

SIERRA VALLEY GROUNDWATER MANAGEMENT DISTRICT GROUNDWATER RECHARGE PROJECT STAVERVILLE CREEK

DECEMBER 2024

MICHAEL J. WILHELM, P.E. _____ DATE

PROJECT NO. 49-23-049



J-U-B ENGINEERS, INC.

5190 Neil Rd, Ste. 500, Reno, NV 89502
p 775 852 1440 w www.jub.com



THE LANGDON GROUP



GATEWAY MAPPING INC.

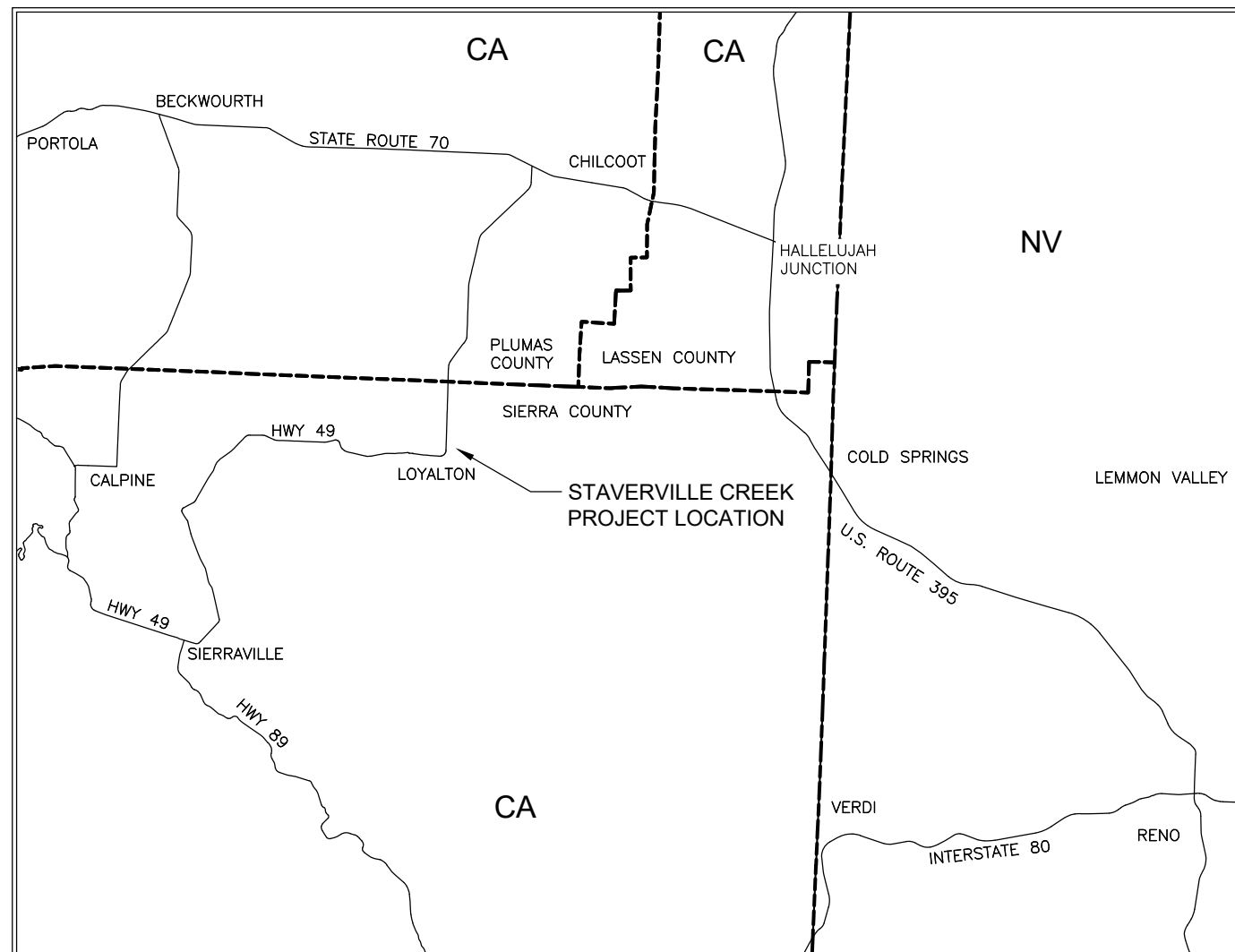
J-U-B FAMILY OF COMPANIES



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Know what's below.
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LOCATION MAP

OWNER:
SIERRA VALLEY GROUNDWATER MANAGEMENT DISTRICT
18012 CA-89
CALPINE, CA 96124
(530) 414-6831

CIVIL ENGINEER/ SURVEY:
MIKE WILHELM, PE (CA)
BEN VOLK, PE (NV)
J-U-B ENGINEERS, INC.
5190 NEIL RD. STE. 500
RENO, NV 89502
(775) 852-1440

PRIME CONSULTANT:
BETSY ELZUFON, PROJECT MANAGER
LARRY WALKER ASSOCIATES
148 DREW AVE. STE. 100
DAVIS, CA 95618
(530) 219-3693

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LAST UPDATED: 11/25/2024

SHEET NUMBER:

G-001

GENERAL NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE CALTRANS STANDARD SPECIFICATIONS 2023 EDITION & "GREEN BOOK"
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY TRAFFIC CONTROL, THROUGHOUT CONSTRUCTION, IN ACCORDANCE WITH APPLICABLE PARTS OF SSPWC 332, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD, LATEST EDITION).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE GENERAL SAFETY DURING CONSTRUCTION, AND ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES. THE CONTRACTOR SHALL FENCE AND OR BARRICADE THE CONSTRUCTION AREA AS REQUIRED TO PROTECT ADJACENT SITES, VEHICULAR TRAFFIC, AND PEDESTRIAN TRAFFIC. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA AND NRS CHAPTER 618, IN THE CONSTRUCTION PRACTICES FOR ALL EMPLOYEES DIRECTLY ENGAGED IN THE CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND/OR PROTECTION OF ALL EXISTING AND PROPOSED PIPING, UTILITIES, TRAFFIC SIGNAL EQUIPMENT (BOTH ABOVE GROUND AND BELOW GROUND), STRUCTURES ADJACENT TO STREETS, AND ALL OTHER EXISTING IMPROVEMENTS THROUGHOUT CONSTRUCTION.
- THE CONTRACTOR SHALL PURSUE WORK IN A CONTINUOUS AND DILIGENT MANNER TO ENSURE A TIMELY COMPLETION OF THE PROJECT.
- ALL CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE OWNER SO THAT THE QUALITY OF WORK CAN BE CHECKED FOR APPROVAL.
- THE CONTRACTOR SHALL INCORPORATE ADEQUATE DRAINAGE PROCEDURES DURING THE CONSTRUCTION PROCESS TO ELIMINATE EXCESSIVE PONDING AND/OR EROSION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SITE IN A NEAT AND ORDERLY MANNER THROUGHOUT THE CONSTRUCTION PROCESS. ALL MATERIALS SHALL BE STORED WITHIN APPROVED CONSTRUCTION AREAS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUOUS DUST CONTROL THROUGHOUT THE CONSTRUCTION OF ALL ITEMS SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REGULAR CLEANING OF ALL MUD, DIRT, DEBRIS, ETC., FROM ANY AND ALL ADJACENT STREETS AND SIDEWALKS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, ALL PERMITS AS REQUIRED.
- SHOULD ANY PREHISTORIC OR HISTORIC REMAINS OR ARTIFACTS BE DISCOVERED DURING SITE DEVELOPMENT, WORK SHALL BE TEMPORARILY HALTED AT THE SPECIFIC SITE AND THE STATE HISTORIC PRESERVATION OFFICE OF THE DEPARTMENT OF MUSEUMS, LIBRARY AND ARTS, SHALL BE NOTIFIED TO RECORD AND PHOTOGRAPH THE SITE. THE PERIOD OF TEMPORARY DELAY SHALL BE LIMITED TO A MAXIMUM OF TWO (2) WORKING DAYS FROM THE DATE OF NOTIFICATION.
- A PRECONSTRUCTION CONFERENCE WILL BE HELD WITH OWNER & ENGINEER PRIOR TO ANY CONSTRUCTION.
- NO MATERIALS OF ANY KIND SHALL BE STOCKPILED OR CONSTRUCTION EQUIPMENT PARKED ON CONCRETE OR ASPHALT SURFACES.
- CONSTRUCTION OF ALL IMPROVEMENTS MUST ALLOW FOR THE PERPETUATION OF ALL EXISTING LEGAL ACCESSSES AND EXISTING DRIVEWAYS DURING & AFTER CONSTRUCTION. FOR RESIDENTIAL DRIVEWAYS AND/OR ROADWAYS THAT REQUIRE TEMPORARY CLOSURE, NOTICES SHALL BE GIVEN TO THE IMPACTED RESIDENTS 48 HOURS IN ADVANCE, AND AGAIN 1 HOUR BEFORE CLOSING ACCESS. TEMPORARY ACCESS SHALL BE RESTORED AT THE END OF THE WORK DAY. THE RTAA FIRE DEPARTMENT SHALL BE NOTIFIED OF CLOSURES OR DETOURS OF STREETS AND FIRE ACCESS ROADS 48 HOURS PRIOR TO CLOSURE.
- THE CONTRACTOR SHALL FURNISH PRODUCT SUBMITTALS FOR IMPROVEMENTS INCLUDING MANUFACTURER'S SPECIFICATIONS, SHOP DRAWINGS, CONCRETE MIX DESIGNS, ASPHALT MIX DESIGNS, GRADATION CERTIFICATIONS, ETC. FOR REVIEW BY THE ENGINEER OF RECORD. SUBMITTALS SHALL BE FURNISHED PROMPTLY AFTER EXECUTION OF THE CONTRACT, BUT IN ALL CASES PRIOR TO DELIVERY OF SUCH MATERIALS.
- THE CONTRACTOR SHALL CLOSELY COORDINATE CONSTRUCTION WITH OTHER TRADE CONTRACTORS, TO INSURE ADEQUATE ACCESS TO THE BUILDING SITE.
- THE CONTRACTOR UPON COMPLETION OF THE PROJECT, SHALL PREPARE AND SUBMIT AS-BUILT DRAWINGS TO THE OWNER & ENGINEER. SUBMITTAL SHALL BE IN THE FORM OF A MULTIPAGE PDF FORMAT AND SINGLE HARD COPY.

CONCRETE & PAVEMENT NOTES

- REFERENCE DETAILS FOR PORTLAND CEMENT CONCRETE SPECIFICATIONS.

UTILITY NOTES

- UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THE PLANS. HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY ACTUAL LOCATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL CALL UNDERGROUND SERVICES ALERT, USA, AT "811" AND A PRIVATE LOCATOR PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES WHICH MAY CONFLICT WITH THE NEW WORK PRIOR TO BEGINNING CONSTRUCTION. WATER LINES WHICH CONFLICT WITH THE NEW WORK SHALL BE REROUTED WITH APPLICABLE STANDARDS. REROUTING OF WATER LINES SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE AWWA & TMWA STANDARDS. REROUTING SHALL BE INCIDENTAL TO OTHER BID ITEMS AND PAID PER THE CONTINGENT BID ITEM.
- THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID SHUT OFF OR DISCONNECTION OF ACTIVE UTILITIES. IF SHUT OFFS ARE UNAVOIDABLE, THE CONTRACTOR SHALL COORDINATE THAT SHUT OFF WITH THE AFFECTED UTILITY COMPANIES AT LEAST 2 WEEKS IN ADVANCE OF THE DISRUPTION OF THE SERVICE.
- THE CONTRACTOR IS TO PROVIDE ALL MISCELLANEOUS PIPE, FITTINGS AND APPURTENANCES AS REQUIRED TO COMPLETE THE UTILITY WORK AS SHOWN.
- TRENCH EXCAVATION AND BACKFILL SHALL BE PERFORMED IN ACCORDANCE WITH THE GREEN BOOK AND GEOTECHNICAL REPORT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION AND SHORING PROCEDURES. CONDUIT PLACEMENT SHALL BE BY OPEN TRENCH UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE PLAN. SHORING BRACING AND SHEETING SHALL BE AS SET FORTH IN THE RULES, ORDERS, AND REGULATIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA).
- UTILITY CONDUIT, 8 INCHES AND SMALLER, SHALL BE BEDDED IN CLASS A PIPE BEDDING AS SPECIFIED IN SPECIFICATION SECTION 200.03. UTILITY CONDUIT, GREATER THAN 8 INCHES, SHALL BE BEDDED IN CLASS A, B OR C AS SPECIFIED IN THE SSPWC. CLASS C BEDDING MATERIAL SHALL BE COMPACTED WITH VIBRATORY COMPACTOR UNTIL MINIMUM DENSITY REQUIREMENTS ARE MET OR UNTIL NO FURTHER SETTLEMENT OCCURS, AS APPROVED BY THE ENGINEER. THE MAXIMUM LOOSE LIFT THICKNESS SHALL BE 6 INCHES. REFERENCE GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS AND RECOMMENDATIONS.
- TRENCH BACKFILL SHALL BE NATIVE EXCAVATED GRANULAR MATERIAL OR APPROVED IMPORT GRANULAR MATERIAL FREE FROM UNSUITABLE MATERIAL DEFINED HEREIN, AND AS PER THE GEOTECHNICAL REPORT.
- AGGREGATE BASE COURSE, ABC, SHALL MEET THE REQUIREMENTS OF THE GREEN BOOK, TYPE 2, CLASS 2. AGGREGATE BASE COURSE SHALL BE PLACED IN ACCORDANCE WITH THE GREEN BOOK AND THE GEOTECHNICAL REPORT.
- COORDINATE LOCATIONS OF ALL UTILITIES WITH RESPECTIVE TRADES.

DEMOLITION NOTES

- EXISTING IMPROVEMENTS, ADJACENT PROPERTY, FENCING, WALLS, UTILITIES AND OTHER FACILITIES, TREES AND PLANTS THAT ARE NOT TO BE REMOVED SHALL BE PROTECTED FROM INJURY OR DAMAGE RESULTING FROM THE CONTRACTORS OPERATIONS.
- ALL EXISTING FEATURES IN CONFLICT WITH PROPOSED SHALL BE REMOVED, RELOCATED AND/OR REPLACED. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER AND THE GOVERNING AGENCIES PRIOR TO SUCH REMOVAL, RELOCATION AND/OR REPLACEMENT.

EARTHWORK NOTES

- CLEARING AND GRUBBING, SUBGRADE PREPARATION AND EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE GREEN BOOK.
- UNSUITABLE SOIL OR MATERIALS NOT TO BE INCLUDED IN THE WORK INCLUDE:
 - ORGANIC MATERIALS SUCH AS PEAT, MULCH, ORGANIC SILT OR SOIL,
 - SOILS CONTAINING EXPANSIVE CLAYS,
 - MATERIAL CONTAINING EXCESSIVE MOISTURE,
 - POORLY GRADED COARSE MATERIAL,
 - PARTICLE SIZE IN EXCESS OF 6 INCHES,
 - MATERIAL WHICH WILL NOT ACHIEVE DENSITY AND/OR BEARING REQUIREMENTS.
- FINE GRADING ELEVATIONS, SLOPES, AND OTHER ELEVATIONS NOT SHOWN SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD TO OBTAIN DRAINAGE IN THE DIRECTION AND TO THE DRAINAGE WAYS INDICATED. ALL GRADING ELEVATIONS SHALL BE APPROVED BY THE ENGINEER.
- DRAINAGE:
 - CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL NEW DRAINAGE IMPROVEMENTS ARE IN PLACE AND FUNCTIONING.
 - NO FENCE OR OTHER OBSTRUCTION WHICH INTERFERES WITH DISCHARGE SHALL BE CONSTRUCTED WITHIN THE DRAINAGE OR STORM DRAIN EASEMENTS.
- ALL EXCESS OR UNSUITABLE MATERIAL SHALL BE DISPOSED ONSITE.
- MECHANICAL SLOPE STABILIZATION IS TO BE USED FOR SLOPES STEEPER THAN 3:1. WHEN ROCK RIP RAP IS USED FOR SLOPE STABILIZATION, IT SHALL CONTAIN A MINIMUM OF FOUR FRACTURED FACES AND BE PLACED TO A MINIMUM DEPTH OF 12 INCHES. A MINIMUM OF 75% OF THE RIP RAP SHALL BE SPECIFIED DIAMETER ROCK OR GREATER.

CALIFORNIA BUILDING STANDARD CODE (CBCS) 2023 EDITION "GREEN BOOK"

INSPECTION AND TESTING

- THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ENGINEER AND INSPECTOR FOR INSPECTIONS OF WORK AT APPROPRIATE INTERVALS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PAY FOR ADDITIONAL INSPECTIONS THAT ARE THE RESULT OF HIS WORKMANSHIP.



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Reno, NV 89502
Phone: 775.852.1440
www.jub.com

PRELIMINARY
PLANS

NOT FOR
CONSTRUCTION

NO.	REVISION	DESCRIPTION	BY	DATE

STAVERVILLE CREEK AQUIFER RECHARGE

GENERAL NOTES

FILE: 07-22-078_TITLE
JUB PROJ. #: 49-23-049
DRAWN BY: ALM, PSS
DESIGN BY: ALM, PSS
CHECKED BY: GO

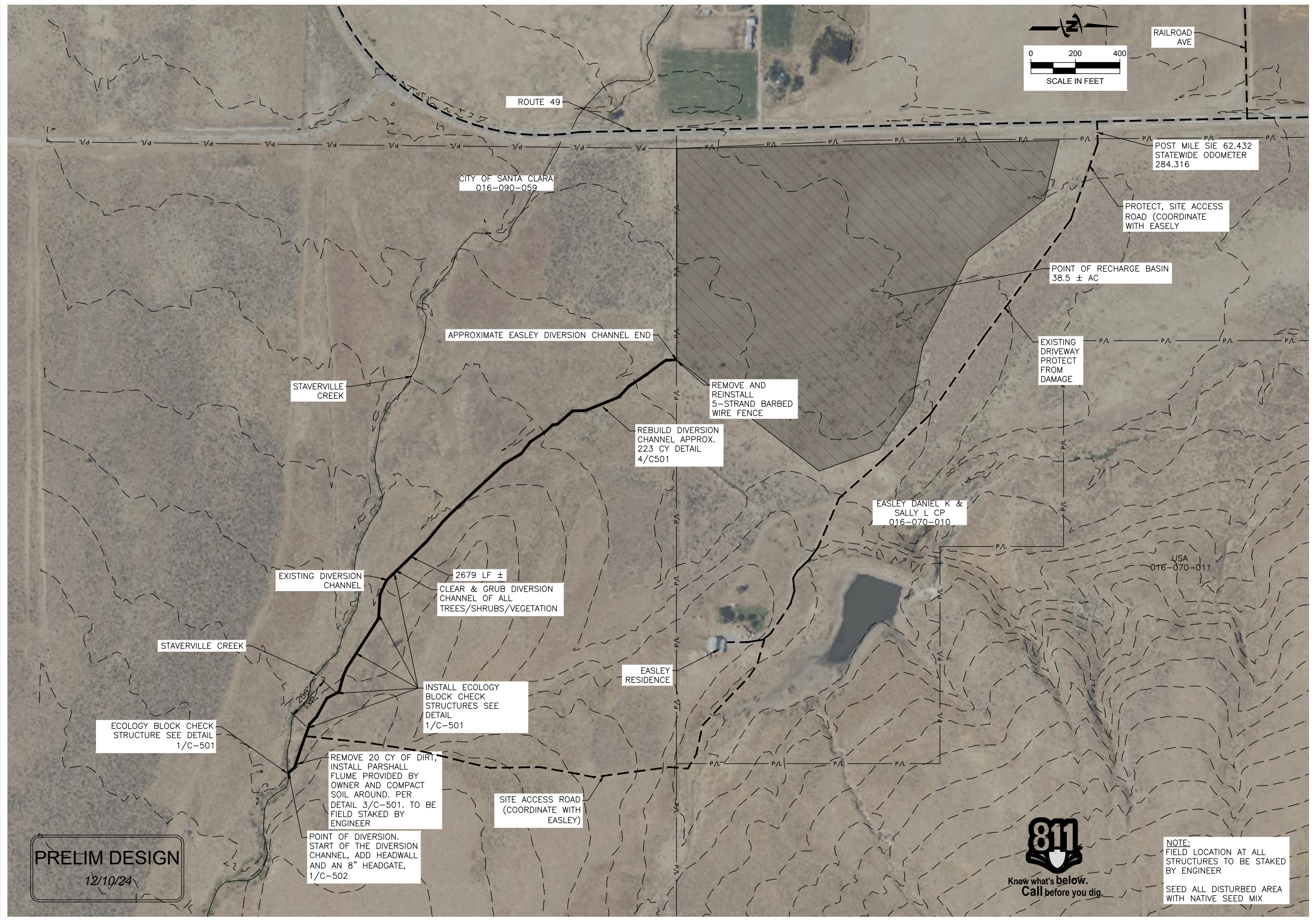
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

LAST UPDATED: 11/7/2024

SHEET NUMBER:

G-002

Plot Date: 12/10/2024 11:23 AM Plotted By: Drew Myers
 Date Created: 12/10/2024 J:\PROJECTS\Clients\CAS\CD\PROJECTS\49-23-049_AQUIFERRECHARGE\PROJECTS\49-23-049_C-101X.DWG



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PRELIMINARY PLANS

NOT FOR CONSTRUCTION

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NO.	REVISION	DESCRIPTION	BY	DATE

STAVERVILLE CREEK AQUIFER RECHARGE SVGMD

STAVERVILLE CREEK RECHARGE AREA

FILE: 49-23-049_C-101X
 JUB PROJ #: 49-23-049
 DRAWN BY: ALM
 DESIGN BY: ALM
 CHECKED BY: BV

LAST UPDATED: 12/9/2024

DRAWING:
C-101

SHEET: 3 OF 5

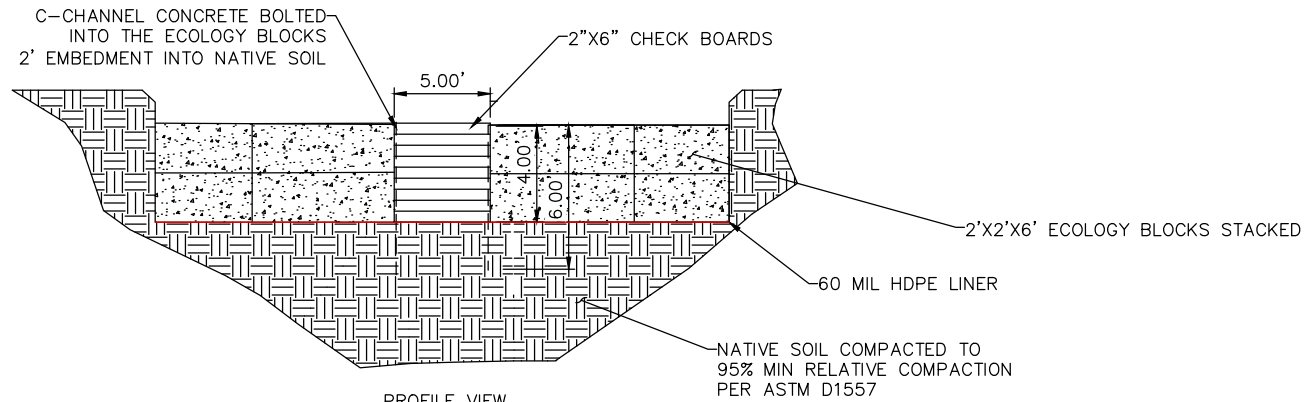


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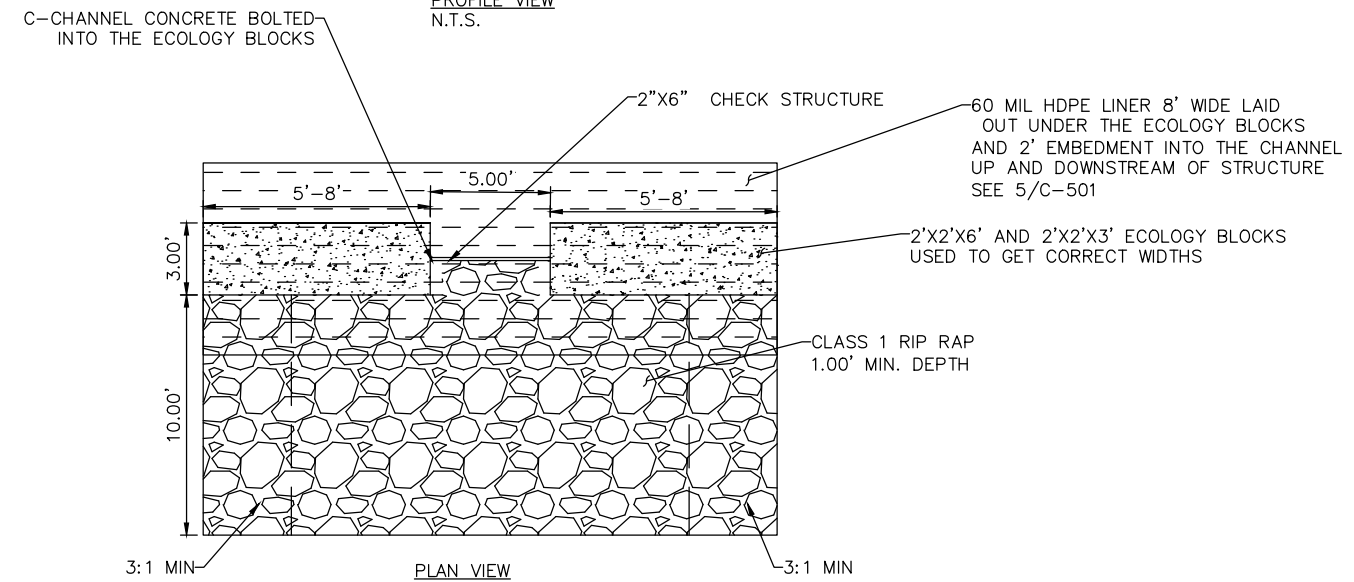
NOTE:
 FIELD LOCATION AT ALL STRUCTURES TO BE STAKED BY ENGINEER

SEED ALL DISTURBED AREA WITH NATIVE SEED MIX

NO.	REVISION	DESCRIPTION	BY	DATE

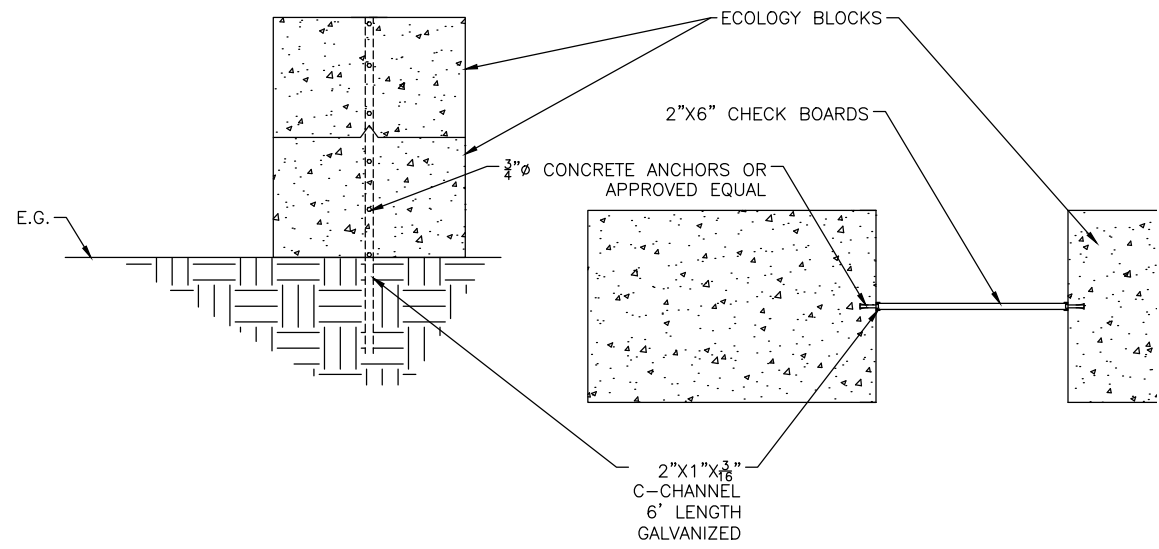


PROFILE VIEW
N.T.S.

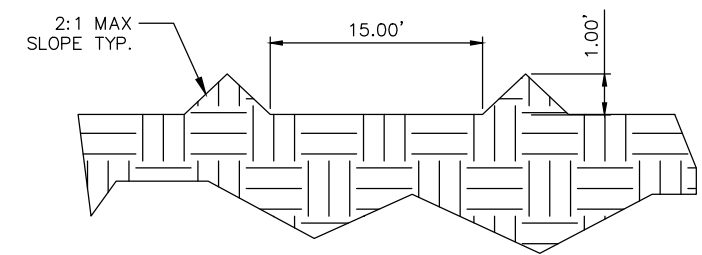


PLAN VIEW
N.T.S.

1 ECOLOGY BLOCK CHECK STRUCTURE
C-501
N.T.S.



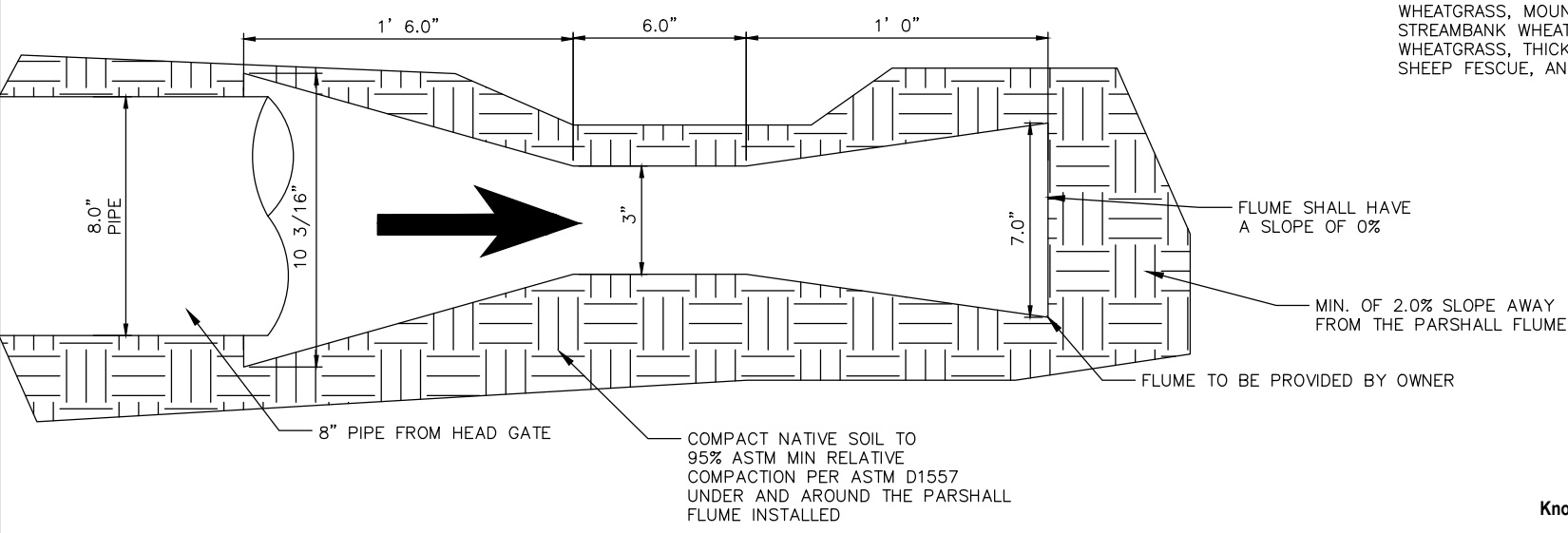
2 CHECK BOARD STRUCTURE
C-501
N.T.S.



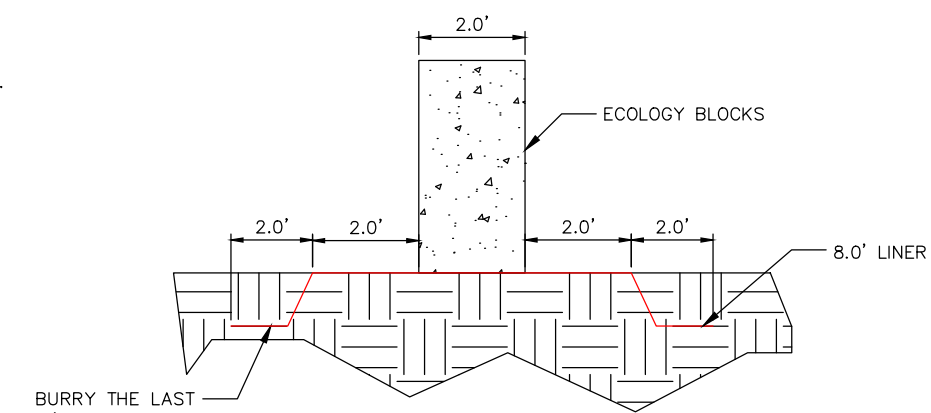
4 DIVERSION CHANNEL
C-501
N.T.S.

LIST OF SPECS:

1. C-CHANNEL MUST BE IN ACCORDAANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION INC
2. CHECK BOARDS, SHALL BE PRESSURE TREATED OR HARDWOOD
3. BOLTS MUST BE 3/4" ϕ GRADE 8 STAINLESS STEEL
4. CLASS 1 RIP RAP (6") PER GREEN BOOK TABLE 873.3A
5. SEED MUST BE A MIX OF SLENDER WHEATGRASS, MOUNTAIN BROMEGRASS, STREAMBANK WHEATGRASS, THICKSPIKE WHEATGRASS, THICKSPIKE WHEATGRASS, SHEEP FESCUE, AND ANNUAL RYEGRASS.



3 PARSHALL FLUME
C-501
N.T.S.



5 LINER INSTALLATION
C-501
N.T.S.



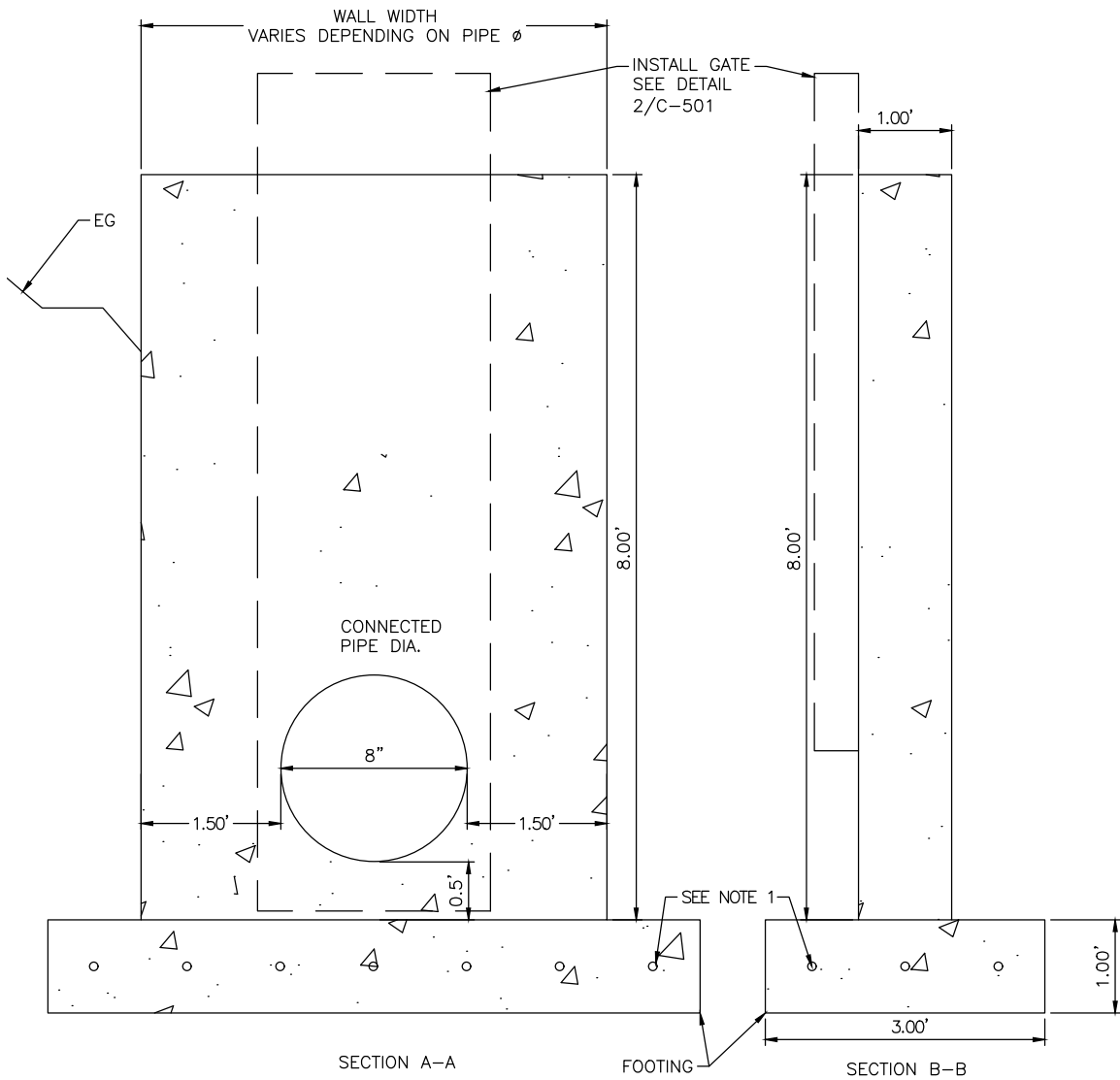
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PRELIM DESIGN
12/10/24

Plot Date: 12/10/2024 11:26 AM Plotted By: Drew Myers
 Date Created: 12/10/2024 10:24:00 AM Client: CAS/CMP/PROJECTS/49-23-049_AQUIFERRECHARGE/PROJECT DESIGN/CSH/SHEET/49-23-049_C-50X.DWG

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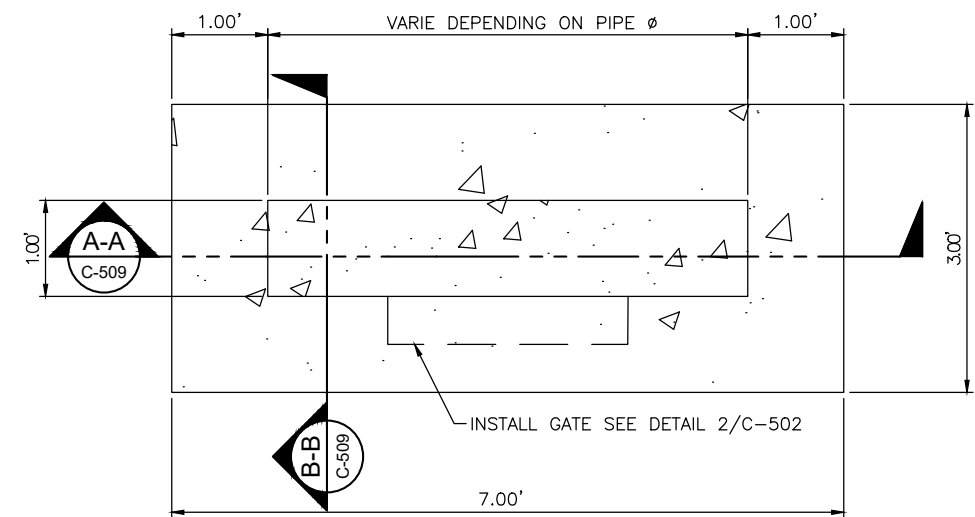
NO.	REVISION	DESCRIPTION	BY	DATE



SECTION A-A

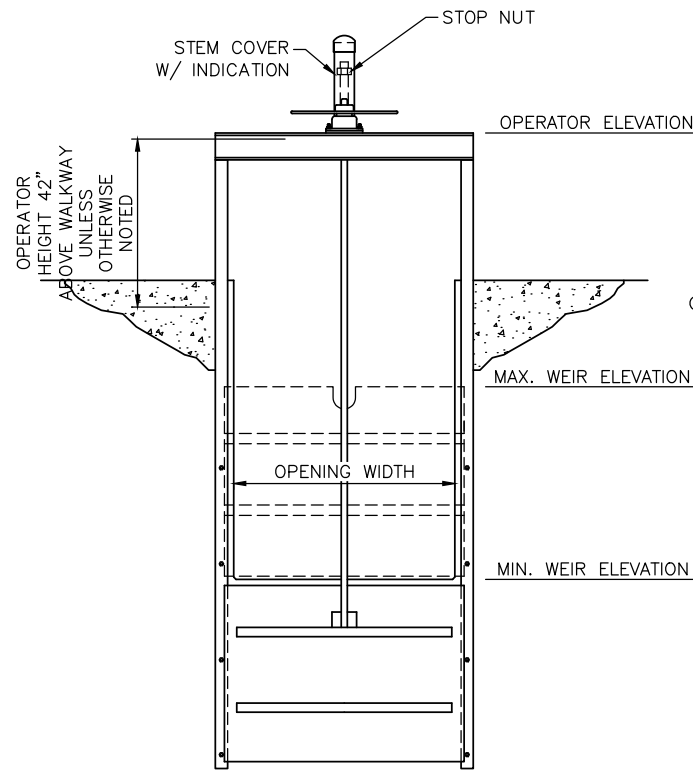
SECTION B-B

PROFILE VIEW

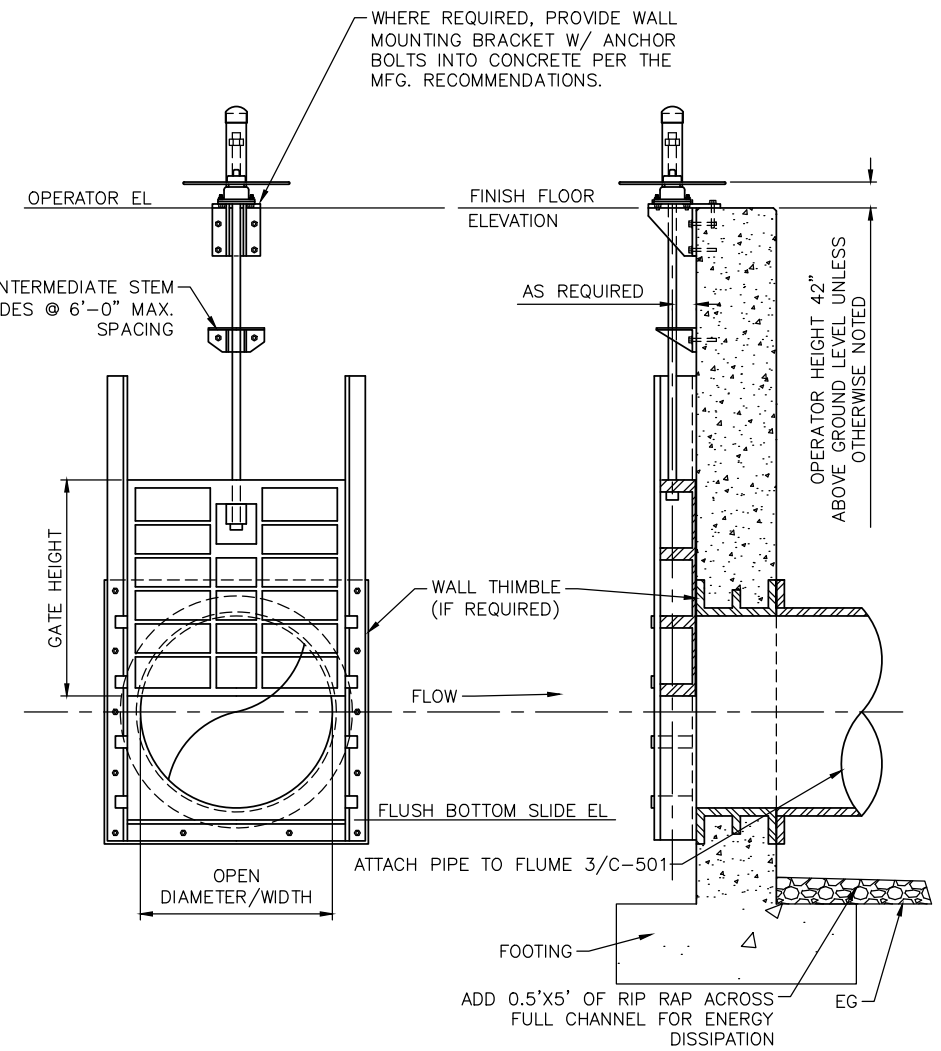


PLAN VIEW

1 FLAT HEADWALL STRUCTURE WITH GATE
 C-502 N.T.S.



WEIR_GATE
 (SELF-CONTAINED, WALL MOUNTED GUIDE SHOWN)



FLUSH_BOTTOM_SLIDE_GATE
 (NON SELF-CONTAINED, THIMBLE WALL MOUNT SHOWN)

2 HEADGATE STRUCTURE
 C-502 N.T.S.

- NOTES:
- #4 REBAR SHALL BE PLACED ON 12" CENTERS FOR THE FOOTING AND THE WALL
 - GATES SHALL BE WATERMAN OR APPROVED EQUAL



PRELIM DESIGN
 12/10/24