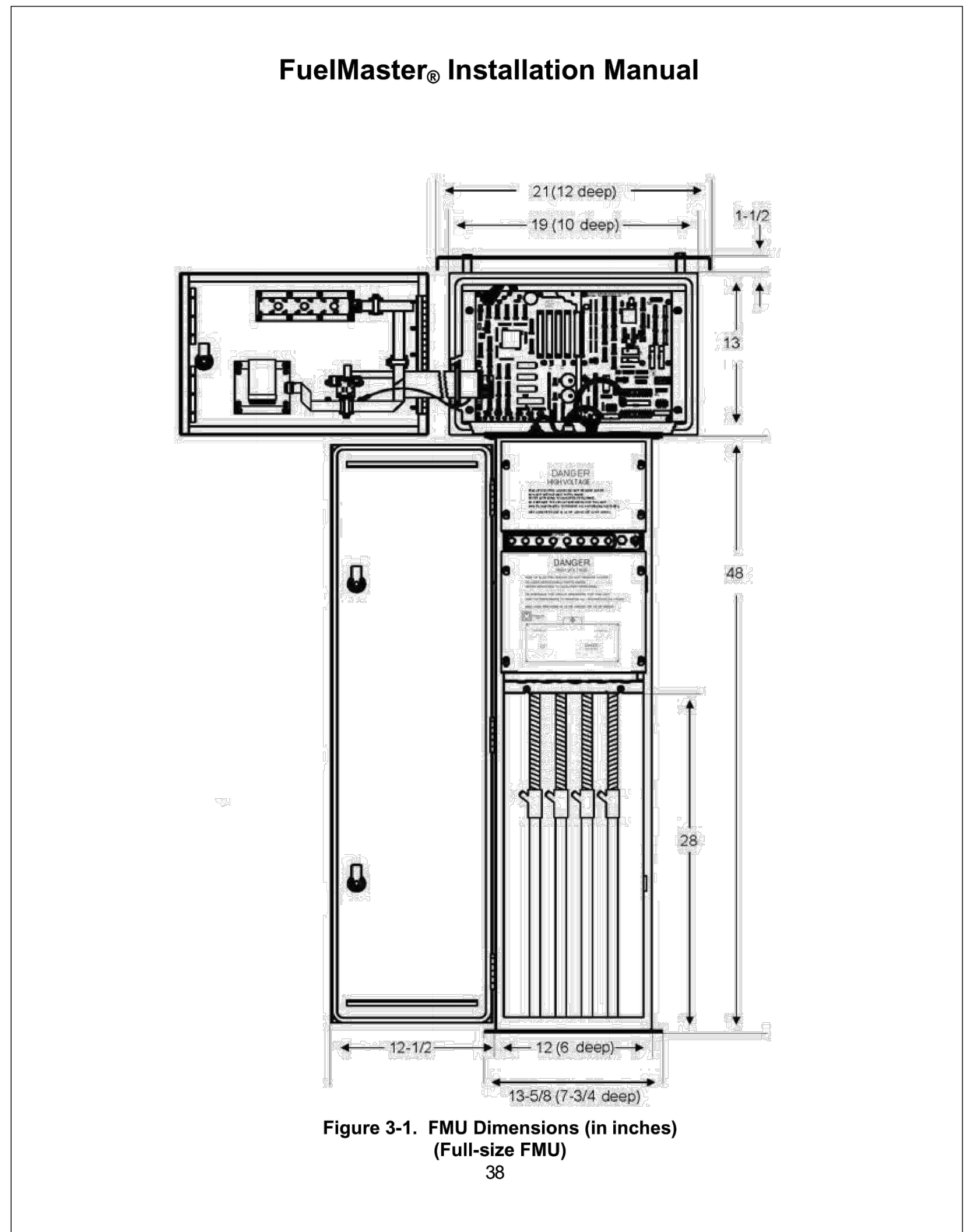
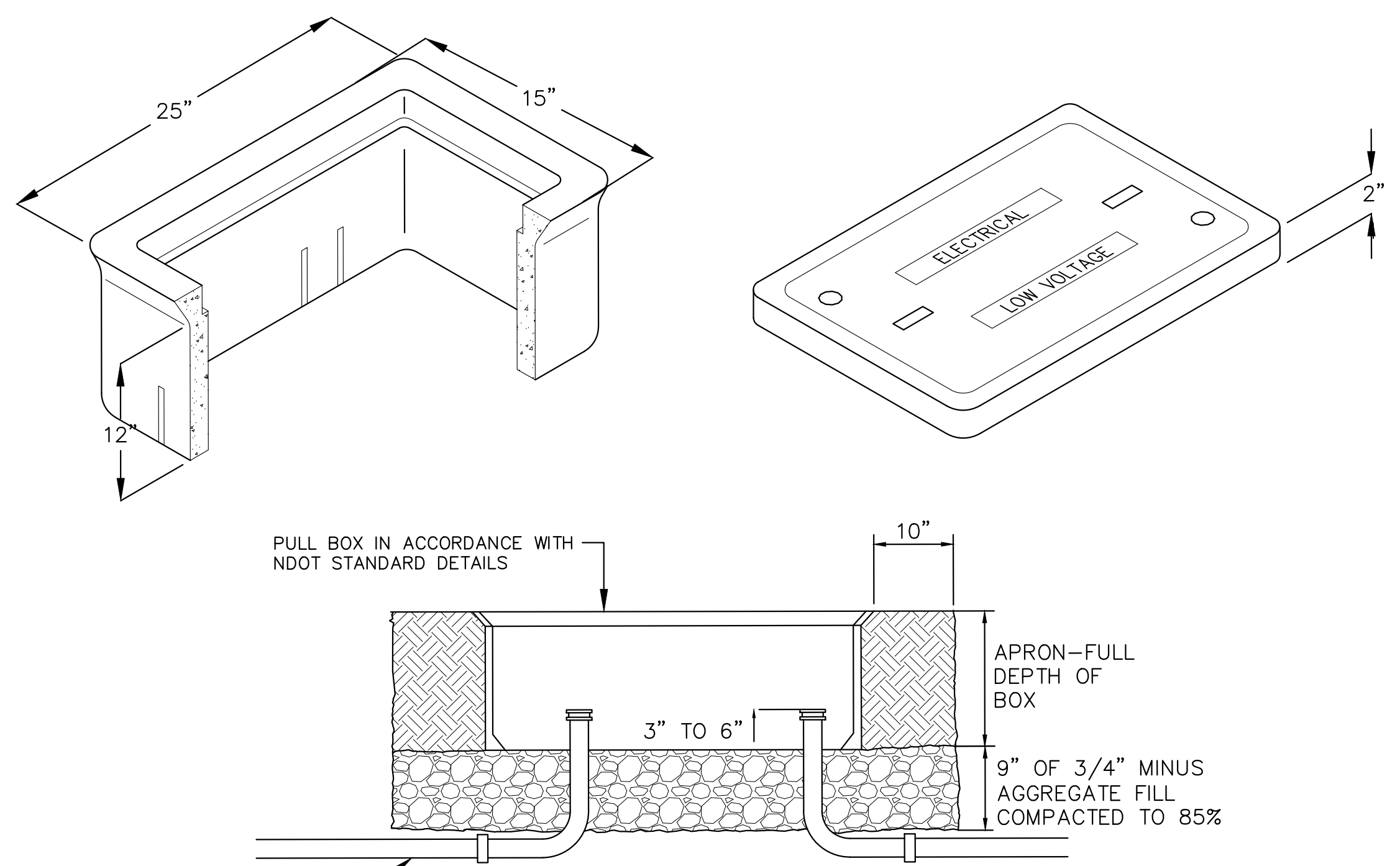


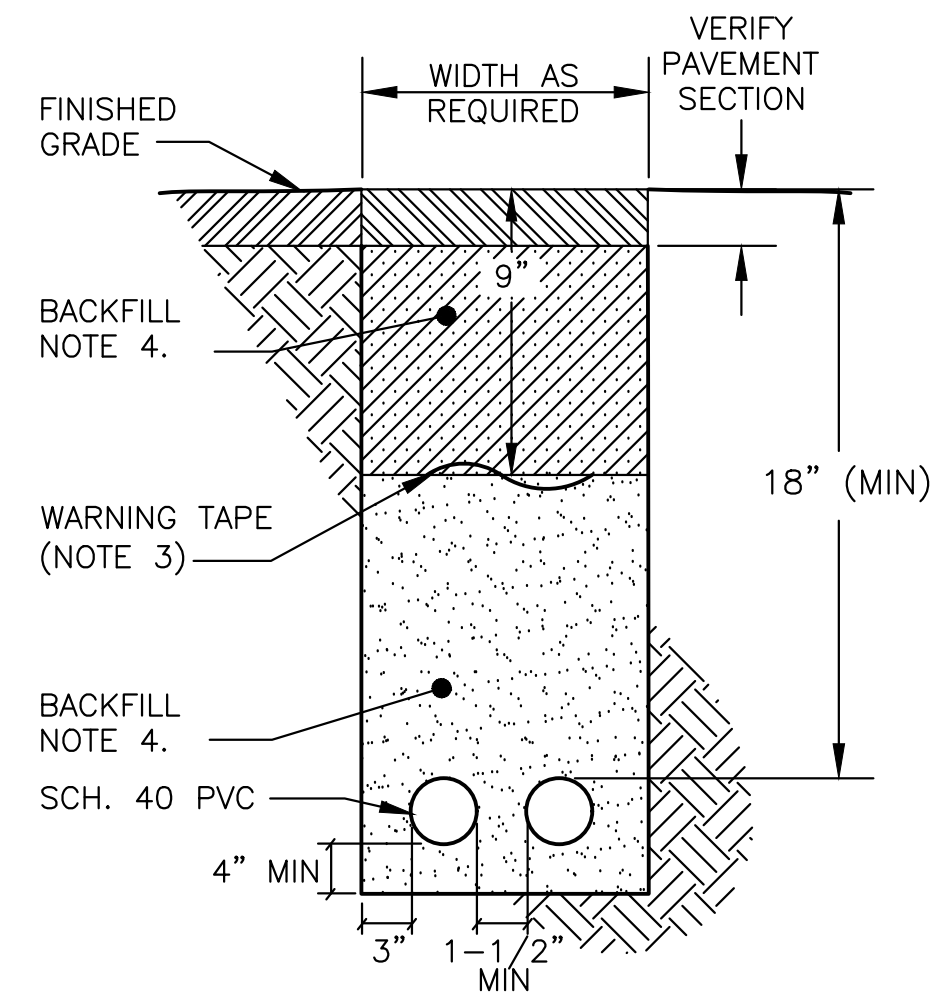
Figure 3-1. FMU Dimensions (in inches)
(Full-size FMU)
38

2 FUEL MASTER UNIT DETAIL
NOT TO SCALE

NOTE: SEE FUEL MASTER FUEL MANAGEMENT UNIT (FMU) INSTALLATION MANUAL FOR MORE DETAIL AND FURTHER INSTALLATION DETAILS



3 PULL BOX DETAIL
NOT TO SCALE



4 TYPICAL TRENCH DETAIL - DIRECT BURIED
NOT TO SCALE

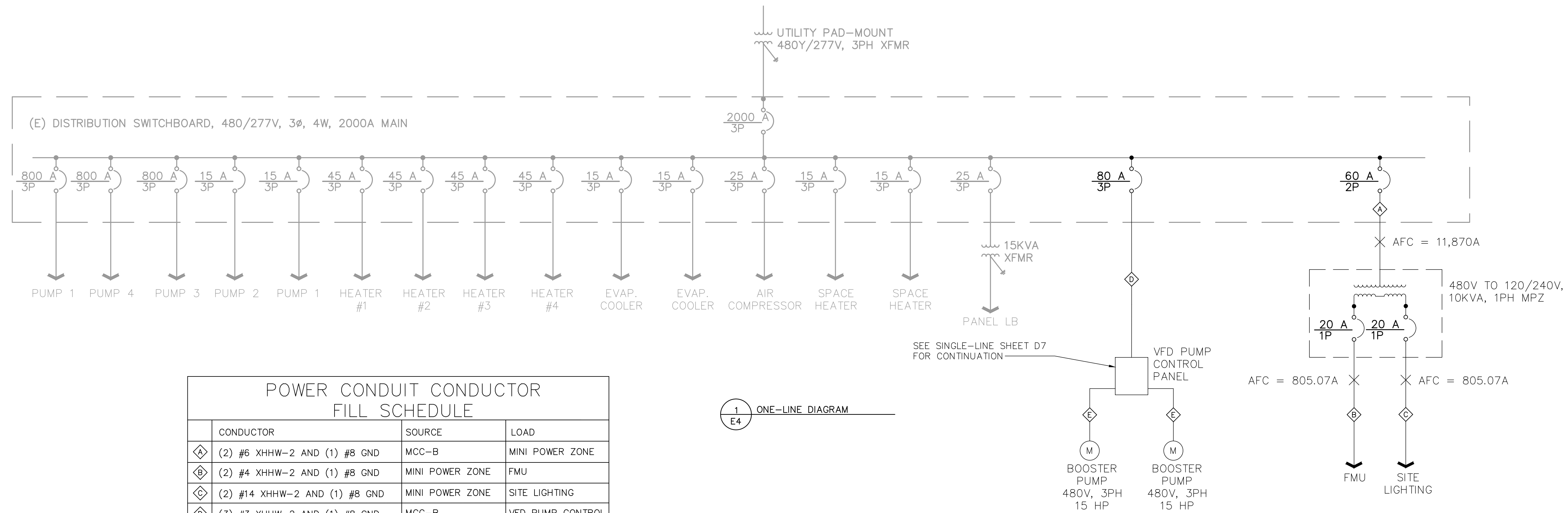
CONDUIT/DUCT & CABLE INSTALLATION NOTES:

1. SEE PLANS FOR REQUIRED DUCT SECTIONS. ALL OF THE SECTIONS SHOWN ON THIS DRAWING MAY NOT BE USED ON THIS PROJECT.
2. PROVIDE PULL WIRES IN ALL (NEW) UNUSED CONDUITS. PLUG CONDUIT ENDS IN HANDHOLES OR MANHOLES.
3. WARNING TAPE REQUIRED IN ALL AREAS.
4. BACKFILL NOTES:
D.B. APPLICATIONS: IN MULTIPLE POURS OF FLOWABLE FILL (AKA SLURRY OR CONTROLLED LOW STRENGTH MATERIAL (CLSM)). FILL TO WARNING TAPE AND THEN TO THE FINISHED GRADE OR BASE OF PAVEMENT W/ FLOWABLE FILL.



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		PROJECT NO. 192049002 DATE: 04/09/2021 SCALE: AS SHOWN DESIGNED BY: JDB DRAWN BY: JPT CHECKED BY: JDB
ELECTRICAL DETAILS		REVISIONS No. _____ DATE _____ BY _____
FIELD CREEK RENO, NV		SHEET NUMBER E3

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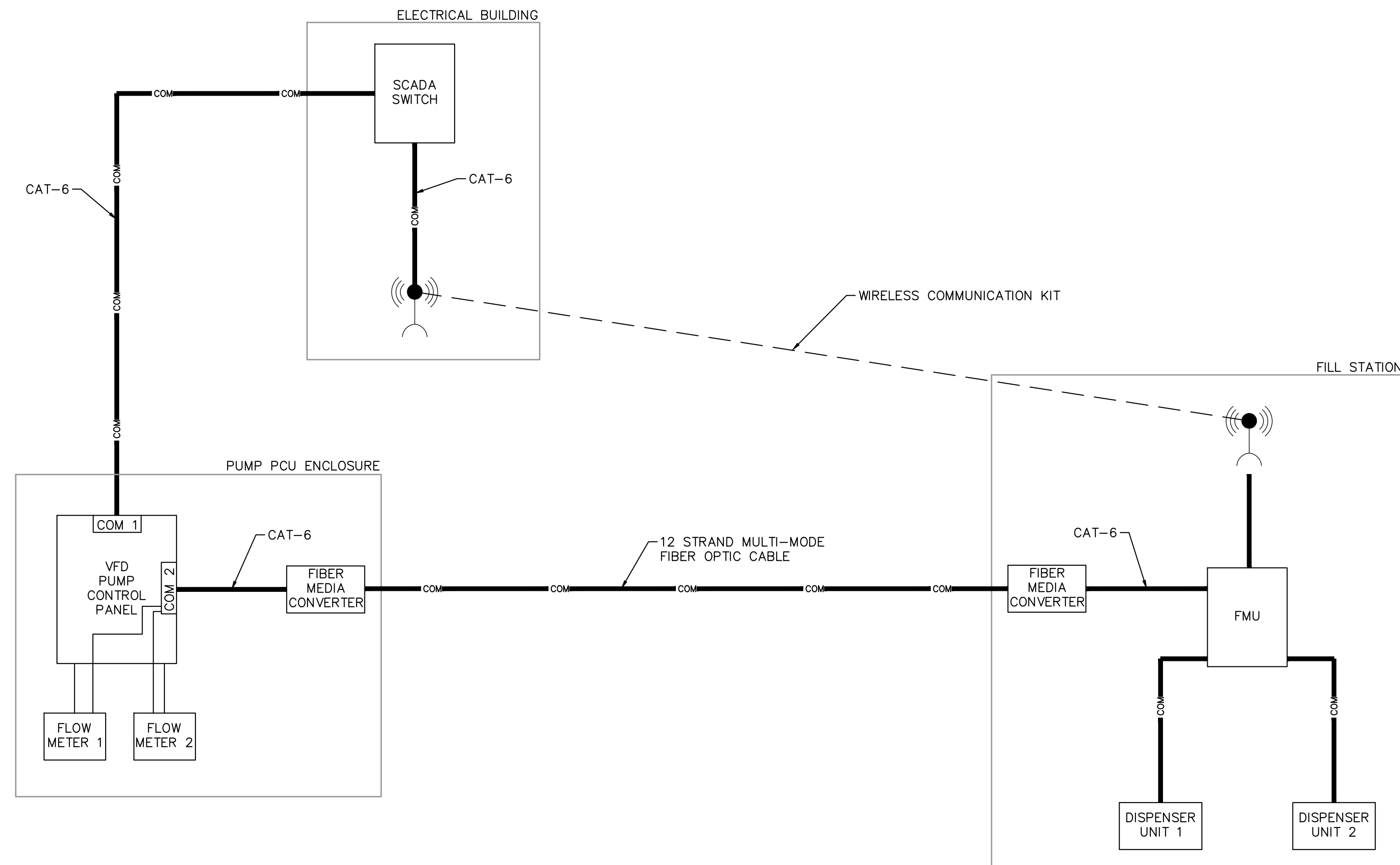


**POWER CONDUIT CONDUCTOR
FILL SCHEDULE**

	CONDUCTOR	SOURCE	LOAD
⊠	(2) #6 XHHW-2 AND (1) #8 GND	MCC-B	MINI POWER ZONE
⊞	(2) #4 XHHW-2 AND (1) #8 GND	MINI POWER ZONE	FMU
⊠	(2) #14 XHHW-2 AND (1) #8 GND	MINI POWER ZONE	SITE LIGHTING
⊠	(3) #3 XHHW-2 AND (1) #8 GND	MCC-B	VFD PUMP CONTROL
⊞	(3) #8 XHHW-2 AND (1) #8 GND	VFD PUMP CONTROL	BOOSTER PUMP

1 ONE-LINE DIAGRAM
E4

NOTE: SEE MANUFACTURER DATA SHEET FOR MORE INFORMATION ON BOOSTER PUMP AND VFD CONTROL PANEL

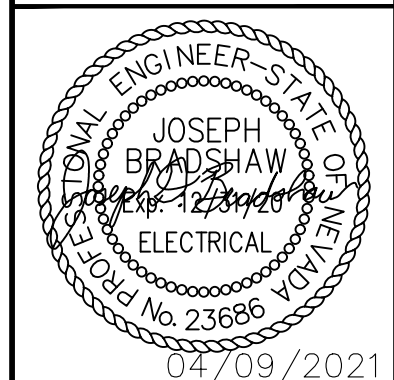


2 CONTROLS DIAGRAM
E4

No.	REVISIONS	DATE	BY

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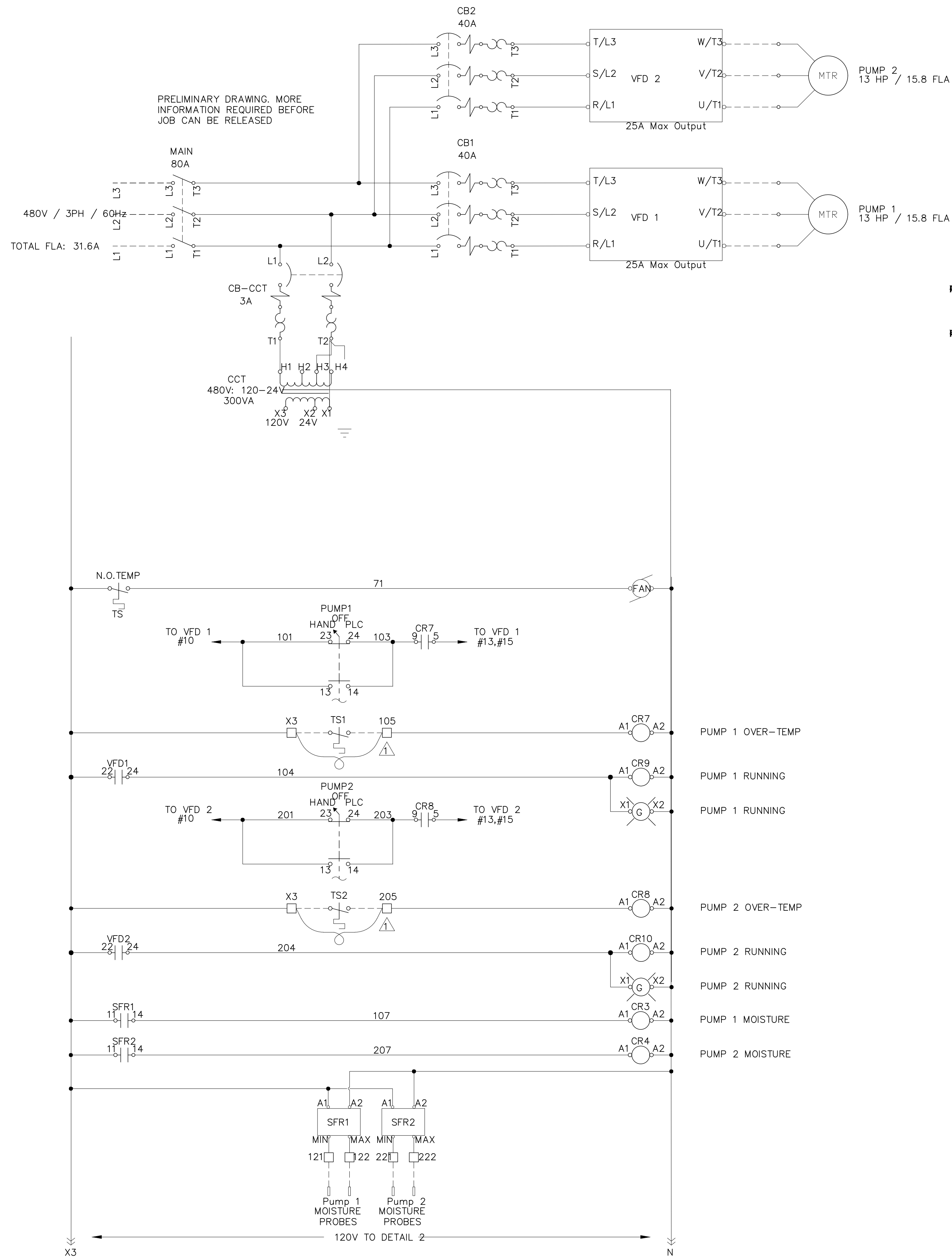
**ELECTRICAL
DETAILS**

**FIELD CREEK
RENO, NV**

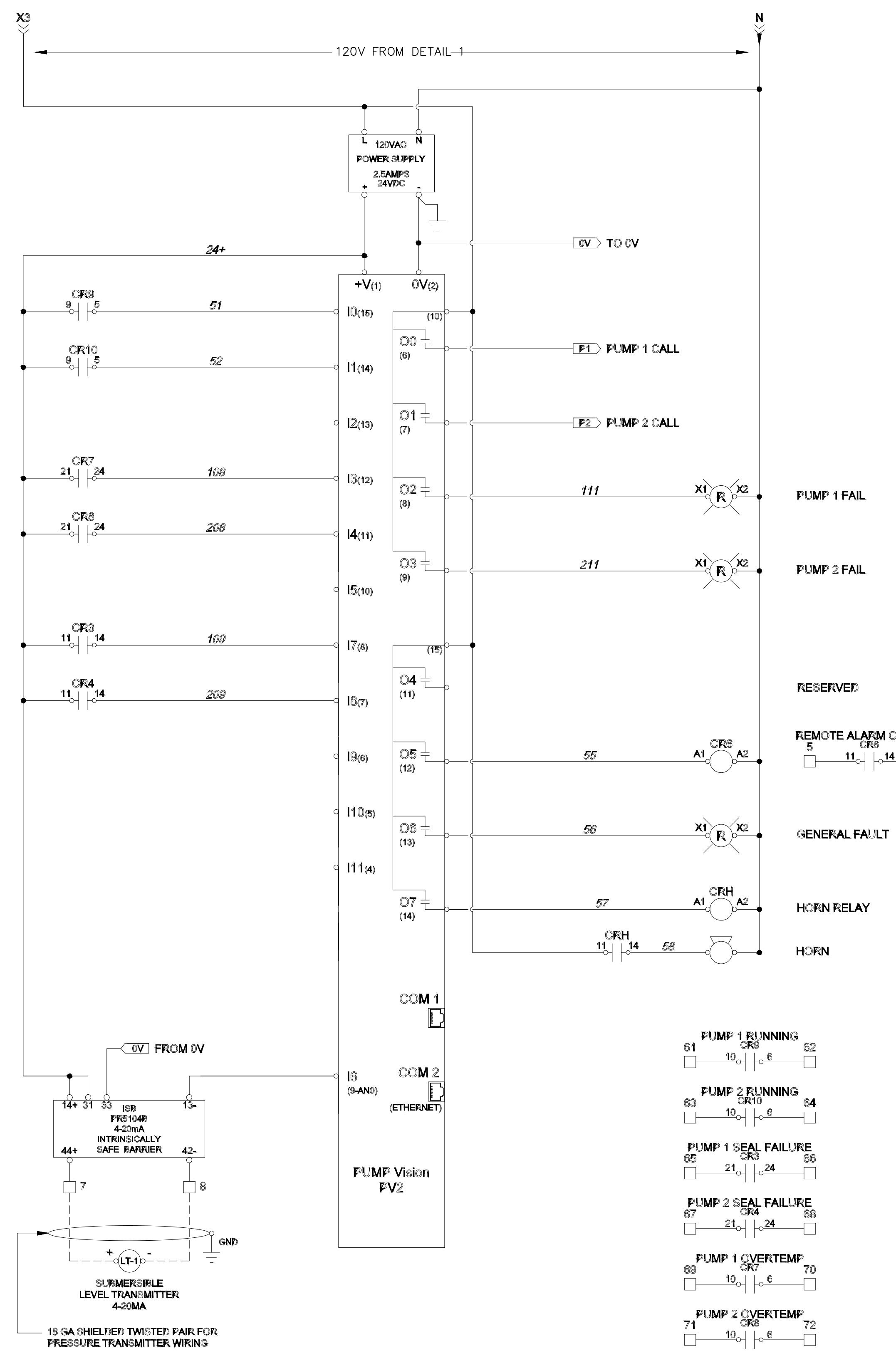
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E4



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1 VFD CONTROL CABINET ONE-LINE DIAGRAM LADDER 1

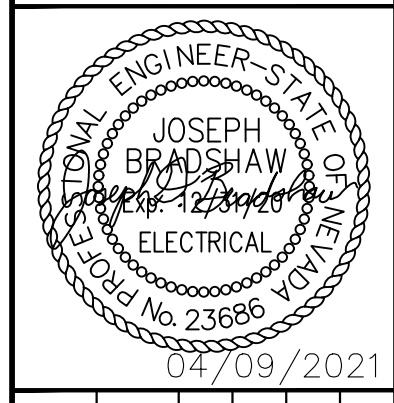


2 VFD CONTROL CABINET ONE-LINE DIAGRAM LADDER 2

- NOTES:
- PUMPS ARE TO BE CONTROLLED FROM SCADA AND ALLOWED TO TURN ON ONLY WHEN CARD READER PANEL HAS GRANTED PERMISSIVE SIGNAL. HOSE DISPENSER 1 CORRESPONDS TO PUMP #1 AND HOSE DISPENSER 2 IS FOR PUMP #2.
 - FLOW METERS NOT SHOWN. FLOW METERS SHALL BE CONNECTED TO PLC FOR FUEL MANAGEMENT OPERATION.

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192049002	04/09/2021	AS SHOWN	JDB	JPT	JDB

ELECTRICAL DETAILS

FIELD CREEK RENO, NV

SHEET NUMBER
E5

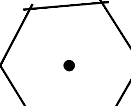
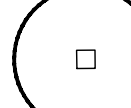
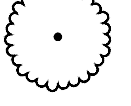
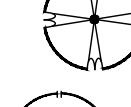








Plotted By: Patrick, Tiffany Date: April 26, 2021 02:00:04pm File Path: \\lenip01\MT_REN\REN_Civil\192049 - Washoe County\02 - Field Creek Effluent Fill Station\07_CAD\Plansheets\Landscape.dwg

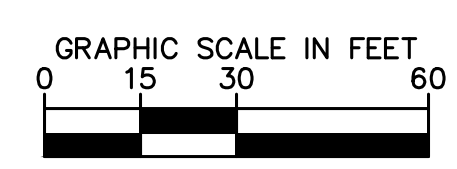
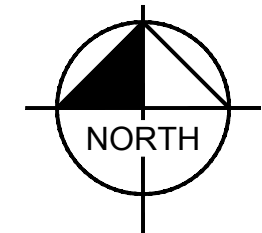
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PLANTING LEGEND

TREES			
BOTANICAL NAME / COMMON NAME	SIZE	QTY	
 Elaeagnus angustifolia Russian Olive	#15	3	
 Fraxinus quadrangulata Blue Ash	2" Cal.	5	
 Juniperus occidentalis Western Juniper	#5	14	
 Juniperus scopulorum 'Pathfinder' Pathfinder Juniper	#5	6	
 Juniperus scopulorum 'Wichita Blue' Wichita Blue Juniper	#5	5	
 Picea pungens 'Glauca' Colorado Blue Spruce	5' High	12	
 Pinus nigra Austrian Black Pine	7' High	9	
 Pinus sylvestris Scots Pine	7' High	1	

MATERIALS		
DESCRIPTION	QTY	
 2' Diameter Boulders	28	
 3' Diameter Boulders	33	



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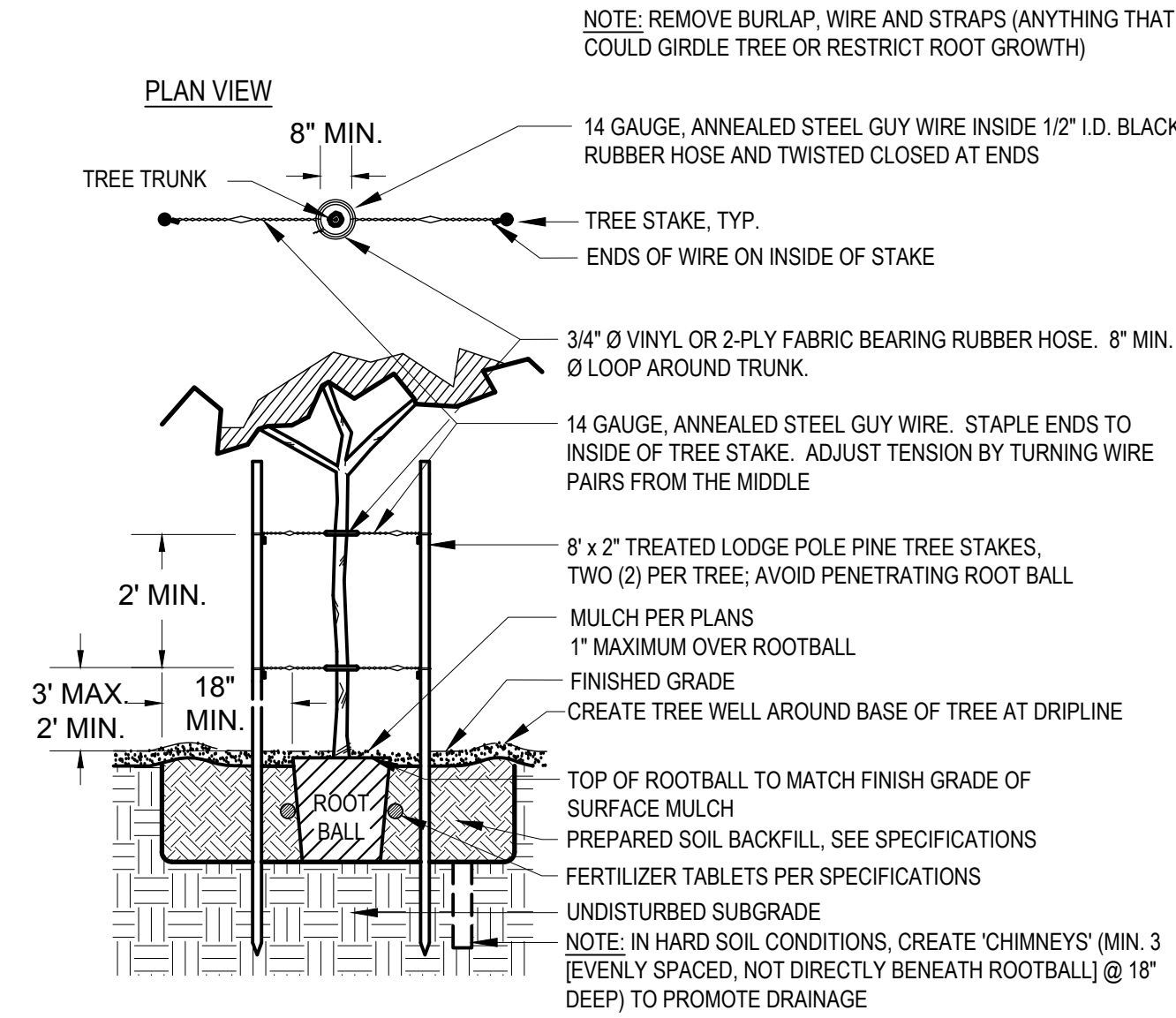


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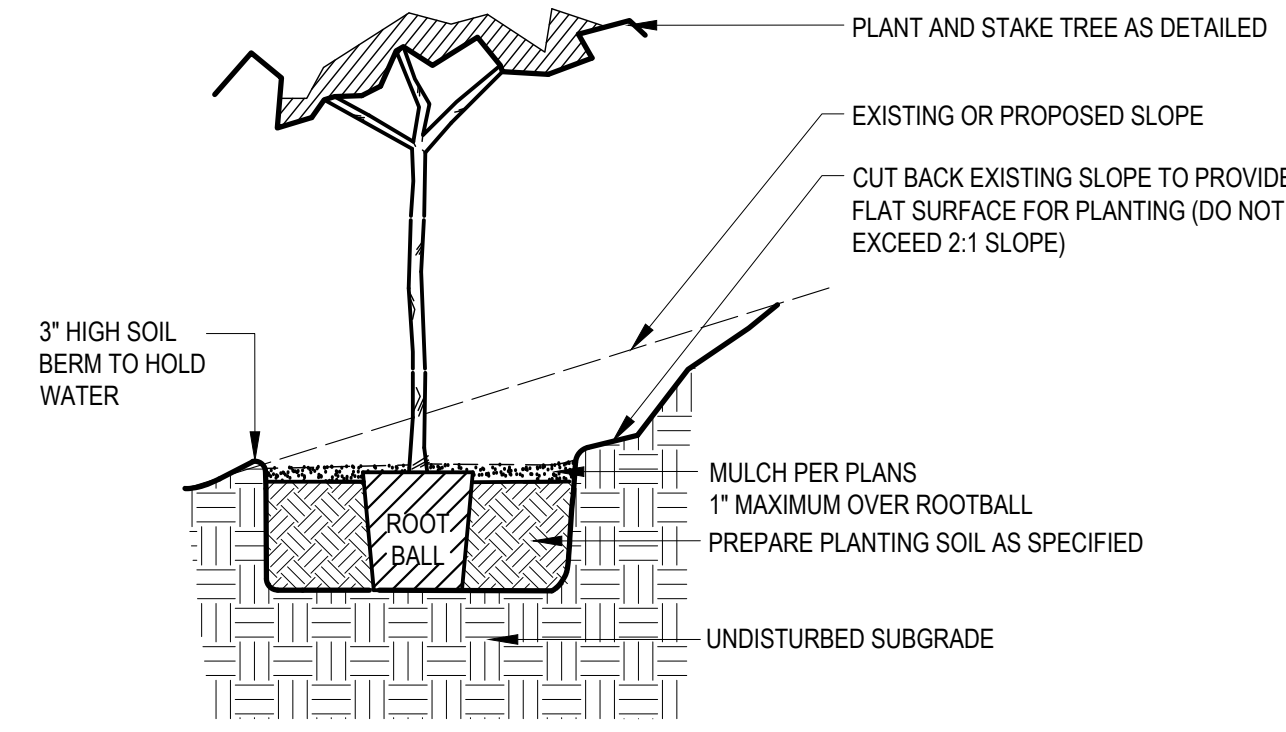
LANDSCAPE PLAN

**FIELD CREEK
EFFLUENT
FILL STATION
RENO, NV**

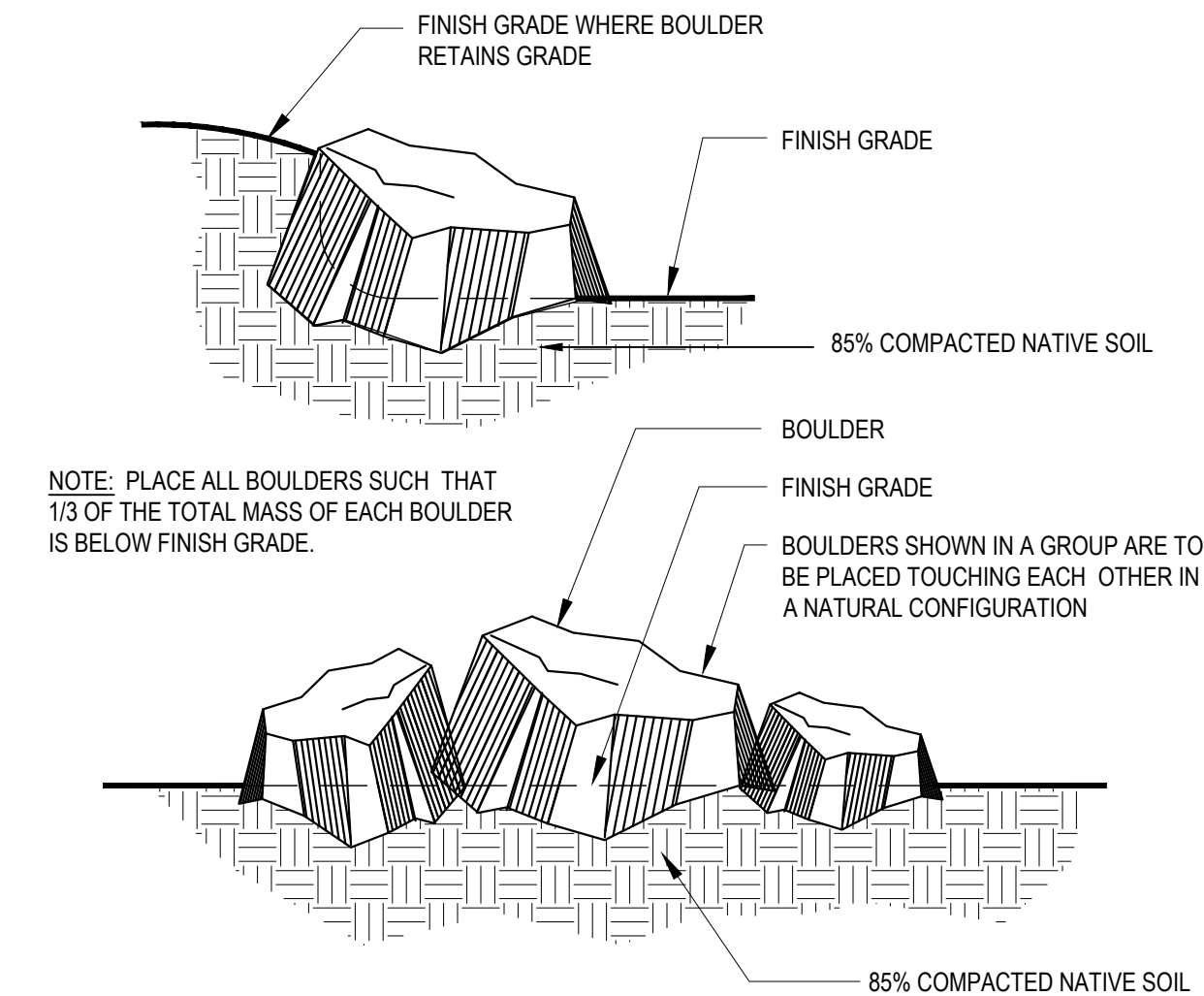
SHEET NUMBER
1



1 TREE PLANTING AND STAKING
SCALE: N.T.S.



2 TREE PLANTING ON SLOPE
SCALE: N.T.S.



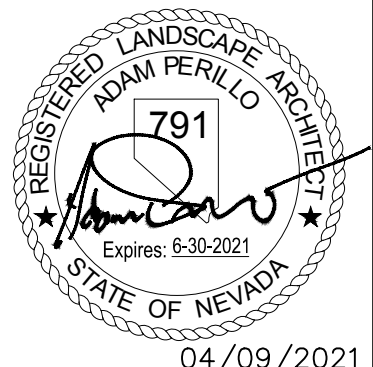
3 BOULDER INSTALLATION
SCALE: N.T.S.



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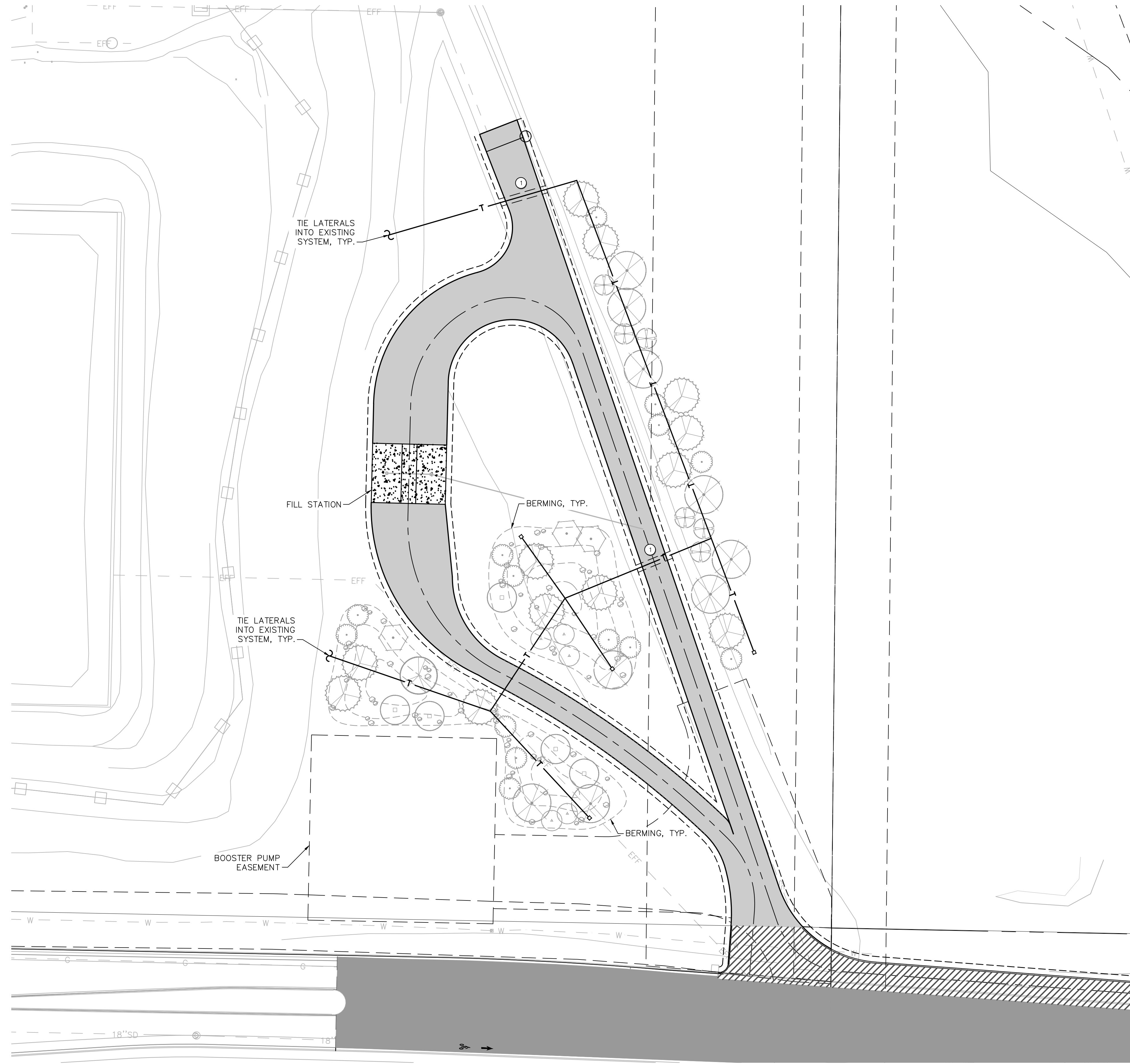
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LANDSCAPE DETAILS

FIELD CREEK EFFLUENT FILL STATION
RENO, NV

SHEET NUMBER
L2

Plotted By: Patrick, Tiffany Date: April 26, 2021 02:00:30pm File Path: \\kenp01\MT_REN\REN_Civil\192049 - Washoe County\02 - Field Creek Effluent Fill Station\07_CAD\Plansheets\Irrigation.dwg
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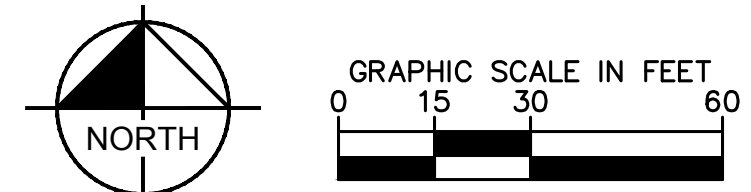
IRRIGATION LEGEND

EQUIPMENT		
SYMBOL	MANUFACTURER / DESCRIPTION	QTY
□	Flush End Cap	4
not shown	Rain Bird XBT-20-6 (1 per tree, 6 ports open)	AS REQ'D
	Rain Bird XBT-10-6 (1 per shrub, 5 ports open max)	AS REQ'D

SLEEVE SCHEDULE		
SYMBOL	DESCRIPTION	QTY
⊗	Schedule 40 PVC 2" Lateral Sleeve, Spears or Equal	50 LF
X	"X" Indicates Quantity	

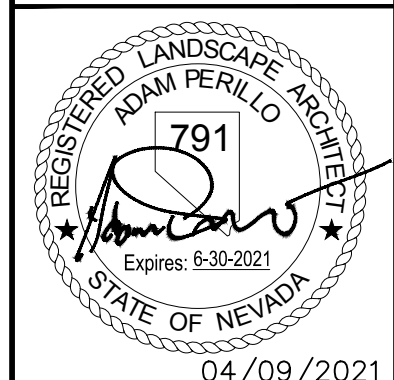
PIPE SCHEDULE			
SYMBOL	SIZE / DESCRIPTION	QTY	
— T —	1" SCH 40 PVC Tree Lateral	815 LF	
	Flow (GPM)	Pipe Size	Pipe Class
	0-5.0	1/2"	SCH 40 PVC
	5.1-10	3/4"	SCH 40 PVC
	10.1-15	1"	SCH 40 PVC

- GENERAL IRRIGATION NOTES:**
- IRRIGATION EQUIPMENT IS SHOWN DIAGRAMMATICALLY. ALL EQUIPMENT AND PIPING SHALL BE PLACED WITHIN LANDSCAPE AREAS. AVOID CONFLICTS WITH UTILITIES AND PLANT MATERIALS, TYP.
 - MULTIPLE VALVE OF THE SAME TYPE MAY BE RUN SIMULTANEOUSLY. HOWEVER, SYSTEM SHALL NOT EXCEED 12.0 GPM AT ANY GIVEN TIME.
 - ALL IRRIGATION COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL GOVERNING AUTHORITIES.
 - THE INTENT OF THE PLANS IS FOR THE INSTALLATION OF A COMPLETE AND WORKABLE IRRIGATION SYSTEM. PROVIDE ALL MATERIALS AND INSTALLATION TECHNIQUES NOT SPECIFICALLY NOTED BUT REASONABLY INFERRED FOR THE WORK.
 - THE PLAN IS SCHEMATIC. SOME RELOCATION OF IRRIGATION COMPONENTS MAY BE REQUIRED IN THE FIELD. VERIFY ALL CONDITIONS IN THE FIELD THAT MAY AFFECT THE WORK.
 - PROVIDE DRIP IRRIGATION TO ALL PLANT MATERIAL TO BE INSTALLED ON THE PROJECT, INCLUDING EXISTING TREES AND SHRUBS TO BE RETAINED.
 - ALL LINES AND WIRING UNDER PAVED SURFACES SHALL BE SLEEVED, SEE SPECIFICATIONS. LINES AND WIRING SHALL HAVE SEPARATE SLEEVES.
 - INSTALL ADEQUATE MANUAL DRAINS ON MAIN LINE TO PREVENT FREEZE RELATED DAMAGE. PROVIDE DRAINS WITH HOSE ON THE END OF EACH MAIN LINE TO FACILITATE REMOVAL OF WATER WITH COMPRESSED AIR.
 - SEE SPECIFICATIONS FOR ALL ASPECTS OF IRRIGATION EQUIPMENT AND INSTALLATION TECHNIQUES.



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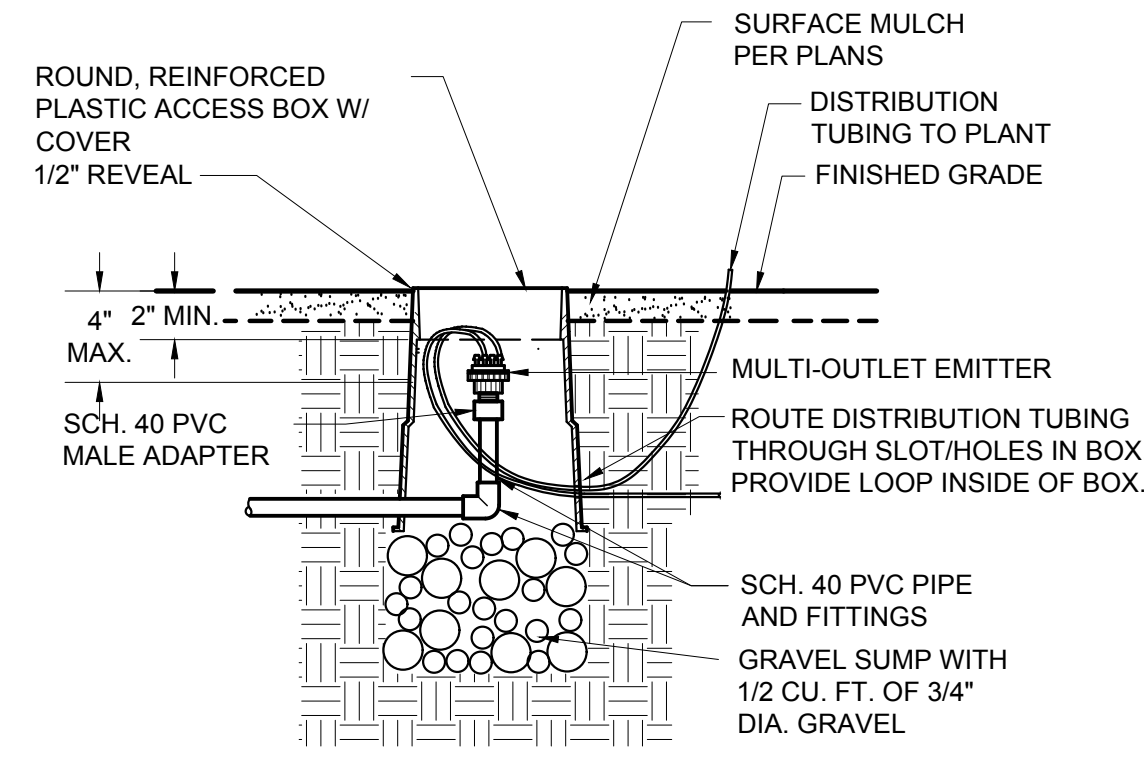
KHA PROJECT 192049002	DATE 04/09/2021	SCALE: AS SHOWN	DESIGNED BY: GMW	CHECKED BY: ACP
			DRAWN BY: GMW	

IRRIGATION PLAN

FIELD CREEK EFFLUENT FILL STATION RENO, NV

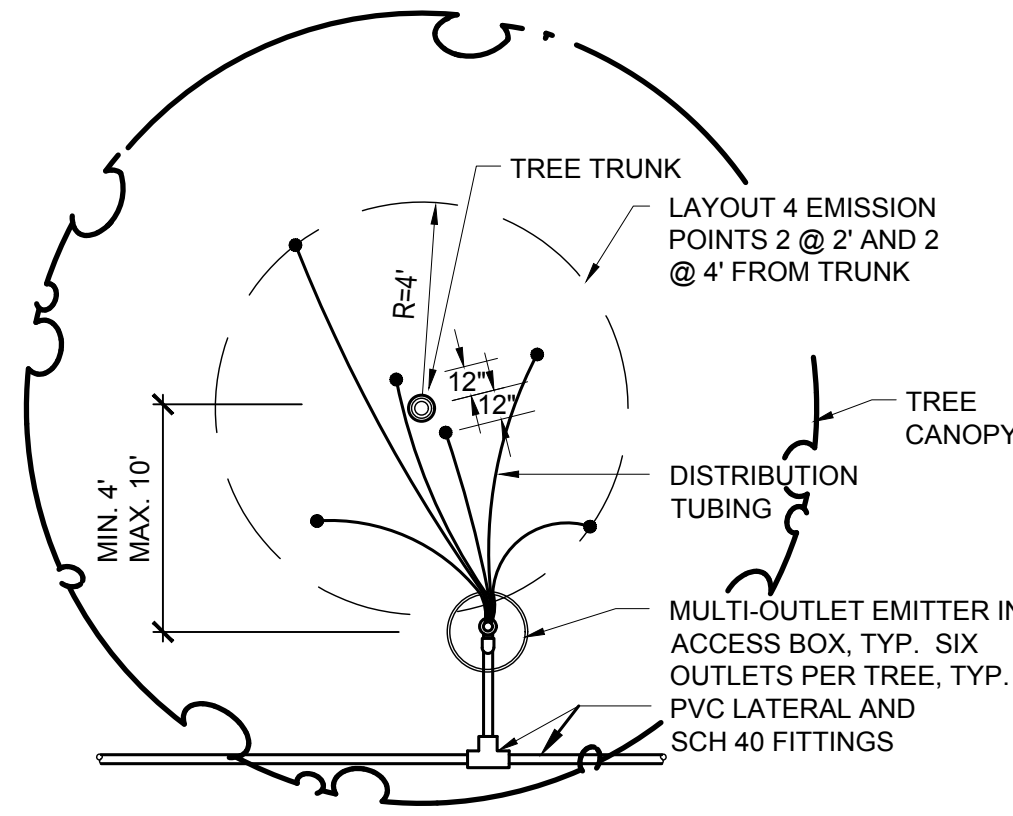
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L3

Plotted By: Patrick, Tiffany Date: April 26, 2021 02:00:30pm File Path: \\kenp01\MT_REN\REN_Civil\192049 - Washoe County\002 - Field Creek Effluent Fill Station\07_CAD\Plansheets\Irrigation.dwg
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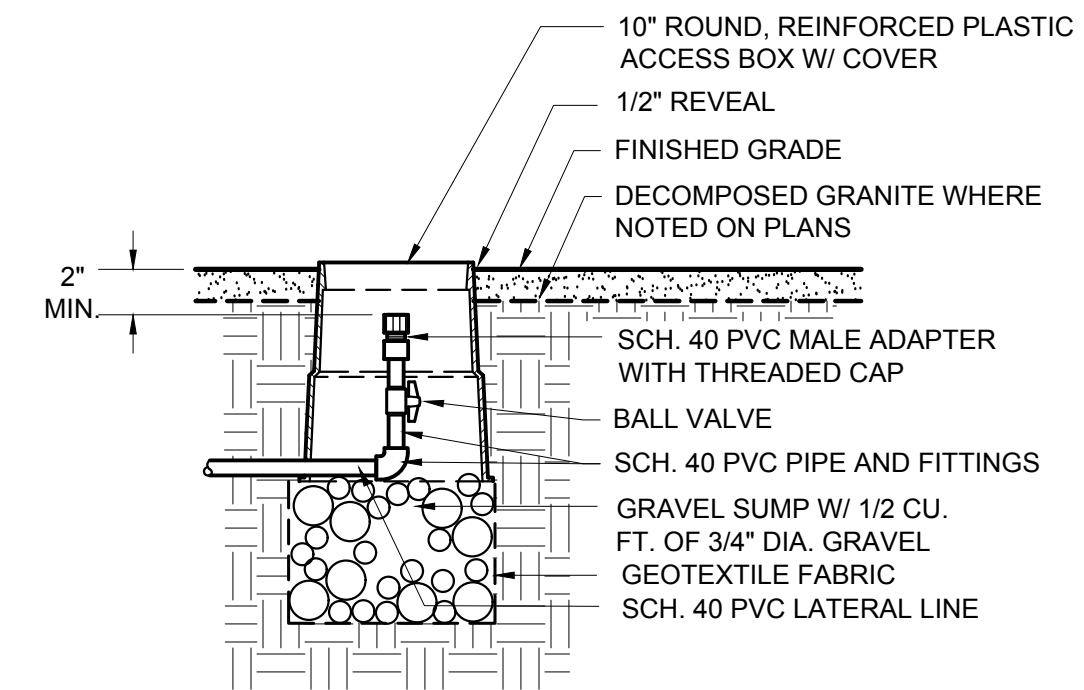


1 MULTI-OUTLET EMITTER
SCALE: N.T.S.

NOTE:
 1. LENGTH OF DISTRIBUTION TUBING SHALL NOT EXCEED 12'-0". REFER TO LOCAL JURISDICTIONAL REQUIREMENTS; MAXIMUM ALLOWABLE LENGTH MAY BE LESS.
 2. LAYOUT DISTRIBUTION TUBING AS SHOWN AND LOCATE DISCHARGE POINT 2" ABOVE FINISHED GRADE.

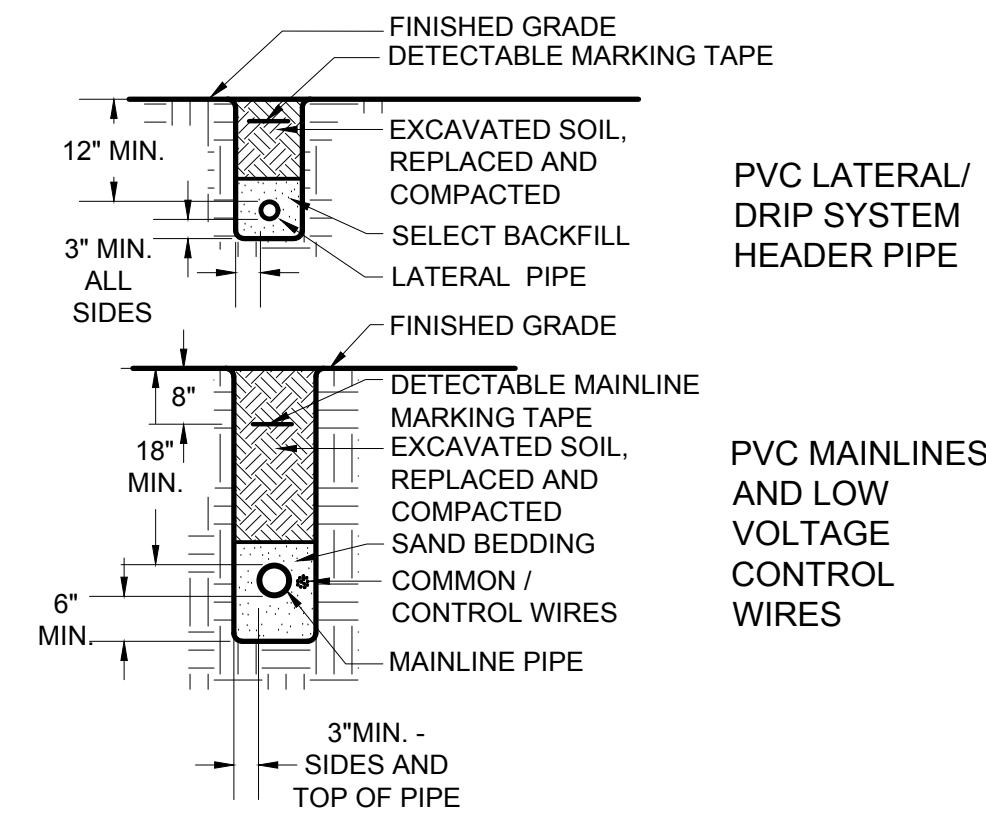


2 EMITTER DISTRIBUTION TUBING LAYOUT - TREES
SCALE: N.T.S.

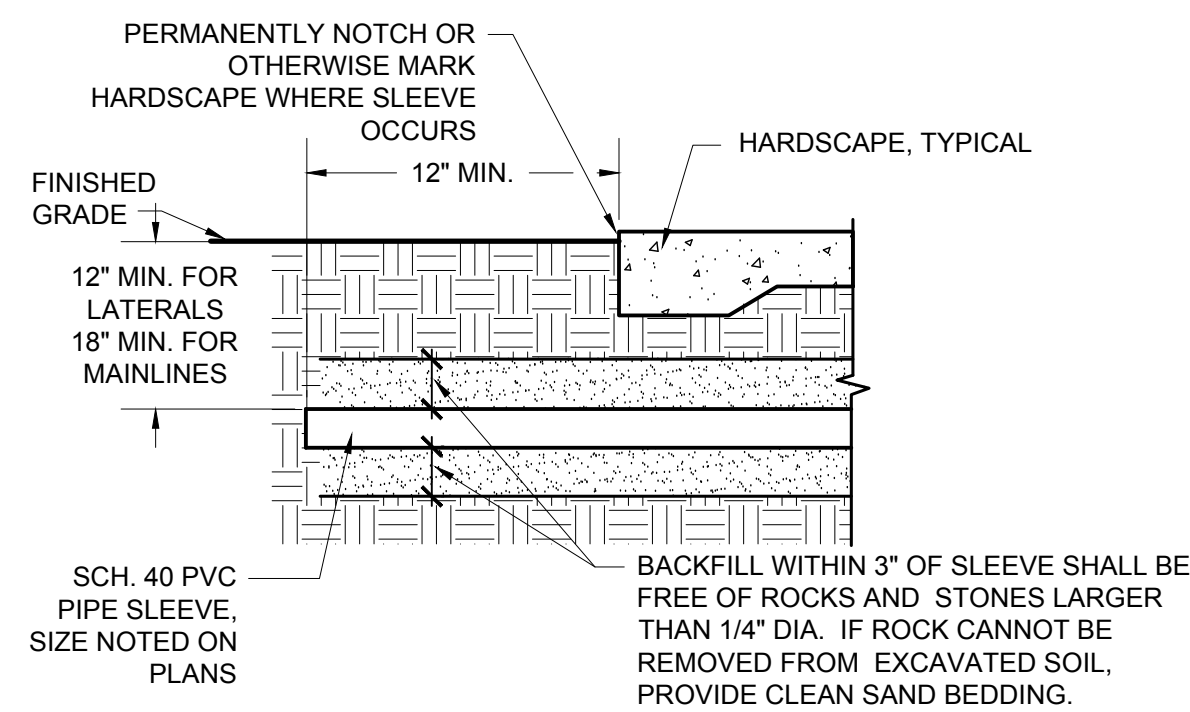


3 LATERAL FLUSHING END CAP
SCALE: N.T.S.

NOTES:
 1. SELECT BACKFILL SHALL BE SAND OR SOIL FREE OF ROCKS AND STONES LARGER THAN 1/4" DIA.
 2. BACKFILL MATERIAL SHALL BE WATERED IN AND COMPACTED TO DENSITY OF ADJACENT UNDISTURBED SOIL.



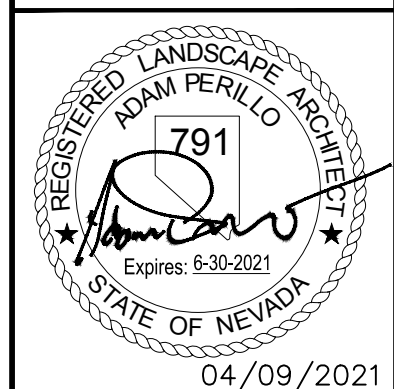
4 PIPE TRENCHING AND BACKFILL - MAINLINE, LATERALS, AND MARKING TAPE
SCALE: N.T.S.



5 MAINLINE AND LATERAL PIPE SLEEVING
SCALE: N.T.S.

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DATE	04/09/2021
SCALE	AS SHOWN
DESIGNED BY	GMW
DRAWN BY	GMW
CHECKED BY	ACP

IRRIGATION DETAILS

FIELD CREEK EFFLUENT FILL STATION RENO, NV



SHEET NUMBER
L4

Plotted By: Patrick, Tiffany Date: April 26, 2021 02:00:31pm File Path: \\yentip01\MT_REN\REN_Civil\192049 - Washoe County\002 - Field Creek Effluent Fill Station\07_CAD\Plansheets\1-Irrigation.dwg
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SECTION 307

DOMESTIC WATER AND IRRIGATION SYSTEM

307.01 DESCRIPTION

This work shall consist of furnishing all labor, equipment and materials necessary to install, test and document a workable domestic water and irrigation system according to the drawings.

The irrigation layout shown on the drawings is schematic only. The actual layout of piping in the field shall be done to minimize sharp turns and piping under paving and maximize the use of common trenching wherever possible for main and lateral lines. Locate all electric remote control valves and quick coupler valves in planting areas. Arrange control valves close together for ease of operation.

307.08 POLYVINYL CHLORIDE PIPE

PVC (polyvinyl chloride) pipe for the landscape irrigation system shall conform to ASTM D2241 and shall be sized as indicated on the drawings. All PVC pipe shall be Schedule 40. Pipe shall be cut straight and true and ends shall be reamed out to the full inside diameter of the pipe. PVC pipe shall be partially backfilled between joints with small amounts of backfill material to prevent movement during the pressure test. All mainline piping shall be covered with a purple warning tape, located 12 inches above the main.

Prolonged exposure to temperatures near freezing make PVC sensitive to impact, and extra care shall be taken in handling PVC during cold weather. PVC lengths shall be lifted off of truck body surfaces to avoid abrasion.

All PVC fittings shall be Schedule 40. Slip fittings shall be joined using PVC cement and solvent applied according to manufacturer's instructions. Pipes and fittings shall be coated on mating surfaces with PVC primer and allowed to dry before applying cements. Primer shall not be allowed to run down the inside of pipe. Allow cement to air dry to a tacky state before assembly. Pipe fittings shall be pressed together and given a quarter (1/4) turn to seat fully, with excess cement being removed from the connection following assembly.

Threaded male fittings shall receive two (2) turns teflon plumbing tape around all threads prior to assembly. No field threading will be allowed. Irrigation mains to be installed at 34" depth.

307.11.01 Controller

Solid state electrical mechanical controller shall accommodate 117 VAC input and 24 VAC output. A circuit breaker or fusible connection shall be installed to protect the controller from overload. Controller shall be a Rainbird ESP-Lit 6 station. Make all electrical connections as required.

307.11.02 Drip Irrigation

Tubing shall be Rainbird Xeri-tube T00, or approved equal, polyethelene. Emitters shall be Rainbird XB-10 for shrubs (2 each), and XB-20 (3 each) for trees. Emitters shall be above ground. Bury flex tubing 4 inches below finish grade. Valve shall be a Rainbird IF FESB series. Filter shall be a Rainbird RBY-200 MX with F81-L30X pressure regulator. End plugs shall be placed at the end of each drip line and located inside of a 91 valve box.

307.11.04 Gate Valves

Gate valves shall be the same size as the pipe on which they are placed unless otherwise indicated on the Plans. Valves two and one-half inches (2 1/2") and smaller shall be bronze with a threaded connection. Valves three inches (3") and larger shall be iron body, bronze mounted, double disc, parallel seat type with "O" ring seals and shall comply with AWWA standards.

307.11.05 Quick Coupler Valve

Install quick coupler valves as shown on the Plans and Details. Valve shall be of 2-piece, brass or bronze construction, with a three-quarter inch (3/4") female bottom connection. Use Rainbird 44NP or approved equal in nine inch (9") diameter box.

307.11.6 Pressure Reducer

The pressure reducer shall be a Watts series UB, 1" size, capable of reducing pressure from a 300 psi maximum to a pre-set 50 psi.

307.11.09 Drain Valves

Provide three-quarter inch (3/4") brass gate valve at lowest point of irrigation main. Provide for inch (4") plastic pipe over valve, gravel sump beneath valve, and a plastic cap to mark valve location. Install according to detail.

307.11.4 Galvanized Steel Pipe

Galvanized steel pipe of the size required shall be used for all above ground applications. All pipe shall have sound, clean cut standard pipe threads, well fitted. All pipe shall be well reamed to the full diameter and burrs removed before assembly.

307.11.7 Installation

Wiring from the controller to the valves shall be done using fourteen (14) gauge, direct burial, copper wire for the control wire and twelve (12) gauge, direct burial, copper wire for the ground wire. Red insulation shall be used to identify the control wire and white insulation shall be used to identify the ground wire. All splices shall be made in valve boxes with DBT connectors or approved equal. Wire shall be placed in the same trench with piping. It shall be gathered and bundled every fifteen to twenty feet (15'-20') and 'naked' from side to side in the trench to provide slack throughout the wiring run.

As Built

The Contractor shall furnish a complete, to scale, as-built drawing of the irrigation system to the Owner, along with all manufacturer's warranty and instruction information.

The Contractor shall furnish to the Owner three (3) quick coupler keys.

Trenching

All mainline piping shall be buried a minimum of twenty-four inches (24") below finish grade. Lateral lines shall be a minimum of eighteen inches (18") below finish grade.

Trenches shall be backfilled with topsoil which is free of rocks and other debris. Backfill material shall be moistened during backfill operations to prevent future settling.

Flushing & Testing

Piping shall be completely flushed of foreign particles before attaching sprinkler heads and drain valves.

After flushing and when valves and quick couplers are in place, all main supply lines shall be tested at one hundred and fifty pounds (150 Lbs.) per square foot, with valves closed. Maintain pressure for a period of eight (8) consecutive hours. All joints showing leaks shall be cleaned, remade and tested.

After flushing, section lines shall be tested with risers capped and drain valves closed. The test shall be made at maximum operating pressure for a period of one (1) hour. All joints showing leaks shall be cleaned, remade and tested.

All testing shall be done in the presence of the Owner's representative prior to backfilling over piping.

307.11.20 Adjusting

The Contractor shall familiarize designated maintenance personnel with the operation and maintenance of the system, including emergency shut-off procedures, the programming and operation of the irrigation controller, and system winterization.

The Contractor shall, for a period of one (1) year from the date of acceptance of the work, guarantee the installation and operation of the irrigation system. Any malfunction or defect, which occurs during this time, will be repaired by the Contractor at no additional cost.

307.13 BASIS OF PAYMENT

Basis of payment shall be lump sum for the irrigation system, installed per Plans and Specifications.

Payment for domestic water shall be at the bid unit price per lineal foot for the respective pipes, complete and in place as itemized in the Bid Proposal.

No direct payment shall be made for connections to existing domestic water and irrigation systems. Such compensation shall be included in other items of work.

SECTION 331

LANDSCAPING

331.01 DESCRIPTION

This work shall consist of furnishing and planting trees, shrubs and vines where shown on the Plans. This section also covers the provision and installation of materials relating to the landscaping process, including, but not limited to, non-living ground cover, header materials, landscape retaining walls, redwood benches, fertilizers, mulches, tree and tree stakes.

331.02.01 Nomenclature

Nomenclature for plant names and varieties shall be in accordance with the latest edition of 'Standardized Plant Names' as prepared by the American Joint Committee on Horticultural Nomenclature.

331.02.02 Quality of Plant Material

It is the intent of the Specifications that all plant material meet the standards as set forth herein, throughout the life of the Contract. During inspections, all plant material will be judged and rejections shall be based upon these standards.

All plants shall be first-class nursery grown representative of their normal species and shall be true to type or name as shown on the Plans.

All plants shall comply with Federal and State laws requiring inspection for plant diseases and infestations.

In determining the quality of plant material, consideration will be given to the root condition, plant size, insect and disease free condition, and general appearance. A deficiency in any one (1) or more of these shall be sufficient reason to reject selectively or by lot.

331.02.05 Substitution of Plants

No substitution of plant material will be permitted unless evidence is submitted in writing to the Owner that a specified plant cannot be obtained and has been unobtainable since the award of the Contract. If substitution is permitted, it can be made only with written approval by the Owner.

331.04 SEEDING

A. Seed Species: Contractor shall submit 3 copies of data on seed purity and germination.

B. Seed Mix: Shall be applied in the following proportions:

- 2 Lbs. per acre: Indian Ricegrass
- 2 Lbs. per acre: Atriplex
- 2 Lbs. per acre: Great Basin Wildrye
- 3 Lbs. per acre: Siberian Wheatgrass
- 1 Lb. per acre: Carcys bluegrass
- 2 Lbs. per acre: Annual rye
- 1/4 Lb. per acre: Palmer perstemon
- 1/4 Lb. per acre: Blue Flax
- 2 Lbs. per acre: Shadscale
- 2 Lbs. per acre: Bitterbrush
- 2 Lb. per acre: Rubber Rabbitbrush

Total: 215 Lbs. per acre, FLS.

PREPARATION:

A. Site: Upon completion of construction operations the seedbed shall be scarified parallel with the slope (along the contour) to a minimum depth of 4 inches leaving definite furrows. The material surface shall also be in an uncompacted workable condition for seeding. Areas not suitable for scarifying shall be left in a rough condition to simulate the scarified areas. Remove rock, debris, and clods that are 2 inches in diameter or larger.

APPLICATION:

A. Fertilizer: 16-20-0 fertilizer shall be spread separately in dry form at the rate of 300 Lbs per acre during preparation of seedbed.

B. Seed: Shall be applied between November 1 and February 28 for winter moisture. Use a disc-type drill for seeding; place drill rows uniformly 8 to 12 inches apart. Plant seed not less than 1/4 inch deep or more than 1/2 inch deep. Follow the seeder with a drag, packer, or roller to ensure uniform coverage of the seed and adequate compaction. Drill on the contour, not up and down a slope. When slopes are too steep for contour drilling, use a 'cyclone' hand seeder or similar broadcast seeder. Rate of application with mechanical hand seeder shall be twice the rate called for above. Seed shall not be broadcast when the weather is windy or wet, the ground is frozen, or otherwise untillable. Other methods of seeding must have prior written approval by the Engineer. The Contractor shall protect seeded areas from damage by traffic or construction equipment. Areas damaged from these causes shall be repaired by the Contractor.

C. Mulch: Immediately after seeding, apply a straw mulch at a rate of 3000 lbs. per acre. Anchor with a straw punching machine to secure the straw. Straw shall be clean, free from noxious weed seed. Commercial products may be used in lieu of straw with Engineers approval.

331.05 PLANTING BEDS

The soil preparation shall not be initiated until after grading has been completed and the irrigation system has been installed, tested, adjusted and accepted by the Owner. Use existing soil in planter areas for planting. Remove construction debris and other foreign matter. For mounding, supplement with imported, friable loam, free of subsoil, roots, grass, excessive amounts of weeds, stones and foreign material; acidity range (pH) of 6.2 to 7.5 containing a minimum of four percent (4%) and a maximum of twenty-five percent (25%) organic matter. The ground surface within the area shall then be loosened and thoroughly pulverized to a depth of six inches (6"). When required, humus, commercial fertilizer and other additives shall be incorporated at the rate specified in the planting notes and/or specifications and shall be thoroughly and uniformly tilled into the soil to a depth of six inches (6"). The area shall then be brought to a plane in conformance to the elevations shown on the Plans. The area to be planted shall then be consolidated with approved culti-packers or rollers.

When adding topsoil fill over existing grade, cultivate sub-grade to a depth of 12-18" where equipment has compacted soil.

331.05.04 Planting Holes

Verify that final grades have been established prior to beginning planting operation. All holes shall be drilled with a power auger to the dimensions specified in the Contract Documents unless otherwise approved by the Owner. Holes shall be drilled at the location of each individual plant, the stake or marking being considered the center of the holes. The holes shall have vertical walls and horizontal bottoms. Scarify sides of plant pit prior to planting.

When required, humus, commercial fertilizer and other additives shall be incorporated at the rates specified in the Contract Documents and shall be thoroughly and uniformly mixed with the material removed from the holes prior to backfilling. After backfilling the holes, the material shall be saturated with water to the full depth of the holes and until ponding appears in the basin. Sufficient backfill material shall be placed so that after planting and settlement has taken place, the basin will conform to the section as shown in the Plans.

Backfill material shall be native soil that is free of rocks, construction debris and other foreign material. Protect existing underground improvements from damage.

331.06 PLANTING

Inspect trees and shrubs for injury, infestation or improper pruning. Do not begin planting or wrapping trees until deficiencies are corrected or plants replaced.

No more plants shall be distributed within the project on any one (1) day than can be planted and watered on that day.

Any planting done in soil that is too wet or dry or not properly conditioned as provided herein will not be accepted. No payment will be made for such planting and any further planting work will be suspended until the Contractor has complied in every way with the Specifications.

331.103 Trees and Shrubs

For trees and shrubs backfill using native soil minus rocks and Agriform tablets, per details.

331.16 REPLACEMENTS

Landscaping Contractor shall guarantee the survival of all plants installed as part of the Contract for one (1) year from the date of acceptance of the project by the Owner. Plants found to be dead by the Owner within this time period shall be replaced by the Landscaping Contractor at no additional cost to the Owner. Replacement shall be done as soon as possible considering the appropriate planting season for the plants in question.

331.17 BASIS OF PAYMENT

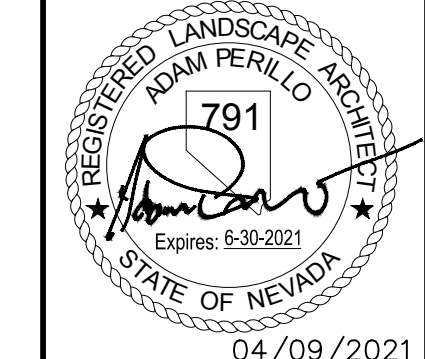
Basis of payment shall be lump sum which shall be full compensation for all material, labor, tools and equipment necessary to complete the work as specified.

There shall be no direct payment for preparation and stabilization of planting beds, pre-emergent soil treatment, and application of fertilizers. This work shall be deemed included in the lump sum of other items of landscape work.

No.	REVISIONS	DATE	BY

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KHA PROJECT 192049002	DATE 04/09/2021	SCALE: AS SHOWN	DESIGNED BY: GMW	DRAWN BY: GMW	CHECKED BY: ACP
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SPECIFICATIONS

FIELD CREEK
EFFLUENT
FILL STATION
RENO, NV

SHEET NUMBER
L5



Plotted By: Patrick, Tiffany Date: April 26, 2021 02:01:10pm File Path: \\renf01\mt_renaren\Civil\192049 - Washoe County\002 - Field Creek Effluent Fill Station\07_CAD\Plansheets\ST - Details.dwg
 This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

GENERAL STRUCTURAL NOTES

DESIGN SPECIFICATION

2018 INTERNATIONAL BUILDING CODE WITH NORTHERN NEVADA AMENDMENTS

CONSTRUCTION SPECIFICATION

2012 STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION REVISION 8

DESIGN LOADS

DESIGN DEAD LOAD
 SELF WEIGHT OF MATERIAL
 WEIGHT OF WATER IN PIPE - 62.4pcf

DESIGN LIVE LOAD
 THRUST OF WATER IN PIPE BEND - 1000lb

DESIGN WIND LOAD
 ULTIMATE DESIGN WIND SPEED = 120mph
 RISK CATEGORY = II
 WIND EXPOSURE = C
 DESIGN WIND PRESSURE = 32psf (STRENGTH)

DESIGN SOIL LOAD
 WEIGHT OF SOIL = 125pcf
 EQUIVALENT FLUID PRESSURE FOR ACTIVE SOIL PRESSURE = 35psf
 EQUIVALENT FLUID PRESSURE FOR AT-REST SOIL PRESSURE = 55psf
 EQUIVALENT FLUID PRESSURE FOR PASSIVE SOIL PRESSURE = 300psf
 COEFFICIENT OF FRICTION = 0.45
 ALLOWABLE SOIL BEARING PRESSURE = 2000psf

STRUCTURAL STEEL

PLATES SHALL CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE.
 HSS RECTANGULAR MEMBERS SHALL CONFORM TO ASTM A500, GRADE C (50 KSI).
 PROVIDE MINIMUM 1/8 INCH THICK CAP PLATE AT EXPOSED ENDS OF ALL HSS MEMBERS.
 DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE LATEST AISC CODES AND SPECIFICATIONS, INCLUDING THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS.

SHOP CONNECTIONS SHALL BE MADE BY WELDING. FIELD CONNECTIONS SHALL BE MADE WITH HIGH-STRENGTH BOLTS, EXCEPT WHERE WELDING IS INDICATED ON THE DRAWINGS. HIGH-STRENGTH BOLTS SHALL CONFORM TO ASTM DESIGNATION A325 BEARING TYPE CONNECTION WITH THREADS INCLUDED IN SHEAR PLANE UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE 3/4 INCH DIAMETER UNLESS NOTED OTHERWISE. ANY 1/2 INCH DIAMETER BOLTS SHALL CONFORM TO ASTM F593. ALL EXPOSED BOLTS SHALL BE STAINLESS STEEL.

ALL BOLTED CONNECTIONS SHALL BE SNUG-TIGHT PER RCSC (RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS) SPECIFICATIONS.

ALL WELD SIZES, NOT INDICATED SHALL COMPLY WITH THE LATEST AWS D1.1 BUT IN NO CASE SHALL WELD SIZE BE LESS THAN 3/16 INCH.

CONCRETE AND REINFORCEMENT

CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.

REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60, $f_y = 60,000$ PSI.

HOOKS AND BENDS FOR REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF ACI318-14.

ALL BEND DIMENSIONS FOR REINFORCING STEEL SHALL BE OUT-TO-OUT OF BARS. ALL PLACEMENT DIMENSIONS FOR REINFORCING STEEL SHALL BE TO CENTER OF BARS UNLESS NOTED OTHERWISE.

ALL REINFORCING SHALL HAVE 2" CLEAR COVER UNLESS NOTED OTHERWISE.

ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".

SPECIAL INSPECTIONS

SPECIAL INSPECTION IS REQUIRED OF MATERIALS, INSTALLATION, FABRICATION, ERECTION OR PLACEMENT OF COMPONENTS AND CONNECTIONS REQUIRING SPECIAL EXPERTISE TO ENSURE COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS.

COORDINATE SCHEDULES WITH AGENCY PERFORMING SPECIAL INSPECTION TO INSURE AMPLE TIME IS AVAILABLE TO PERFORM REQUIRED TASKS.

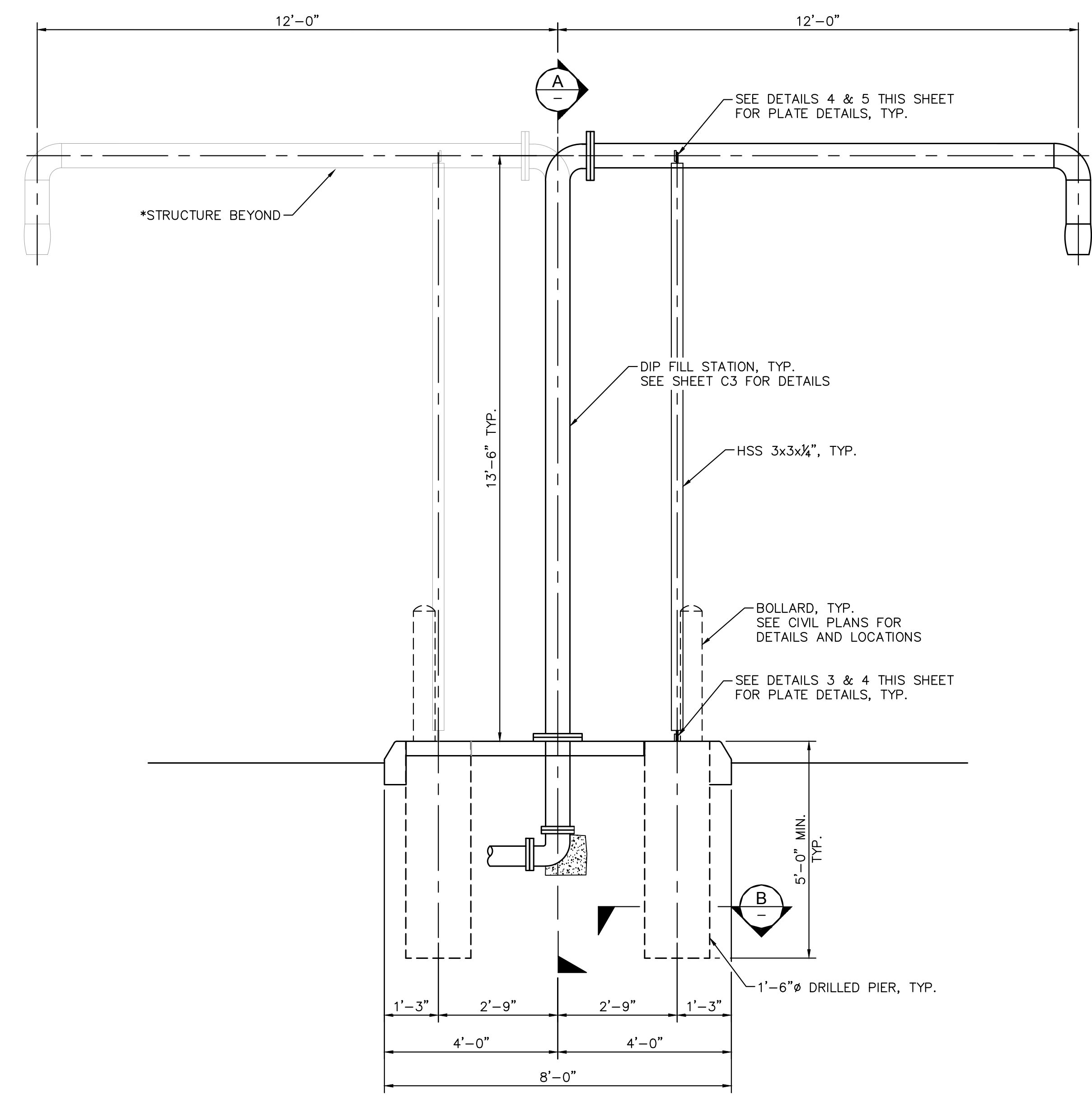
SPECIAL INSPECTIONS SHALL BE PROVIDED PER 2018 INTERNATIONAL BUILDING CODE (IBC) CHAPTER 17.

- A. STRUCTURAL STEEL AS REQUIRED BY IBC SECTION 1705.2.1
- B. CONCRETE AS REQUIRED BY IBC TABLE 1705.3

FABRICATOR SHALL SUBMIT CERTIFICATE OF COMPLIANCE STATING WORK PERFORMED WAS IN ACCORDANCE WITH APPROVED CONSTRUCTION DOCUMENTS.

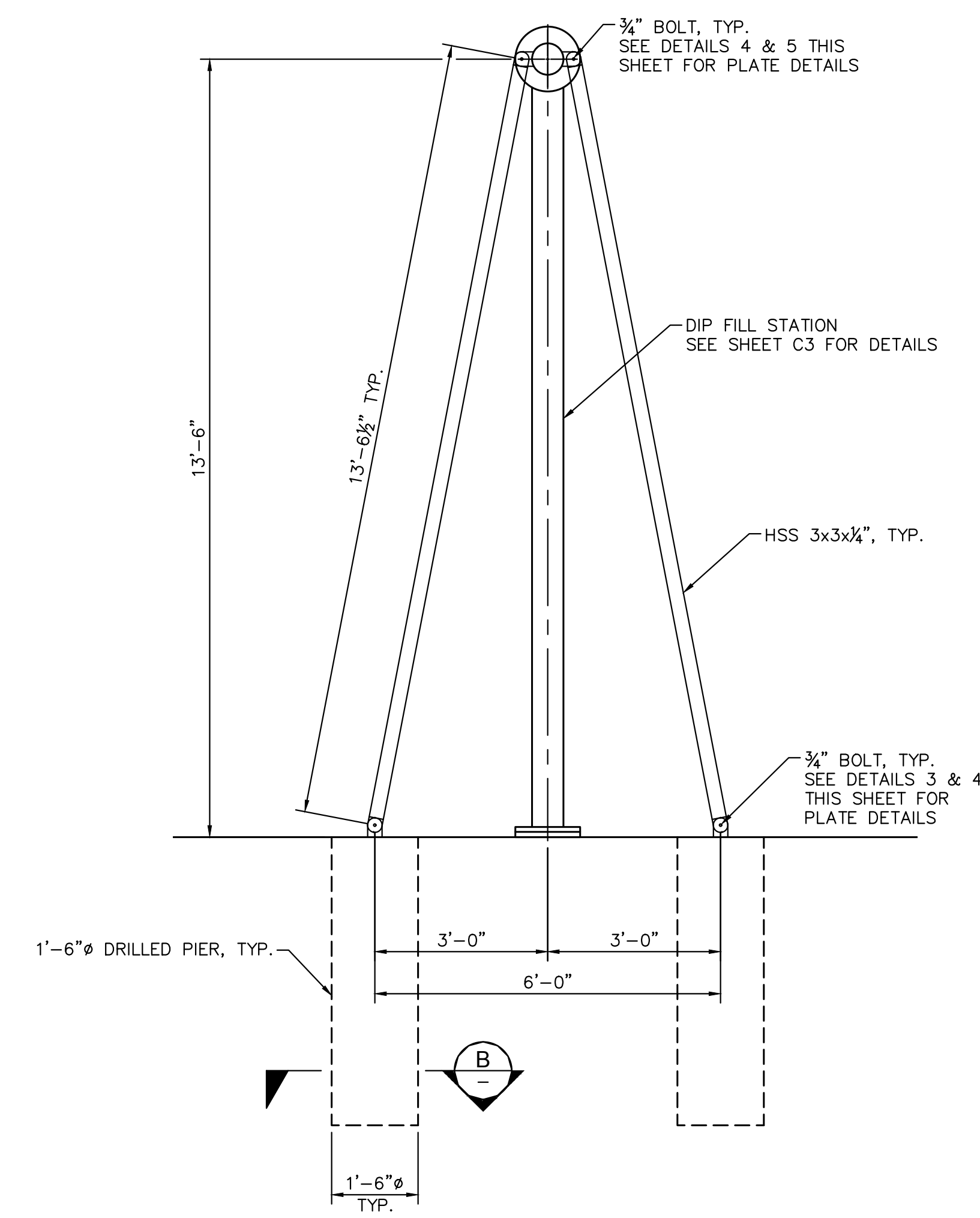
SUBMITTALS

CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. ALL WELD AND BOLT CONNECTIONS MUST BE APPROVED BY THE ENGINEER.

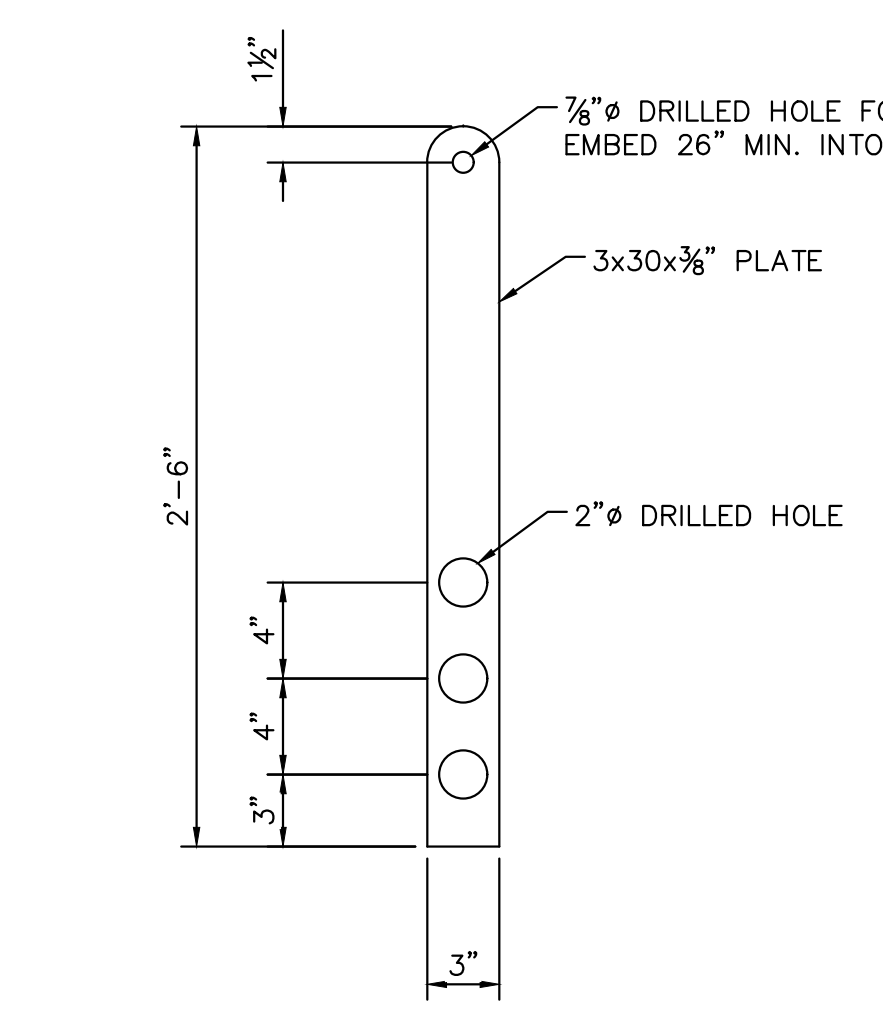


1 FILL STATION DETAILS
 SCALE: 1/2" = 1'-0"

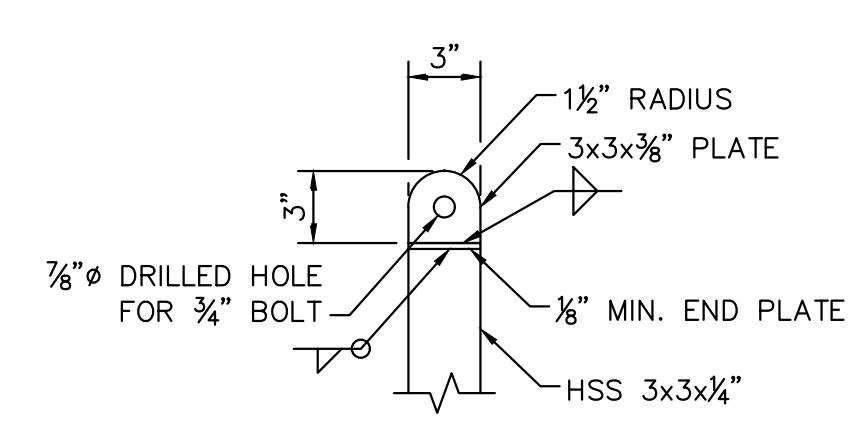
*NOTE: STRUCTURES ARE OFFSET, SEE CIVIL PLANS FOR LOCATIONS AND LAYOUT IN PLAN VIEW.



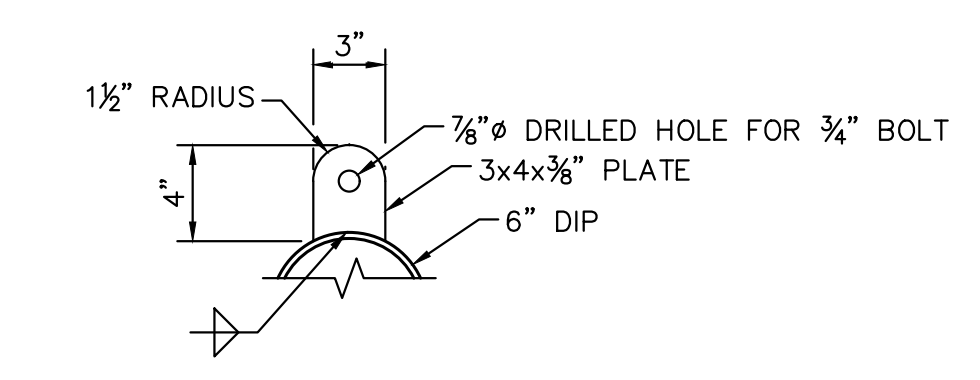
A SECTION
 SCALE: 1/2" = 1'-0"



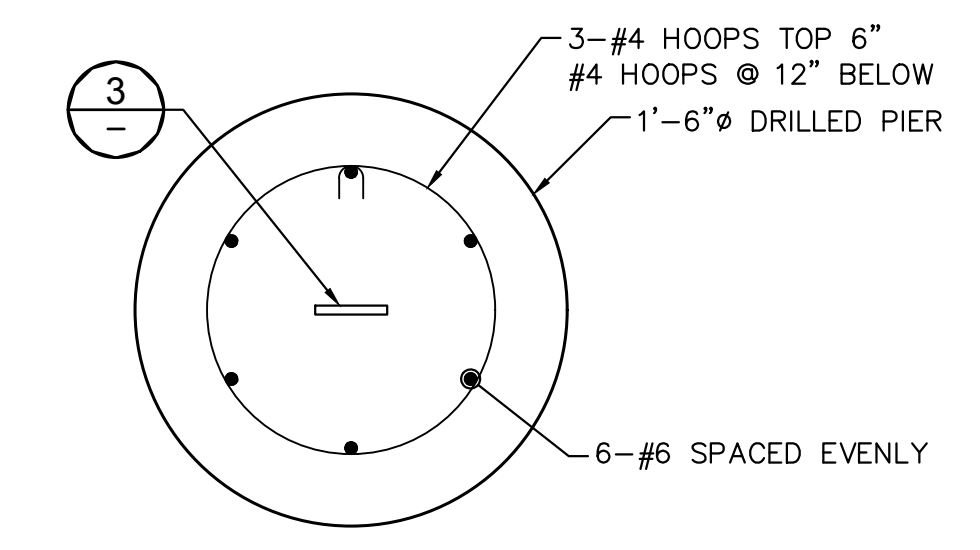
3 EMBEDDED PLATE DETAILS
 SCALE: 1/2" = 1'-0"



4 HSS END PLATE DETAIL
 SCALE: 1/2" = 1'-0"



5 PLATE ON PIPE DETAIL
 SCALE: 1/2" = 1'-0"

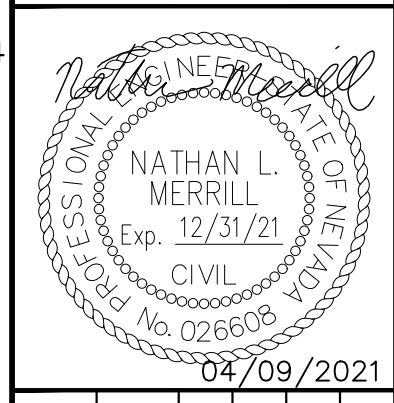


B SECTION
 SCALE: 1/2" = 1'-0"



No.	REVISIONS	DATE	BY

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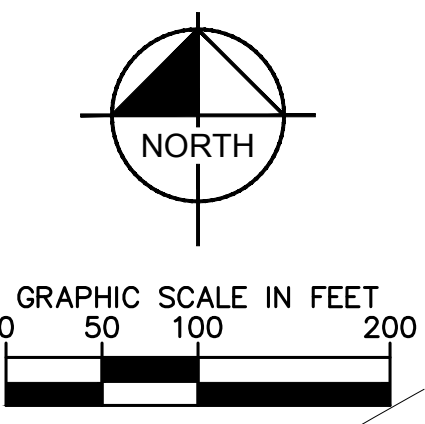
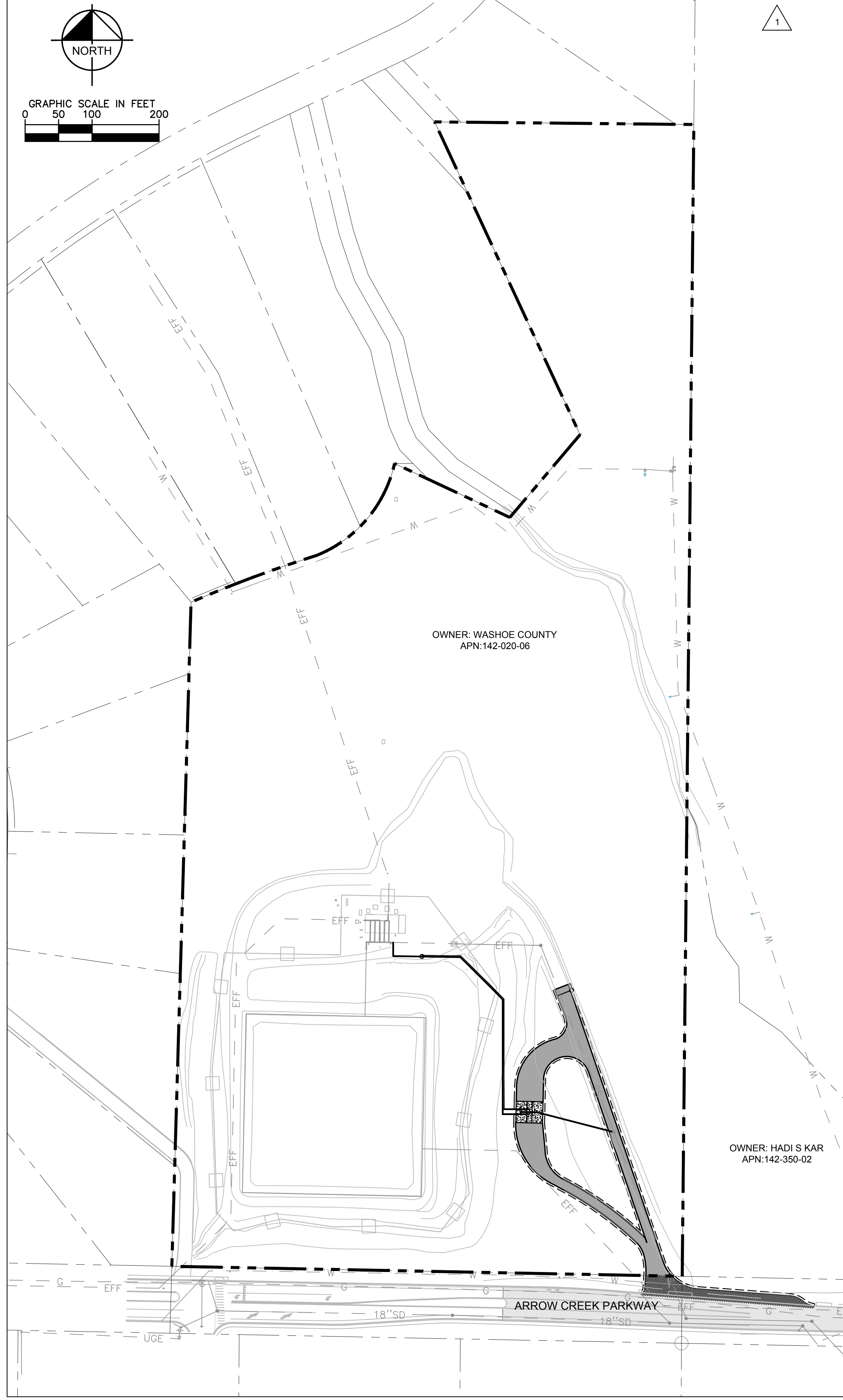
KHA PROJECT	192049002
DATE	04/09/2021
SCALE:	AS SHOWN
DESIGNED BY:	M/R
DRAWN BY:	M/R
CHECKED BY:	NLM

**FILL STATION
 STRUCTURAL
 DETAILS**

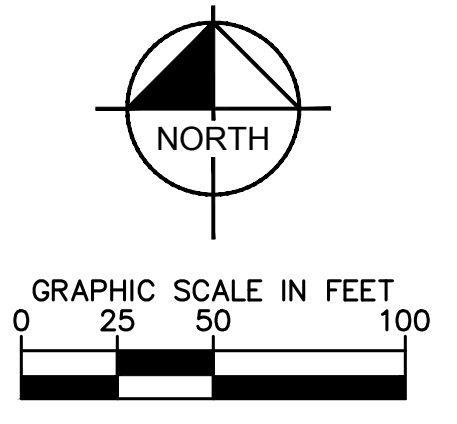
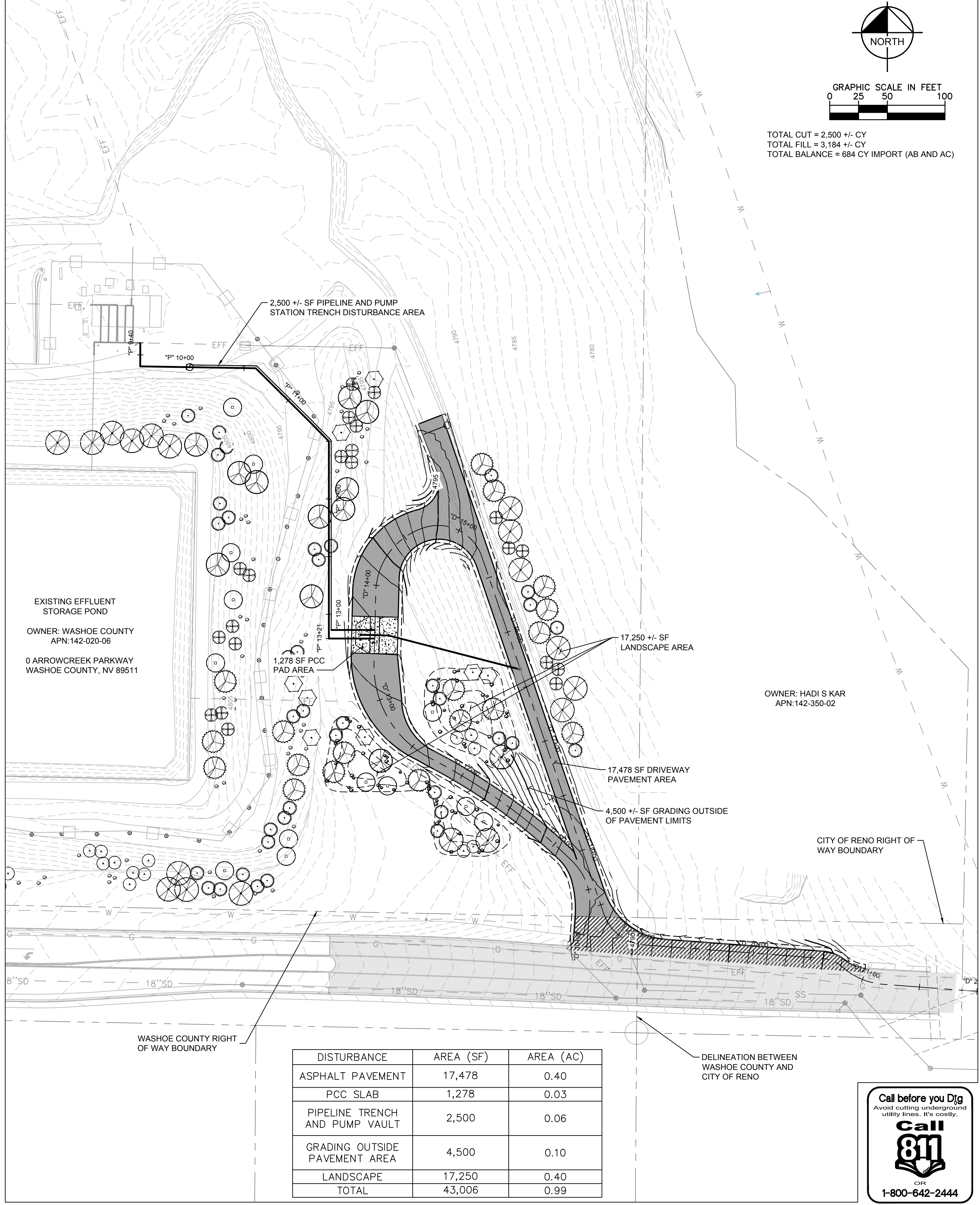
**FIELD CREEK
 EFFLUENT
 FILL STATION
 RENO, NV**

SHEET NUMBER
S1

Plotted By: Larkin, Iliona (Brown) Date: December 14, 2021 04:25:17pm File Path: K:\REN_Civil\192049 - Washoe County\002 - Field Creek Effluent Fill Station\07 CAD\Plansheets\02 - Overall Project.dwg



1



TOTAL CUT = 2,500 +/- CY
 TOTAL FILL = 3,184 +/- CY
 TOTAL BALANCE = 684 CY IMPORT (AB AND AC)

DISTURBANCE	AREA (SF)	AREA (AC)
ASPHALT PAVEMENT	17,478	0.40
PCC SLAB	1,278	0.03
PIPELINE TRENCH AND PUMP VAULT	2,500	0.06
GRADING OUTSIDE PAVEMENT AREA	4,500	0.10
LANDSCAPE	17,250	0.40
TOTAL	43,006	0.99



No.	REVISIONS	DATE	BY
1	ADDENDUM 1 - PERMIT REVISIONS	12/14/2021	IML

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REL PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
192049002	05/03/2021	AS SHOWN	CNH	IML	CNH

PROJECT SITE INFORMATION

FIELD CREEK EFFLUENT FILL STATION RENO, NV

SHEET NUMBER
G2