

**RESOLUTION 25R09**

**A RESOLUTION APPROVING THE SITE DEVELOPMENT PLAN FOR  
THE MAIN STREET OFF-STREET PARKING LOT**

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF ELIZABETH, COLORADO AS FOLLOWS:

Section 1. The Site Development Plan for the Main Street Off-Street Parking Lot, attached hereto as **Exhibit A**, is hereby approved pursuant to Section 16-2-40 of the Town of Elizabeth Municipal Code.

PASSED, APPROVED, and ADOPTED this \_\_\_\_ day of \_\_\_\_\_, 2025, by the Board of Trustees of the Town of Elizabeth, Colorado, on first and final reading, by a vote of \_\_\_\_\_ for and \_\_\_\_\_ against.

\_\_\_\_\_  
Angela Ternus, Mayor

ATTEST

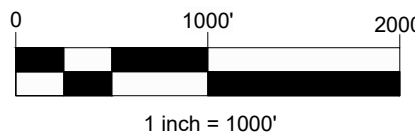
\_\_\_\_\_  
Michelle M. Oeser, Town Clerk

# MAIN STREET OFF-STREET PARKING LOT

LOTS 2-6 OF BLOCK 13  
WITHIN THE NE QUARTER OF SECTION 18, T8S, R64W, 6TH P.M.,  
TOWN OF ELIZABETH, ELBERT COUNTY, COLORADO



VICINITY MAP



## BASIS OF BEARINGS

THE BEARINGS SHOWN HEREON ARE BASED UPON THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 18, TOWNSHIP 8 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN, ASSUMED TO BEAR SOUTH 89°12'42" WEST, A DISTANCE OF 2642.37 FEET.

## BENCHMARK

PROJECT BENCHMARK (AZTEC #400):  
PROJECT BENCHMARK IS A NGS MONUMENT DESIGNATION H 53 (POINT ID KK0312). SAID MONUMENT IS AN NGS STANDARD DISK SET ON THE TOP OF A CONCRETE PORCH, STAMPED "H 53 1934." MONUMENT IS LOCATED ON 188 S. MAIN ST., NORTH EAST SIDE OF THE FORMER BANK, 4 FT EAST OF THE CENTERLINE OF SIDEWALK AND 5 INCHES NORTH OF A BRICK PILLAR.  
NGS PUBLISHED ELEVATION = 6451.58 FT (NAVD 88)

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30	DETAILS
31	DETAILS

## PROFESSIONAL ENGINEER CERTIFICATION

THESE CONSTRUCTION PLANS FOR THE MAIN STREET OFF-STREET PARKING LOT WERE PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF ELIZABETH DESIGN REVIEW STANDARDS AND GUIDELINES, WATER AND SEWER STANDARDS, STORM DRAINAGE DESIGN AND TECHNICAL CRITERIA, AND THE GRADING, EROSION AND SEDIMENT CONTROL MANUAL.

MARTIN METSKER, PE #41743  
TERRACINA DESIGN  
10200 E. GIRARD AVE., SUITE A-314  
DENVER, CO 80231  
PHONE (303) 632-8867 EXT.110

DATE

THESE DESIGNS, PLANS, AND CONTRACT DOCUMENTS ARE REVIEWED FOR CONCEPT AND GENERAL CONFORMANCE TO THE TOWN'S MINIMUM STANDARDS ONLY, AND THE PRIMARY RESPONSIBILITY FOR DESIGN ADEQUACY IS TO REMAIN WITH THE ENGINEER OF RECORD. THIS REVIEW DOES NOT IMPLY RESPONSIBILITY BY THE TOWN OF ELIZABETH, OR THE TOWN ENGINEER FOR COMPLETENESS, ACCURACY OR CORRECTNESS OF CALCULATION. THE REVIEW DOES NOT IMPLY THAT QUANTITIES OF ITEMS INDICATED ON THE PLANS ARE THE FINAL QUANTITIES REQUIRED. THE REVIEW SHALL NOT BE CONSTRUED FOR ANY REASON AS ACCEPTANCE OF FINANCIAL RESPONSIBILITY BY THE TOWN FOR ADDITIONAL ITEMS AND ADDITIONAL QUANTITIES OF ITEMS SHOWN THAT MAY BE REQUIRED DURING THE CONSTRUCTION PHASE.

APPROVED FOR CONSTRUCTION WITHIN ONE YEAR OF THE EARLIEST OF THESE DATES:

BY:	_____	DATE
TOWN ENGINEER	_____	DATE
BY:	_____	DATE
TOWN OF ELIZABETH-PUBLIC WORKS DIRECTOR	_____	DATE
BY:	_____	DATE
TOWN OF ELIZABETH-TOWN ADMINISTRATOR	_____	DATE
BY:	_____	DATE
ELIZABETH FIRE DEPARTMENT	_____	DATE

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	11/01/2024	MM
2	2ND SUBMITTAL	01/17/2025	MM

NOT FOR  
CONSTRUCTION

MAIN STREET OFF-STREET PARKING LOT  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
COVER SHEET



13/02/2025 11:23 AM, X:TOWN OF ELIZABETH\CD\PLANS\01 - MAIN ST PARKING\PRELIMINARY CDS GENERAL NOTES.DWG 1

GENERAL NOTES:

- UNLESS OTHERWISE MODIFIED HEREIN, ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION SHALL MEET OR EXCEED THE STANDARDS AND SPECIFICATIONS SET FORTH BY THE GOVERNING MUNICIPALITY, DISTRICT, AGENCY OR ENTITY. IF THE GOV. OR ENTITY DOES NOT HAVE A STANDARD, AN APPLICABLE STANDARD FROM THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARDS (M & S STANDARDS, AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION) SHALL BE ADHERED TO. FURTHER ALL OTHER APPLICABLE STATE AND FEDERAL REGULATIONS ARE TO BE FOLLOWED. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND THE SPECIFICATIONS, OR ANY APPLICABLE STANDARDS OR REGULATIONS, THE MOST RESTRICTIVE STANDARD SHALL APPLY.
- ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD, UNLESS SPECIFICALLY STATED OTHERWISE.
- EXISTING UTILITIES SHOWN ON THIS PLAN ARE BASED UPON THE BEST INFORMATION AVAILABLE AS SUPPLIED BY SURFACE EVIDENCE AND UTILITY COMPANY MAPS. UTILITIES THAT EXIST MAY NOT BE SHOWN HEREIN. THE SIZE, LOCATION, TYPE AND NUMBER OF UTILITY SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND NOTIFICATION OF ANY DISCREPANCY SHALL BE MADE TO THE OWNER AND ENGINEER BEFORE ANY OTHER WORK IS PERFORMED.
- THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO(UNCC) AT 811, AT LEAST 2 WORKING DAYS PRIOR TO BEGINNING EXCAVATION OR GRADING, TO HAVE ALL REGISTERED UTILITY LOCATIONS MARKED. OTHER UNREGISTERED UTILITY ENTITIES (I.E. DITCH / IRRIGATION COMPANY) ARE TO BE LOCATED BY CONTACTING THERE SPECTIVE REPRESENTATIVE. UTILITY SERVICE LATERALS ARE ALSO TO BE LOCATED PRIOR TO BEGINNING EXCAVATION OR GRADING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES DURING CONSTRUCTION AND FOR COORDINATING WITH THE APPROPRIATE UTILITY COMPANY FOR ANY UTILITY CROSSINGS REQUIRED.
- A STATE CONSTRUCTION DETERMINING WASTE/WATER DISCHARGE PERMIT IS REQUIRED IF DEWATERING IS REQUIRED IN ORDER TO INSTALL UTILITIES OR WATER IS DISCHARGED INTO A STORM SEWER, CHANNEL, IRRIGATION DITCH OR ANY WATERS OF THE UNITED STATES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF JOB SITE SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.
- DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWING. IF PERTINENT DIMENSIONS ARE NOT SHOWN, CONTACT THE DESIGNER FOR CLARIFICATION, AND ANNOTATE THE DIMENSION ON THE AS-BUILT RECORD DRAWINGS.
- IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE DEVELOPER SHALL CONTACT THE DESIGNER AND THE LOCAL ENTITY ENGINEER IMMEDIATELY.
- THE CONTRACTOR SHALL REFER TO AN APPROVED GEOTECHNICAL STUDY FOR ADDITIONAL INFORMATION PERTAINING TO THE SITE CONSTRUCTION, MATERIALS AND PAVEMENTS.
- CONTRACTOR SHALL REFER TO THE APPROVED EROSION CONTROL MANAGEMENT PLAN FOR IMPLEMENTATION OF BEST MANAGEMENT PRACTICES TO MINIMIZE OR ELIMINATE EROSION AND SEDIMENT TRANSPORT AT ALL TIMES.

GRADING NOTES:

- REFER TO THE ROADWAY PLANS FOR GRADING AND CONSTRUCTION DETAIL IN THE PUBLIC RIGHT OF WAY.
- REFER TO APPROVED GEOTECHNICAL REPORT FOR ADDITIONAL CONSTRUCTION AND GRADING REQUIREMENTS.
- STOCKPILE ONSITE TOPSOIL FOR REUSE ONSITE. LOCATIONS OF TOPSOIL REUSE SHALL BE IN LANDSCAPE AREAS, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- WOOD FRAMING MEMBERS, INCLUDING WOOD SHEATHING, THAT ARE IN CONTACT WITH EXTERIOR FOUNDATION WALLS AND ARE LESS THAN EIGHT (8) INCHES FROM EXPOSED EARTH SHALL BE OF NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.
- FOR ALL AREAS ADJACENT TO STRUCTURES THAT ARE HARD SURFACE, THE FINAL FINISH GRADE SHALL FALL AWAY FROM THE BUILDING AT A GRADE OF 1.5% (MIN) FOR PEDESTRIAN PATHS OR 3% FOR NON-PEDESTRIAN AREAS.
- FOR ALL AREAS ADJACENT TO STRUCTURES THAT ARE NOT HARD SURFACE, THE FINAL FINISH GRADE SHALL FALL AWAY FROM THE BUILDING AT A GRADE OF 10% (MIN) FOR 10-FT (MIN.), UNLESS MODIFIED BY AN APPROVED GEOTECHNICAL STUDY.
- STEPS AND GRADES SHOWN INSIDE BUILDING ENVELOPES AND GARAGES ARE FOR INFORMATION ONLY. REFER TO ARCHITECTURAL PLANS FOR CONSTRUCTION DETAILS.
- REFER TO THE ARCHITECTURAL AND/OR STRUCTURAL PLANS FOR THE LOCATION AND EXTENT OF FOUNDATION STEM WALLS AND/ OR EXPOSED FOUNDATION.
- REFER TO THE LANDSCAPE PLANS FOR RETAINING WALL MATERIALS AND CONSTRUCTION DETAILS.
- SPOT ELEVATIONS TAKE PRECEDENCE OVER CONTOURS.
- SPOT ELEVATIONS ARE FLOWLINE OR FINISH GRADE UNLESS OTHERWISE INDICATED.
- SIDEWALKS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF FIVE PERCENT (5%).
- RAMP AND SIDEWALK CROSS-SLOPES SHALL NOT EXCEED 2%.
- RAMPS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 12:1 (8.33%) AND SHALL NOT EXCEED THIRTY FEET IN LENGTH OR THIRTY INCHES IN HEIGHT, WITHOUT INTERMEDIATE LANDINGS.
- RAMPS, EXCEPT CURB RAMPS, SHALL HAVE HAND RAILS ON BOTH SIDES.
- ALL SITE STEP TREADS ARE 11-INCHES DEEP UNLESS OTHERWISE NOTED.
- STAIRWAY AND RAMP LANDINGS SHALL HAVE A MAXIMUM SLOPE, IN ANY DIRECTION, OF TWO PERCENT AND SHALL NOT BE LESS THAN THE WIDTH OF THE STAIRS AND 5-FT LONG, UNLESS OTHERWISE INDICATED ON THE PLAN.
- ALL RAMPS AND STAIRS SHALL BE CONSTRUCTED, INCLUDING THE USE OF RAILINGS, IN ACCORDANCE WITH APPLICABLE ADA (ADAAQ), FAIR HOUSING STANDARDS, AND BUILDING CODE STANDARDS.
- EDGE PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH APPLICABLE CODES AT ALL LOCATIONS WHICH REQUIRE HANDRAILS.
- RE: LANDSCAPE PLANS AND/OR ARCHITECTURAL PLANS FOR HANDRAIL DETAIL.
- RETAINING WALL ELEVATIONS ARE SHOWN TO THE EXPOSED FACE OF WALL AT THE TOE AND THE TOP OF WALL.
- RETAINING WALLS ARE TO BE DESIGNED BY OTHERS.
- THE CONTRACTOR SHALL REVIEW ALL ELEVATIONS WITH THEIR SURVEYOR PRIOR TO STAKING AND CONSTRUCTION OF THE BUILDINGS.
- REFER TO LANDSCAPE PLANS FOR PLANTER DESIGN INCLUDING HEIGHT ABOVE FINISH GRADE.
- ALL ROOF DOWNSPOUTS MUST CONNECT TO THE ROOF DRAIN PIPING SYSTEM OR DOWNSPOUTS THAT DISCHARGE TO THE SURFACE SHALL SPILL ONTO THE SPLASH BLOCKS THAT EXTEND A MINIMUM OF FIVE (5) FEET AWAY FROM THE FOUNDATION.

PAVING, SIGNING & STRIPING NOTES:

- PAVING OF PUBLIC STREETS AND SIDEWALKS SHALL BE IN ACCORDANCE WITH THE GOVERNING AGENCY CRITERIA.
- ALL ONSITE CURB AND GUTTER IS 6-IN VERTICAL WITH 1-FT SPILL PAN UNLESS OTHERWISE INDICATED.
- ON SITE SIDEWALK SHALL BE 4-IN THICK MIN. AND 6-IN THICK (MIN) IF IT CROSSES A DRIVING SURFACE).
- CONCRETE PAVING JOINTS SHALL BE IN CONFORMANCE WITH GOVERNING AGENCY ROADWAY STANDARDS OR, IN THE ABSENCE OF A STANDARD, THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) M & S STANDARDS, AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- UNLESS SPECIFICALLY DETAILED ON THESE PLANS AND REFERENCED TO AN APPROVED GEOTECHNICAL STUDY, THESE PLANS DO NOT DETAIL THE REQUIRED PAVING SECTIONS.
- SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH CDOT CRITERIA AND COMPACTED TO 95% OPTIMUM DENSITY IN ACCORDANCE WITH AASHTO T-99, UNLESS FURTHER RESTRICTED BY THE APPROVED PAVING DESIGN.
- ALL PAVEMENT IS ASPHALT UNLESS OTHERWISE INDICATED. NO CONTRACTION OR EXPANSION JOINTS SHALL BE LOCATED WITHIN TWELVE INCHES (LONGITUDINALLY) OF THE FLOWLINE.
- CONCRETE FOR DRIVING SURFACES SHALL BE CDOT CLASS P UNLESS OTHERWISE INDICATED OR APPROVED BY THE ENGINEER.
- TOOLED OR SAWED CONTRACTION JOINTS AT 8-FT ON CENTER (MAX) OR AS SHOWN ON PLAN.
- ALL CONCRETE JOINTS PER CDOT STANDARDS.
- ALL EXPANSION JOINTS SHALL BE SEALED PER CDOT STANDARDS.
- ALL NEW OR RELOCATED STREET/TRAFFIC SIGNS SHALL BE INSTALLED PER CURRENT GOVERNING MUNICIPALITY STANDARDS.
- SIGNAGE AND STRIPING SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH GOVERNING AGENCY STANDARDS. IN THE ABSENCE OF A STANDARD IT SHALL COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION.
- STRIPING OUTSIDE OF THE RIGHT-OF-WAY SHALL BE EPOXY PAINT. SYMBOLS SHALL BE METHYL METHACRYLATE, HOT APPLIED THERMOPLASTIC (90 MIL.), PREFORMED PLASTIC (90 MIL) OR INLAYED TAPE (STAMARK), OR APPROVED EQUAL.

DEMOLITION NOTES:

- THE WORK GENERALLY INCLUDES REMOVAL/DEMOLITION OF INDICATED EXISTING SURFACE FEATURES (I.E. STRUCTURES, CURB, GUTTER, DRAINAGE STRUCTURES, ASPHALT, LIGHTS, VEGETATION, ETC.) AND UNDERGROUND UTILITIES (I.E. ELECTRIC LINES, GAS LINES, FIBER OPTIC LINES, DRAINAGE LINES, ETC), WITHIN THE PROPERTY BOUNDARY. NO WORK UNLESS SPECIFICALLY NOTED SHALL BE OUTSIDE OF THE SUBJECT PROPERTY. SEE PLANS FOR LIMITS OF REMOVAL/DEMOLITION.
- LIMITS OF REMOVAL SHOWN ARE APPROXIMATE.
- CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS INCLUDING SITE SAFETY FOR ALL ASPECTS OF DEMOLITION INCLUDING OPERATION WITHIN THE REGULATIONS OF GOVERNING AGENCIES.
- ALL UNDERGROUND STORM SEWER, WATER, SANITARY SEWER, GAS, ELECTRIC, OTHER UTILITY LOCATIONS, AND EXISTING SITE APPURTENANCES ARE BASED ON THE ALTA SURVEY PREPARED FOR THE SITE AND ARE TO BE CONSIDERED APPROXIMATE ONLY. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- ALL ITEMS NOTED AS "REMOVE" SHALL BE DEMOLISHED/REMOVED FROM THE SITE. ALL ITEMS NOTED "VERIFY/REMOVE" SHALL BE REMOVED ONLY AFTER VERIFICATION THAT THE UTILITY IS NO LONGER NEEDED TO PROVIDE SERVICE TO ANY ADJACENT PROPERTIES OR USERS. COORDINATE WITH LOCAL UTILITY PROVIDER. ALL ITEMS NOTED FOR REUSE SHALL BE REPLACED AS DIRECTED. HOWEVER, THE GOVERNING AGENCY (IN THE INSTANCE OF PUBLIC INFRASTRUCTURE) OR THE ENGINEER SHALL DETERMINE IF THE ITEM IS IN ADEQUATE CONDITION TO BE REUSED.
- ITEMS TO BE REUSED SHALL BE REMOVED AND SAFELY STORED AS NECESSARY PRIOR TO REPLACEMENT.
- UNLESS SPECIFICALLY DIRECTED, THE CONTRACTOR SHALL DISPOSE OF CONCRETE, ASPHALT RUBBLE AND ANY OTHER DEMOLISHED/ REMOVED MATERIALS OFFSITE.
- CONTRACTOR SHALL DISPOSE OF AND TRANSPORT DEBRIS TO OFFSITE IN A SAFE AND LEGAL MANNER AND SHALL NOT STORE OR BURN MATERIALS ONSITE. CONTRACTOR SHALL HANDLE AND DISPOSE OF ALL DEBRIS IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. DISPOSAL SHALL BE TRANSPORTED TO AN APPROVED LANDFILL OR OTHER APPROVED FACILITY.
- CONCRETE SHALL BE REMOVED TO THE NEAREST JOINT.
- THE CONTRACTOR SHALL VERIFY ALL UTILITIES HAVE BEEN DISCONNECTED AS REQUIRED FOR THE WORK.
- CONTRACTOR SHALL ERECT BARRIERS, FENCES, GUARDRAILS, ENCLOSURES, ETC. TO PROTECT THE SITE AND IN ACCORDANCE WITH THE EROSION CONTROL PLAN.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL (SIGNS, BARRICADES, FLAGMEN, LIGHTS, ETC) IN ACCORDANCE WITH THE MUTCD, CURRENT EDITION, AS REQUIRED FOR THE WORK.
- CONTRACTOR SHALL OBTAIN ALL PERMITS AND LICENSES REQUIRED FOR DEMOLITION OF WORK SHOWN.
- CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION AND BENCHMARK(S). CONTRACTOR SHALL HAVE A LICENSED SURVEYOR REPLACE ANY DAMAGED OR DISTURBED MONUMENTATION AT THE CONTRACTORS COST.

DEMOLITION NOTES (CONT.):

- CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, FEATURES, IMPROVEMENTS, AND UTILITIES (OVERHEAD OR UNDERGROUND) AT ALL TIMES DURING DEMOLITION AND CONSTRUCTION NOT INTENDED TO BE REMOVED OR DEMOLISHED. CONTRACTOR WILL BE RESPONSIBLE FOR ALL RESULTANT COSTS DUE TO SUCH DAMAGES.
- REFER TO SHEET C3.10 FOR DEMOLITIONS IN THE RIGHT OF WAY.

GENERAL UTILITY NOTES:

- DESIGN OF UTILITIES WITHIN FIVE (5) FEET OF THE BUILDING ARE EXCLUDED FROM THESE PLANS. UTILITIES, INCLUDING DOWNSPOUT CONNECTIONS, CLEAN-OUTS, ETC WITHIN FIVE (5) FEET OF THE BUILDING SHALL BE DETAILED BY THE ARCHITECT OR MECHANICAL ENGINEER.

SANITARY NOTES:

- CONCRETE USED IN SANITARY SEWER STRUCTURES SHALL BE AS SPECIFIED BY THE GOVERNING AGENCY OR CLASS B AS DEFINED BY CDOT STANDARDS AND SPECIFICATIONS FOR ROAD AN BRIDGE CONSTRUCTION, IN THE ABSENCE OF AN AGENCY SPECIFICATION.
- SEWER SERVICE CONNECTIONS WITH THE MAIN LINE SHALL BE IN ACCORDANCE WITH GOVERNING AGENCY STANDARDS. IF NO STANDARD EXISTS, WYE OR TEE (AS NOTED ON PLANS) SHALL BE CUT INTO THE MAIN LINE AND INSTALLED WITH FLEXIBLE NON-SHEAR REINFORCED COUPLINGS ON THE MAIN.
- IF NOT SPECIFIED BY THE UTILITY DISTRICT, SANITARY SEWER SERVICE CONNECTIONS TO THE MAINLINE SHALL CONNECT AT 2:00 OR 10:00 ON THE MAIN.
- MINIMUM DROP FROM THE SERVICE LINE BEND TO THE MAIN SHALL BE EQUAL TO THE SIZE OF THE MAINLINE.
- SLOPE OF SERVICE LINES SHALL BE AS NOTED ON PLANS.
- PIPE AND FITTINGS SHALL BE PER GOVERNING AGENCY STANDARD AN IN THE ABSENCE OF A STANDARD SHALL BE PVC SDR 35, MEETING ASTM D3034.
- BEDDING SHALL BE PROVIDED AND PLACED IN ACCORDANCE WITH GOVERNING AGENCY STANDARD OR APPROVED EQUAL.
- PIPE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
- ALL PIPE LENGTHS ARE MEASURED TO CENTER OF MANHOLES.
- COORDINATES FOR MANHOLES ARE TO CENTER OF STRUCTURE, UNLESS OTHERWISE INDICATED.

STORM NOTES:

- CONCRETE USED IN STORM SEWER STRUCTURES SHALL BE AS SPECIFIED BY THE GOVERNING AGENCY OR CLASS B AS DEFINED BY CDOT STANDARDS AND SPECIFICATIONS FOR ROAD AN BRIDGE CONSTRUCTION, IN THE ABSENCE OF AN AGENCY SPECIFICATION.
- REFER TO STORM SEWER PLANS FOR LANDSCAPE/ ROOF DRAINS AND DETENTION POND FACILITIES, INCLUDING OUTFALLS.
- IF CONNECTED TO AN UNDERGROUND SYSTEM, DOWNSPOUTS SHALL HAVE AN OVERFLOW PROTECTION. REFER TO ARCHITECTURAL PLANS.
- ALL PVC PIPE SHALL BE PVC SCHEDULE 40, OR APPROVED EQUAL.
- ALL CONCRETE PIPE SHALL BE REINFORCED AND CLASS III (MIN).
- SLOPE OF SERVICE LINES SHALL BE AS NOTED ON PLANS.
- BEDDING SHALL BE PROVIDED AND PLACED IN ACCORDANCE WITH GOVERNING AGENCY STANDARD OR APPROVED EQUAL.
- PIPE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
- ALL PIPE LENGTHS ARE MEASURED TO CENTER OF MANHOLES AND LANDSCAPE INLETS, AND INSIDE FACE OF OTHER STRUCTURES.
- COORDINATES FOR TYPE R INLETS ARE TO FLOWLINE AT MIDPOINT OF INLET.
- COORDINATES FOR ALL OTHER STRUCTURES ARE TO CENTER OF STRUCTURE, UNLESS OTHERWISE INDICATED.
- LANDSCAPE DRAINS (18" SQUARE OR SMALLER) SHALL BE NDS CATCH BASINS WITH ADA COMPLIANT GRATES THAT MEET HS-20 LOADING OR APPROVED EQUAL, UNLESS OTHERWISE SPECIFIED ON THE PLANS.

ABBREVIATIONS

AC	ASPHALTIC CONCRETE
B.O.P.	BOTTOM OF PIPE
CC	CONCRETE
CL	ROADWAY CENTERLINE
CMP	CORRUGATED METAL PIPE
CR	CURB RAMP
DE / DEMO	DEMOLITION
DIA	DIAMETER
DWG	DRAWING
DRNG	DRAINAGE
ESMT	EASEMENT
E / ELEC	ELECTRICAL
E	EAST
EC	EDGE OF CONCRETE
EG	EXISTING GRADE
EL / ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EX / EXIST	EXISTING
FES	FLARED END SECTION
FG	FINISHED GRADE
FL	FLOWLINE
FH	FIRE HYDRANT
FO	FIBER OPTIC
G	GAS
GND	GROUND
GRV	GRAVEL
HGL	HYDRAULIC GRADE LINE
HORIZ	HORIZONTAL
HP	HIGH POINT
INT	INTERSECTION
INV	INVERT
LP	LOW POINT
LF	LEFT
LN	LANE
LS	LIFT STATIO
MAT	MATERIAL
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
N	NORTH
NO	NUMBER
NTS	NOT TO SCALE
OH	OVERHEAD
OH/EL	OVERHEAD ELECTRICAL
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PCR	POINT OF CURVATURE, REVERSE
PE	PROFESSIONAL ENGINEER
PI	POINT OF INTERSECTION
PLS	PROFESSIONAL LAND SURVEYOR
PR	PROPOSED
PT	POINT OF TANGENCY / POINT
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS / RIGHT
REC	RECORDING
RCP	REINFORCED CONCRETE PIPE
R.O.W.	RIGHT-OF-WAY
RD	ROAD / ROADWAY
RT	RIGHT
S	SOUTH
SD	STORM DRAIN
SEC	SECTION
SHT	SHEET
SI	SIGNING & STRIPING
SS	SANITARY SEWER
ST	STREET
STA	STATION
STD	STANDARD
SW	SIDEWALK
T / TELE	TELEPHONE
TBC	TOP BACK OF CURB
TC	TOP OF CURB / TRAFFIC CONTROL
TOE	TOE OF SLOPE
TOW	TOP OF WALL
T.O.P.	TOP OF PIPE
TV	TELEVISION
UE	UTILITY EASEMENT
VERT	VERTICAL
VC	VERTICAL CURVE
W	WEST / WATER
WT	WATER
XC	CROSS-SECTION
Y1	SINGLE YELLOW STRIPE
Y2	DOUBLE YELLOW STRIPE

LEGEND

	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	FINISHED GRADE
	PROJECT BOUNDARY
	RIGHT OF WAY (ROW)
	EASEMENT
	CENTERLINE
	LOT / TRACT / PARCEL BOUNDARY
	SIGHT / SAFETY TRIANGLE
	BLOCK NUMBER
	LOT NUMBER
	DRAINAGE SWALE
	GUARDRAIL
	STREET LIGHT
	STREET SIGNS
	CURB RAMPS
	TOWNHOMES
	ROAD WARPING
	CONCRETE
	MAINTENANCE ACCESS / GRAVEL ROAD
	RIPRAP
	SOIL RIPRAP
	SAWCUT
	STORM (FES, MH, & INLET)
	SANITARY
	WATER (HYDRANT, VALVE, BEND, MH)
	RAW WATER (VALVE, BEND, ARV)
	FOREBAY
	STORM INLETS (TYPE C, D, 13, & R)
	STORM 100 YEAR HGL
	STORM 5 YEAR HGL
	A LOT
	B LOT
	WALKOUT LOT
	TRANSITION LOT
	EX STORM (FES, MH, & INLET)
	EX SANITARY
	EX WATER (HYDRANT, VALVE, BEND, MH)
	EXISTING OVERHEAD ELECTRIC
	EXISTING UNDERGROUND ELECTRIC
	EXISTING STORM
	EXISTING SWALE
	EXISTING SANITARY CLEAN OUT
	EXISTING TREE
	EXISTING SIGN
	EXISTING WATER
	EXISTING GAS
	EXISTING FIBER OPTIC
	EXISTING ELECTRIC
	EXISTING TELEPHONE
	EXISTING FENCE
	EXISTING WETLAND
	EX BOLLARD
	EX ELECTRIC BREAKER BOX
	EX FIBER OPTIC VAULT
	EX GAS METER
	EX METAL POST
	EX OIL & GAS WELL
	EX TELEPHONE PEDESTAL
	EXISTING POWER POLE & GUY WIRE
	EX WATER MH, METER, & VENT PIPE
	EX WATER VALVE & HYDRANT



10200 E. Grant Ave. A-314  
Denver, CO 80231  
PH: 303.652.8667

#	DATE	BY
1	11/01/2024	MM
2	01/17/2025	MM

#	REVISION DESCRIPTION
1	1ST SUBMITTAL
2	2ND SUBMITTAL

NOT FOR CONSTRUCTION

MAIN STREET OFF-STREET PARKING LOT  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
GENERAL NOTES

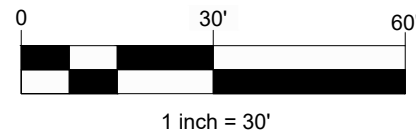
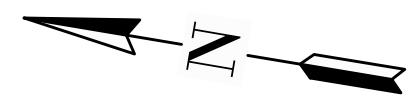
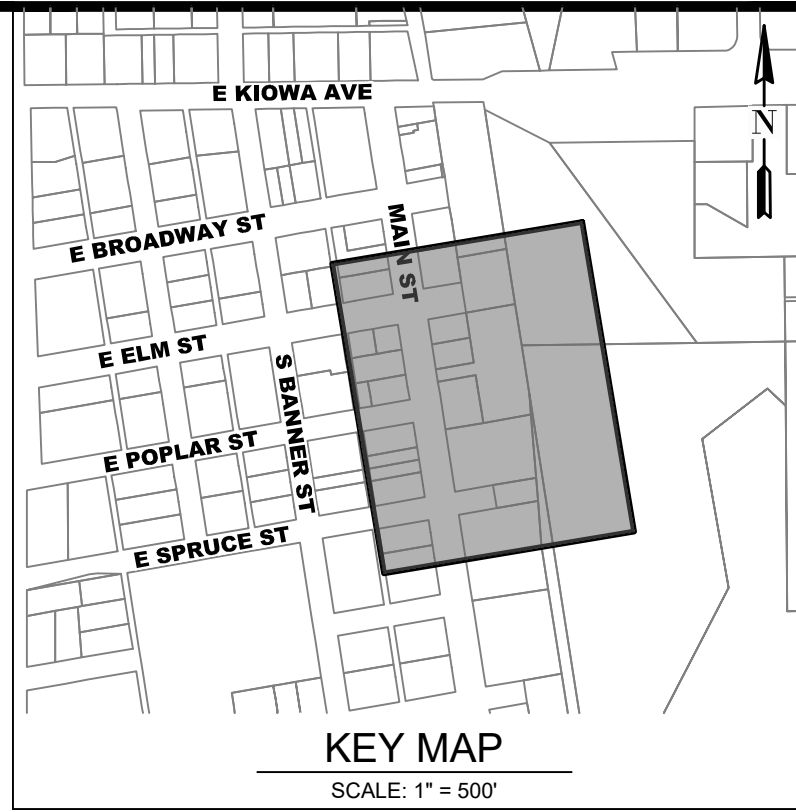
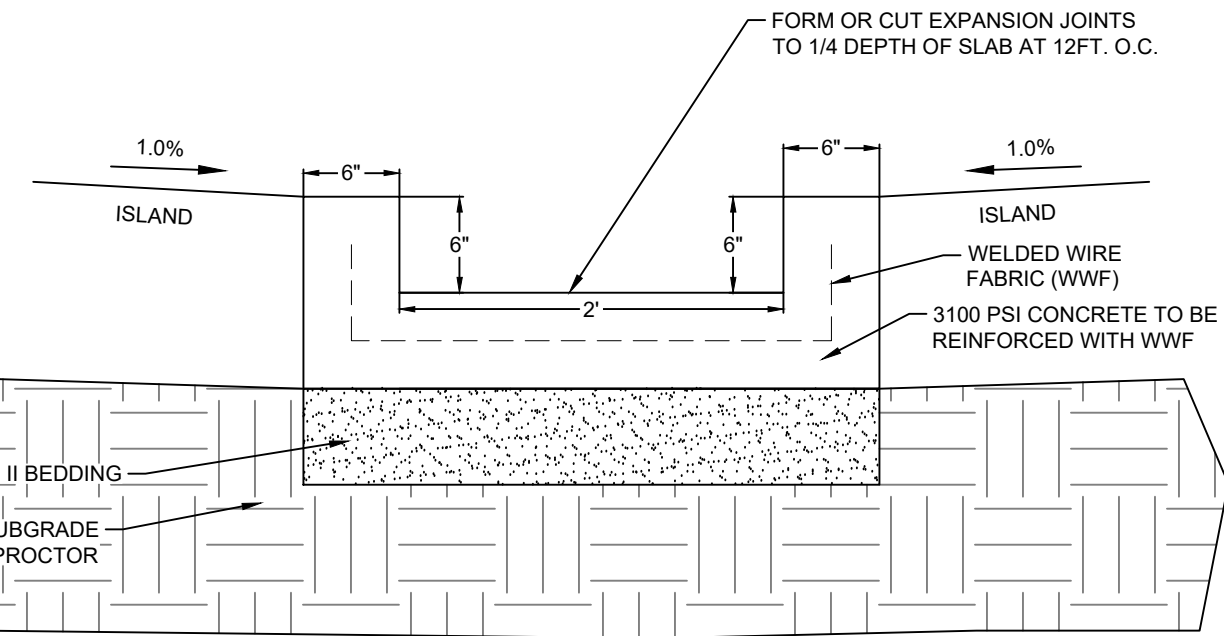
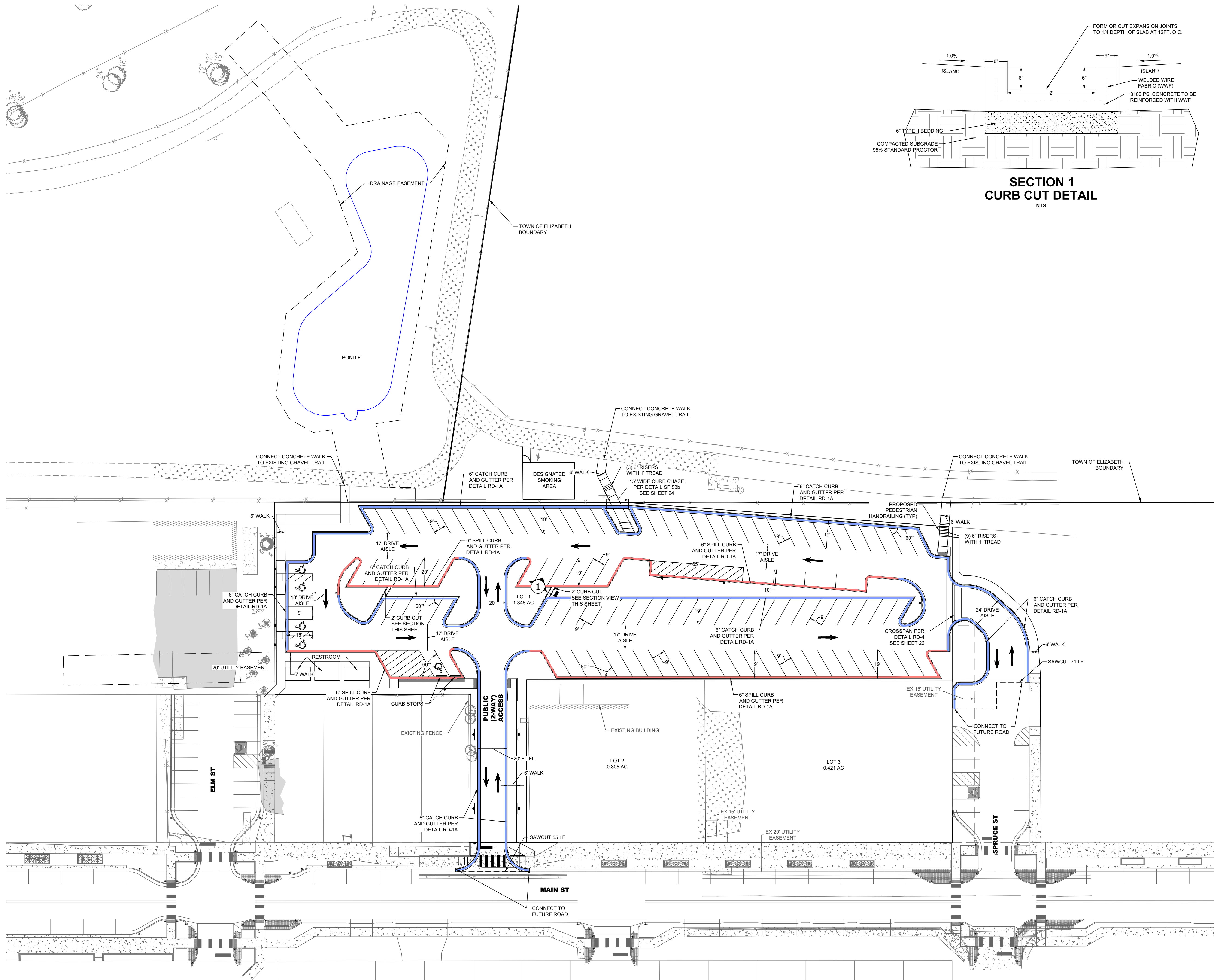








1/30/2025 11:23 AM X:TOWN OF ELIZABETH/CADD/PLANS/01- MAIN ST PARKING/PRELIMINARY CDS SITE PLAN.DWG 1



LEGEND

- PROJECT BOUNDARY
- RIGHT OF WAY (ROW)
- EASEMENT
- CENTERLINE
- LOT / TRACT / PARCEL BOUNDARY
- LOT BOUNDARY TO BE VACATED
- TOWN OF ELIZABETH BOUNDARY
- STREET SIGNS
- CURB RAMPS
- EXISTING TREE
- EXISTING SIGN
- CONCRETE
- MAINTENANCE ACCESS / GRAVEL ROAD
- EXISTING FENCE

LEGEND:

- SPILL CURB -
- CATCH CURB -

PARKING LOT COUNT:

STANDARD - 111  
HANDICAP - 5

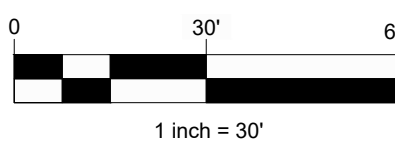
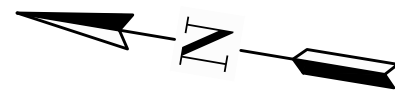
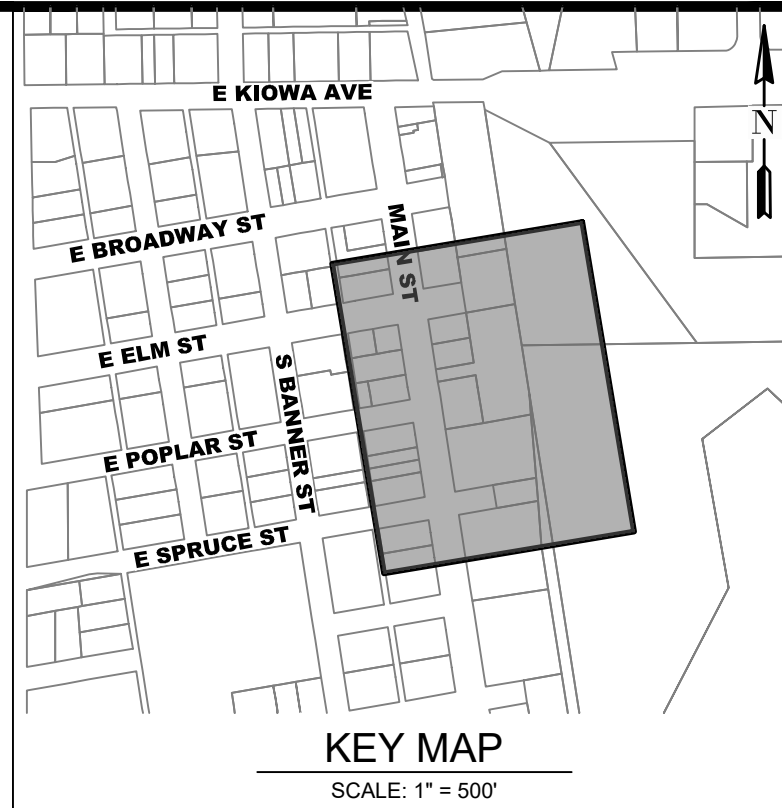
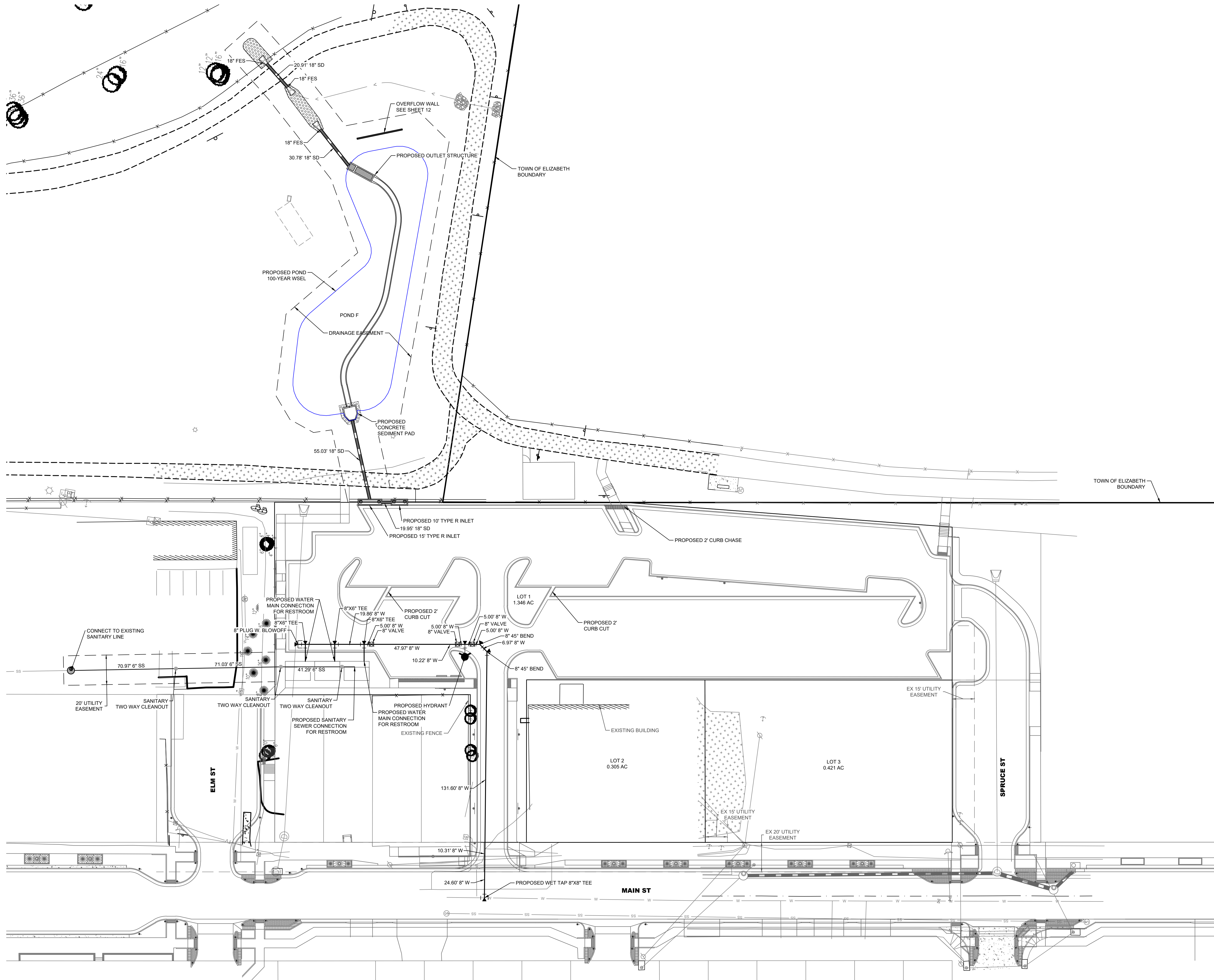
#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	11/01/2024	MM
2	2ND SUBMITTAL	01/17/2025	MM

NOT FOR  
CONSTRUCTION

MAIN STREET OFF-STREET PARKING LOT  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
OVERALL SITE PLAN



1/3/2025 11:23 AM, XTOWN OF ELIZABETH\CD\PLANS\01 - MAIN ST PARKING\PRELIMINARY CDS UTILITY PLANDWG, 1



LEGEND

- STORM (FES, MH, & INLET)
- STORM INLETS (TYPE C, D, 13, & R)
- SANITARY
- WATER (HYDRANT, VALVE, BEND, MH)
- 100-YR WSEL
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND ELECTRIC
- EXISTING FENCE
- EXISTING FIBER OPTIC
- EXISTING GAS
- EXISTING STORM
- EXISTING TELEPHONE
- EXISTING WATER
- EXISTING SWALE
- EXISTING SANITARY CLEAN OUT
- EXISTING WATER MANHOLE
- MAINTENANCE ACCESS / GRAVEL TRAIL
- RIPRAP
- CONCRETE

# REVISION DESCRIPTION

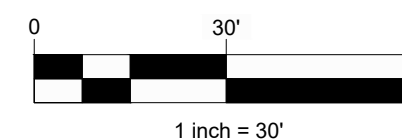
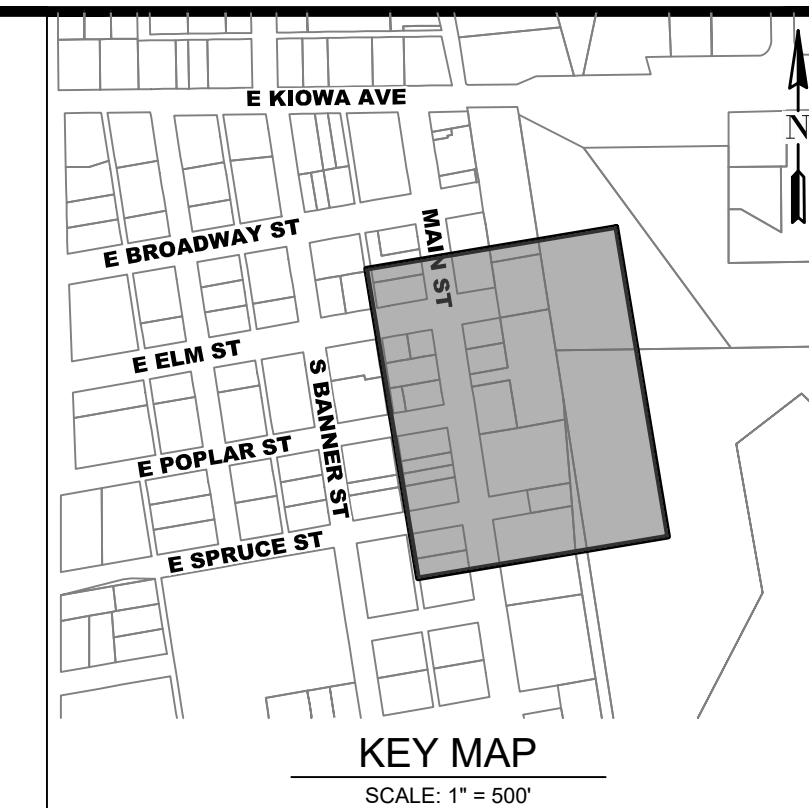
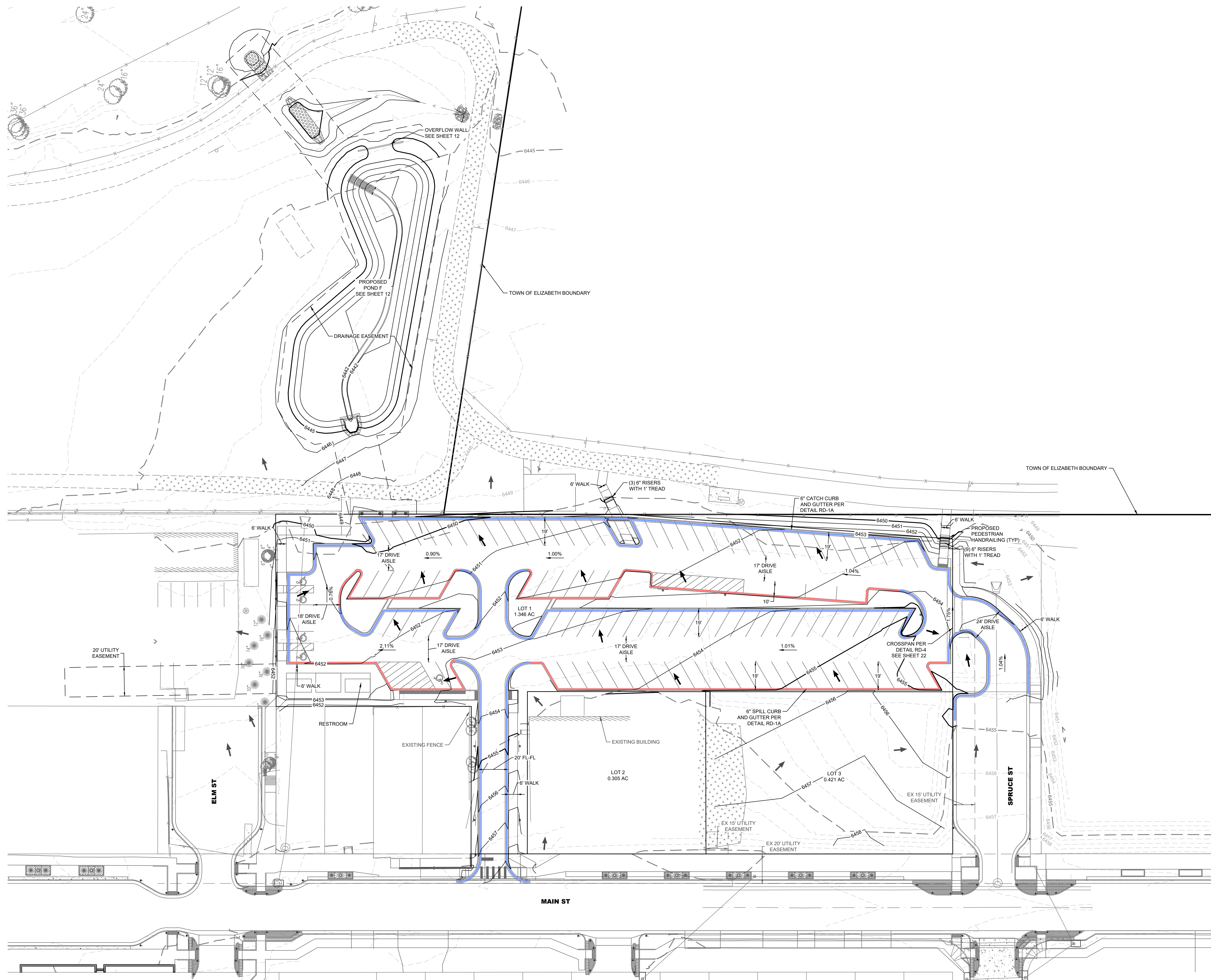
1	1ST SUBMITTAL
2	2ND SUBMITTAL

**NOT FOR CONSTRUCTION**

**MAIN STREET OFF-STREET PARKING LOT**  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
OVERALL UTILITY PLAN







## LEGEND

- |  |                                  |
|--|----------------------------------|
|  | PROJECT BOUNDARY                 |
|  | RIGHT OF WAY (ROW)               |
|  | EASEMENT                         |
|  | LOT / TRACT / PARCEL BOUNDARY    |
|  | PROPOSED MAJOR CONTOUR           |
|  | PROPOSED MINOR CONTOUR (1 FT)    |
|  | PROPOSED MAJOR CONTOUR           |
|  | PROPOSED MINOR CONTOUR (1 FT)    |
|  | STREET SIGNS                     |
|  | CURB RAMPS                       |
|  | EXISTING TREE                    |
|  | EXISTING SIGN                    |
|  | CONCRETE                         |
|  | MAINTENANCE ACCESS / GRAVEL ROAD |
|  | EXISTING FENCE                   |

LEGEND:

- SPILL CURB - 
- CATCH CURB - 

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	11/01/2024	MM
2	2ND SUBMITTAL	01/17/2025	MM

**NOT FOR  
CONSTRUCTION**

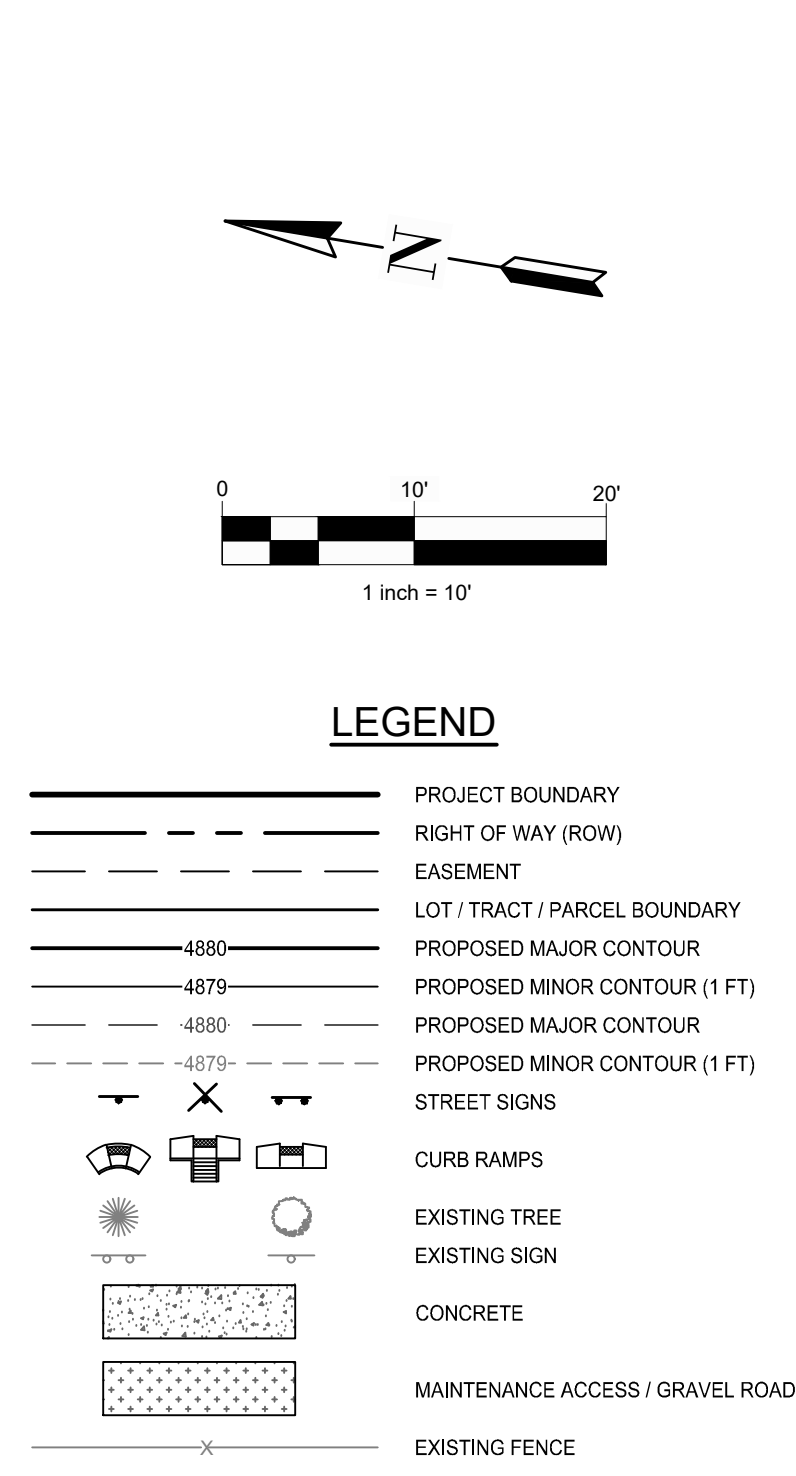
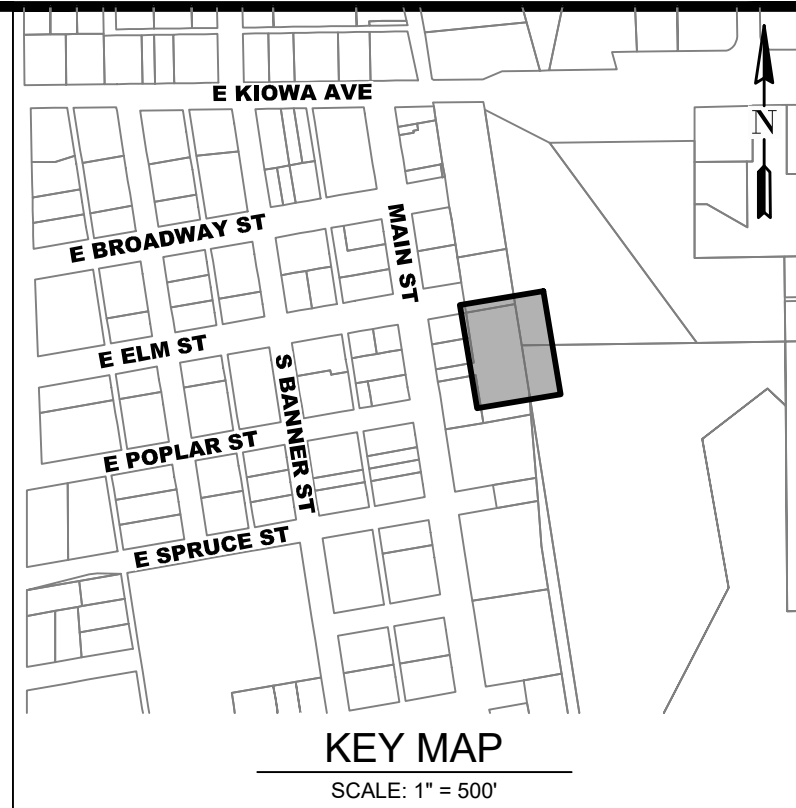
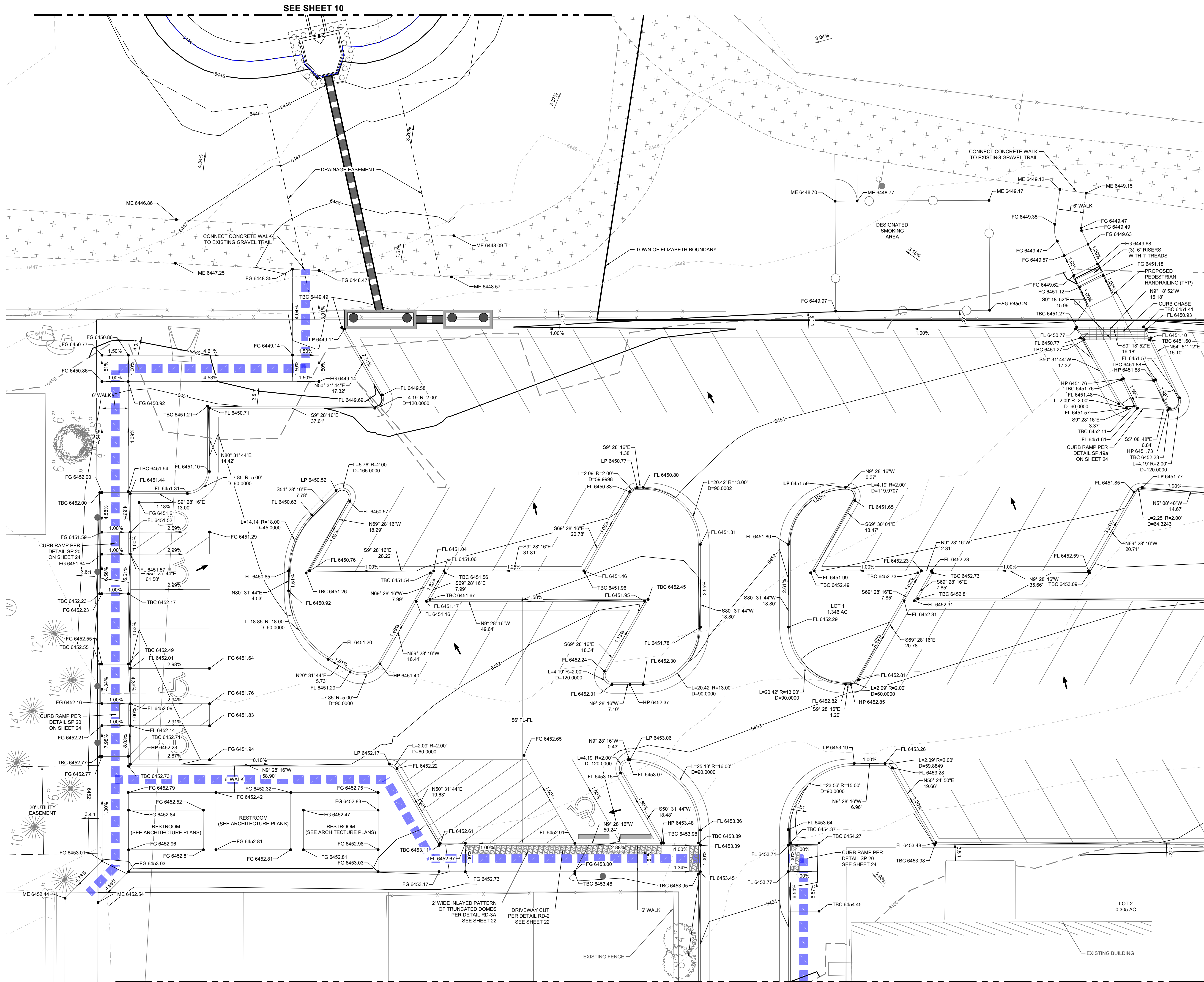
**MAIN STREET OFF-STREET PARKING LOT**  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
OVERALL GRADING PLAN







13/02/2025 11:24 AM, XTOWN OF ELIZABETH/CD/PLANS/01- MAIN ST PARKING/RE/MAIN/CD/5 DETAILED GRADING PLANNING 2



terracedesign

10200 E. Grand Ave, A-314  
Denver, CO 80231  
PH: 303.632.8667

DATE

BY

11/01/2024

MM

01/17/2025

MM

#

REVISION DESCRIPTION

1

1ST SUBMITTAL

2

2ND SUBMITTAL

NOT FOR CONSTRUCTION

MAIN STREET OFF-STREET PARKING LOT

TOWN OF ELIZABETH, COLORADO

CONSTRUCTION DOCUMENTS

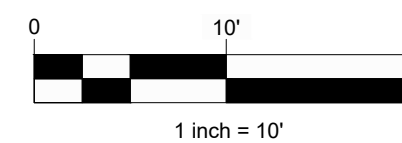
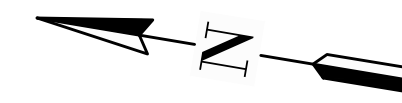
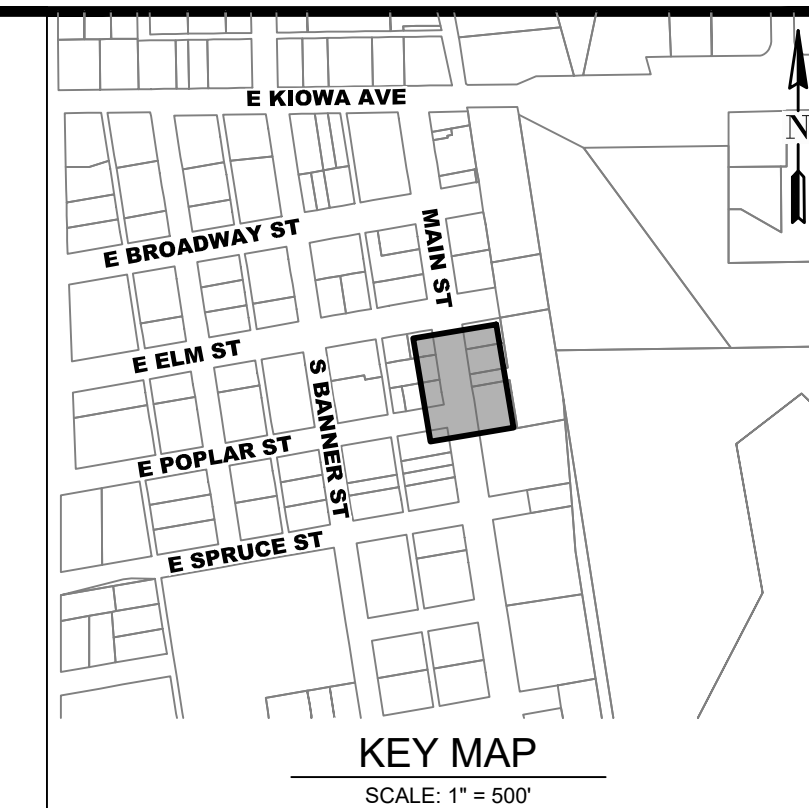
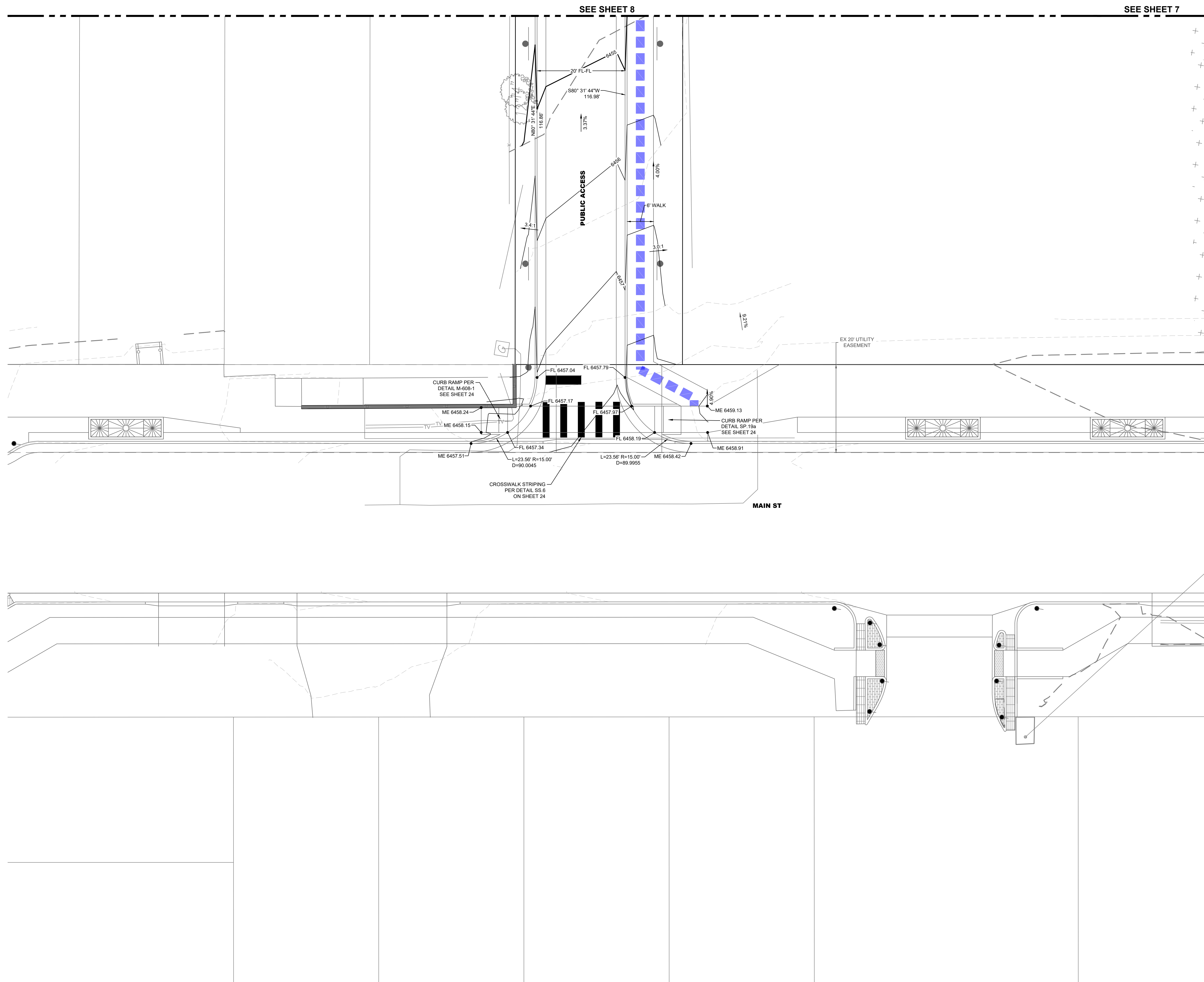
HORIZONTAL CONTROL & GRADING PLAN (2 OF 4)

Know what's below.  
Call before you dig.
















811

SHEET  
8 OF 31






LEGEND

- |  |                                  |
|--|----------------------------------|
|       | PROJECT BOUNDARY                 |
|       | RIGHT OF WAY (ROW)               |
|       | EASEMENT                         |
|       | LOT / TRACT / PARCEL BOUNDARY    |
|  4880 | PROPOSED MAJOR CONTOUR           |
|  4879 | PROPOSED MINOR CONTOUR (1 FT)    |
|  4880 | PROPOSED MAJOR CONTOUR           |
|  4879 | PROPOSED MINOR CONTOUR (1 FT)    |
|       | STREET SIGNS                     |
|       | CURB RAMPS                       |
|       | EXISTING TREE                    |
|       | EXISTING SIGN                    |
|       | CONCRETE                         |
|       | MAINTENANCE ACCESS / GRAVEL ROAD |
|       | EXISTING FENCE                   |

LEGEND:

ADA ACCESS - 

**td** terracina  
design  
10200 E. Girard Ave, A-314  
Denver, CO 80231  
ph: 303.632.8867

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	11/01/2024	MMI
2	2ND SUBMITTAL	01/17/2025	MMI

**NOT FOR  
CONSTRUCTION**

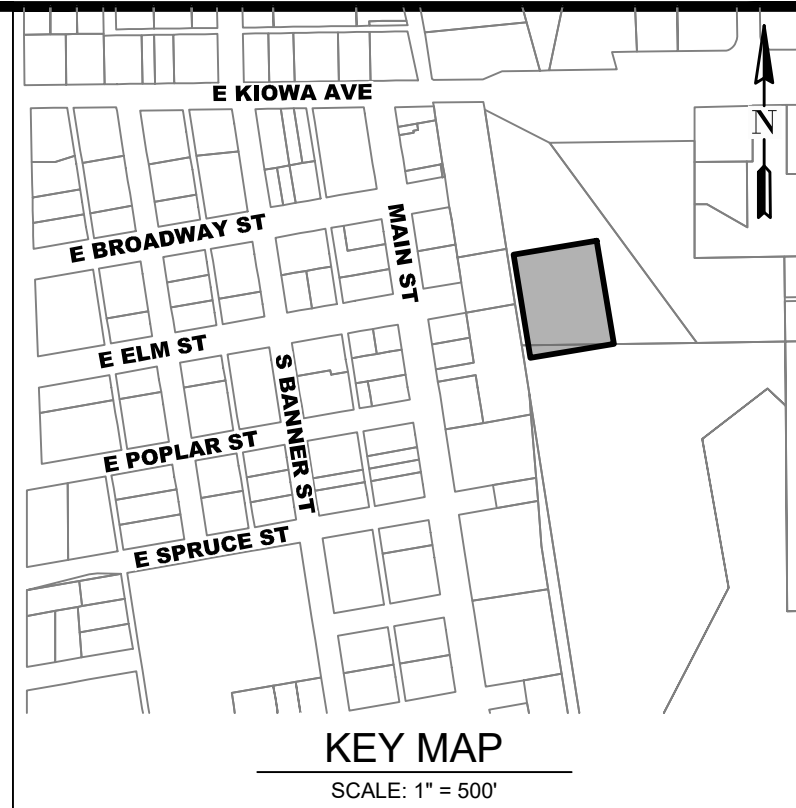
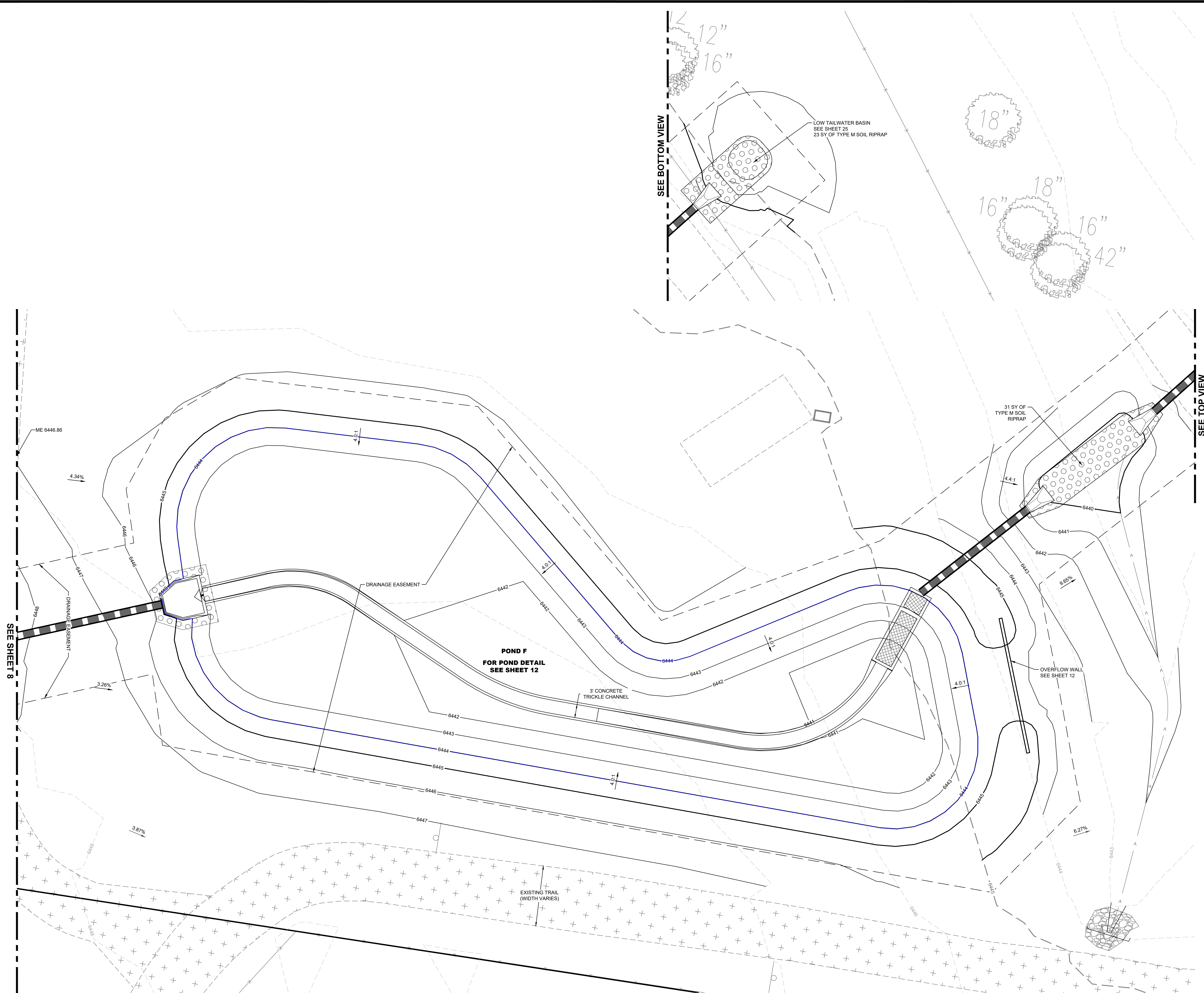
**MAIN STREET OFF-STREET PARKING LOT**  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
HORIZONTAL CONTROL & GRADING PLAN (3 OF 4)



SHEET  
9 OF 31



1/30/2025 11:24 AM X:\TOWN OF ELIZABETH\CD\PLANS\01 - MAIN ST PARKING\PRELIMINARY CDS DETAILED GRADING PLANS.DWG 4



1 inch = 10'

**LEGEND**

	PROJECT BOUNDARY
	RIGHT OF WAY (ROW)
	EASEMENT
	LOT / TRACT / PARCEL BOUNDARY
	PROPOSED MAJOR CONTOUR (1 FT)
	PROPOSED MINOR CONTOUR (1 FT)
	PROPOSED MAJOR CONTOUR (1 FT)
	PROPOSED MINOR CONTOUR (1 FT)
	STREET SIGNS
	CURB RAMP
	EXISTING TREE
	EXISTING SIGN
	CONCRETE
	MAINTENANCE ACCESS / GRAVEL ROAD
	EXISTING FENCE

**LEGEND:**

ADA ACCESS -

10200 E Grand Ave, A-314  
Denver, CO 80231  
PH: 303.652.8667

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	11/01/2024	MM
2	2ND SUBMITTAL	01/17/2025	MM

**NOT FOR CONSTRUCTION**

**MAIN STREET OFF-STREET PARKING LOT**

TOWN OF ELIZABETH, COLORADO

CONSTRUCTION DOCUMENTS

HORIZONTAL CONTROL & GRADING PLAN (4 OF 4)

Know what's below.  
Call before you dig.

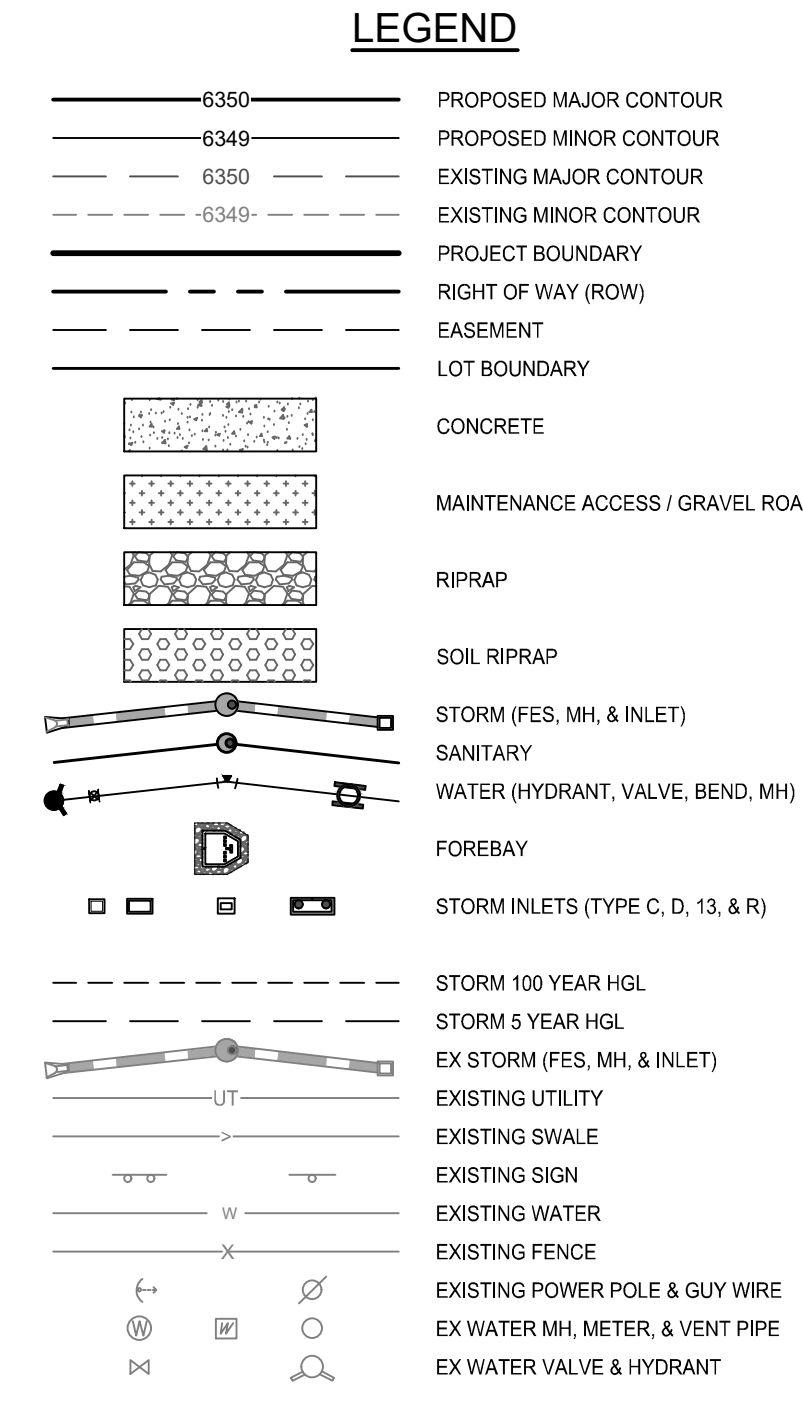
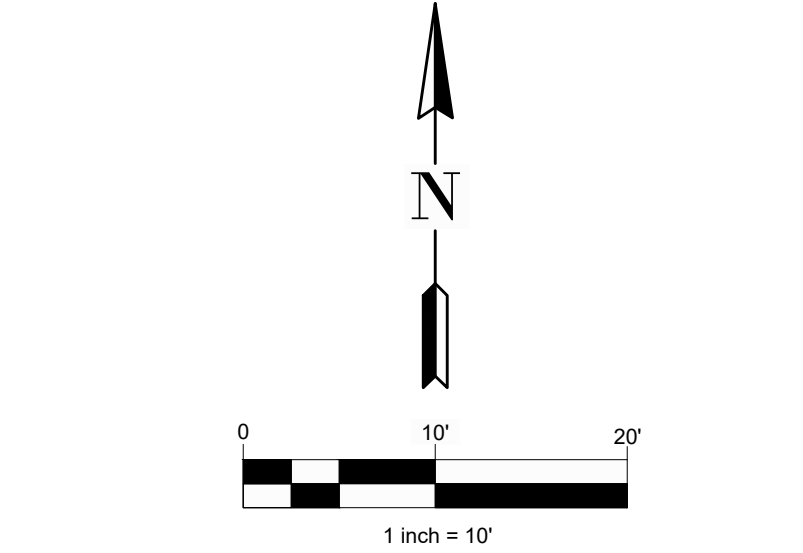
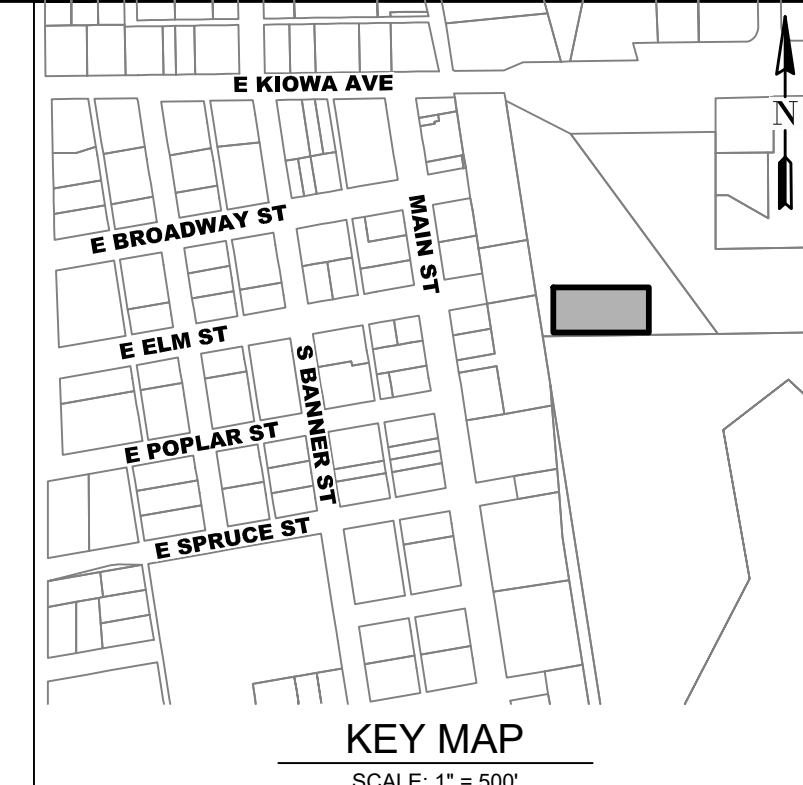
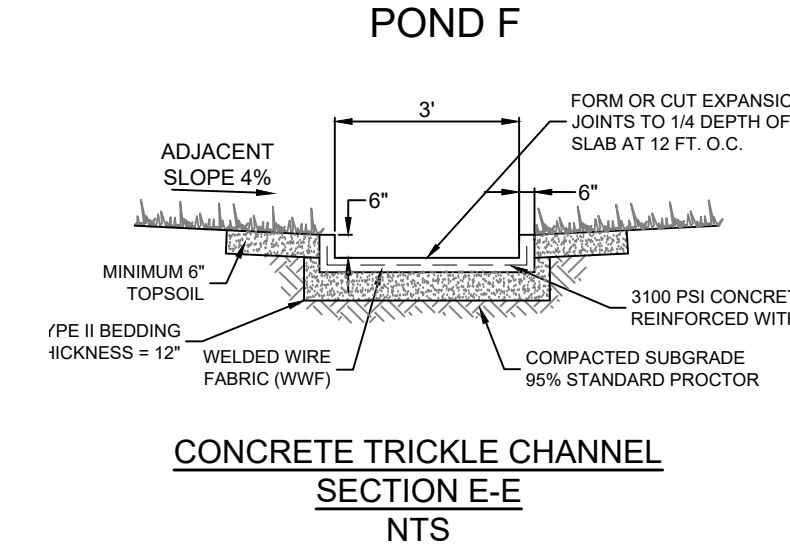
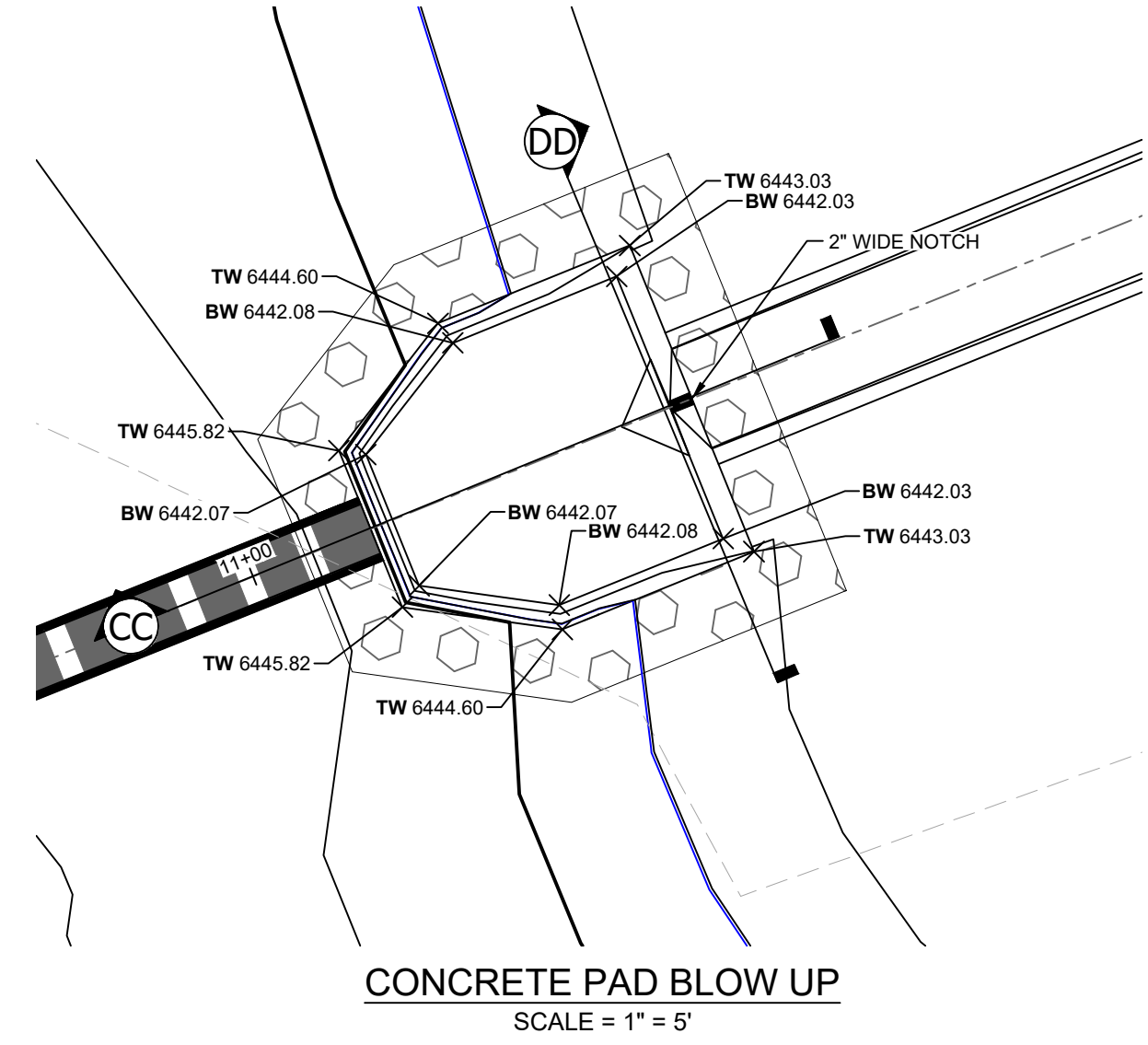
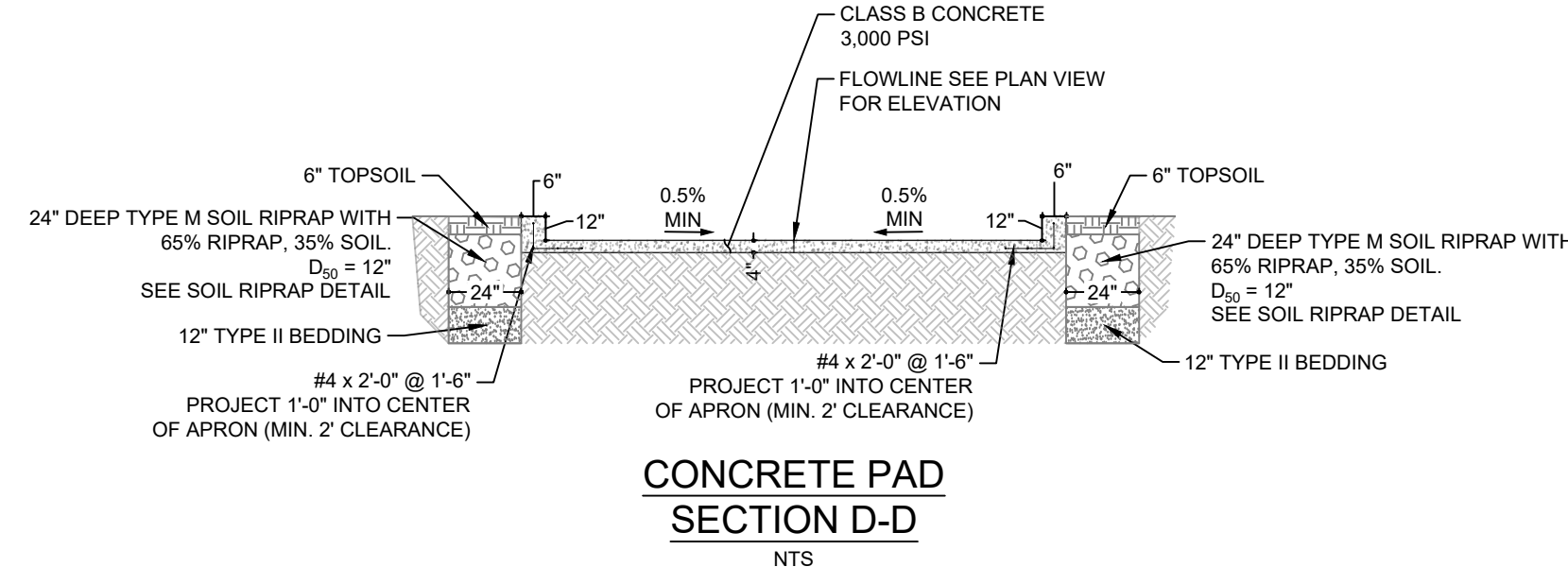
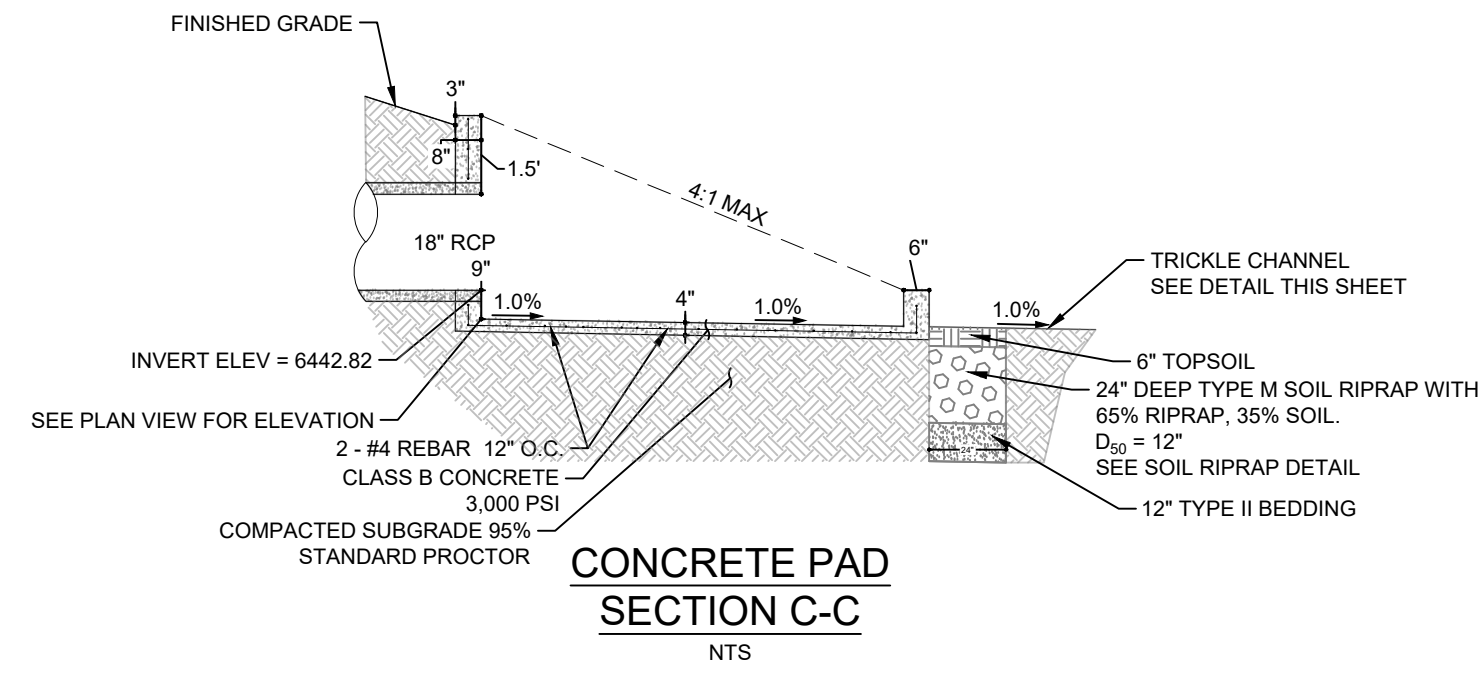
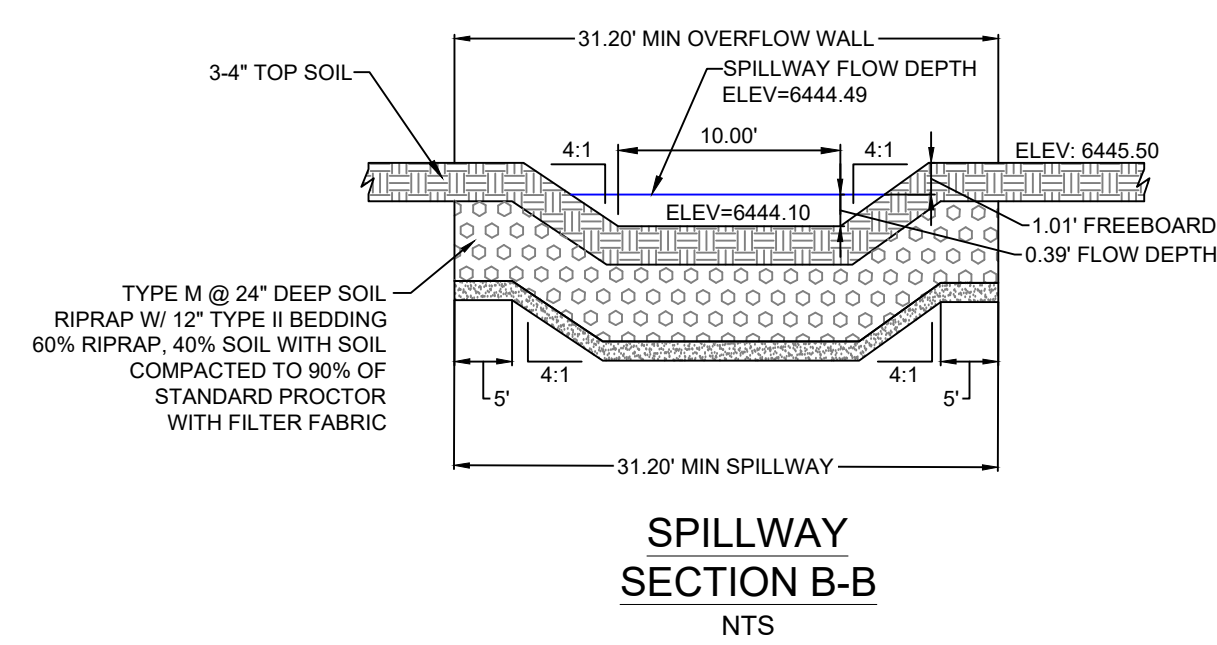
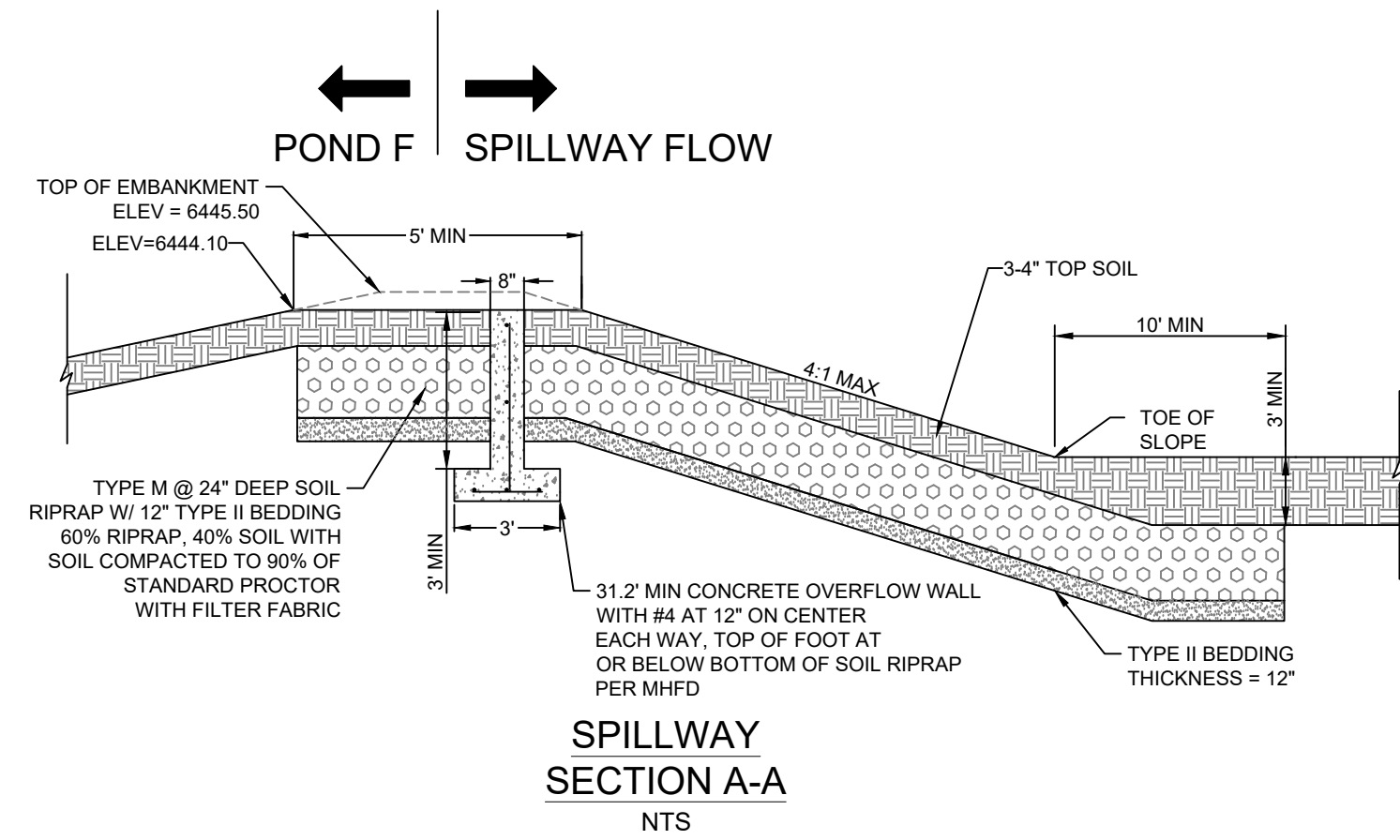
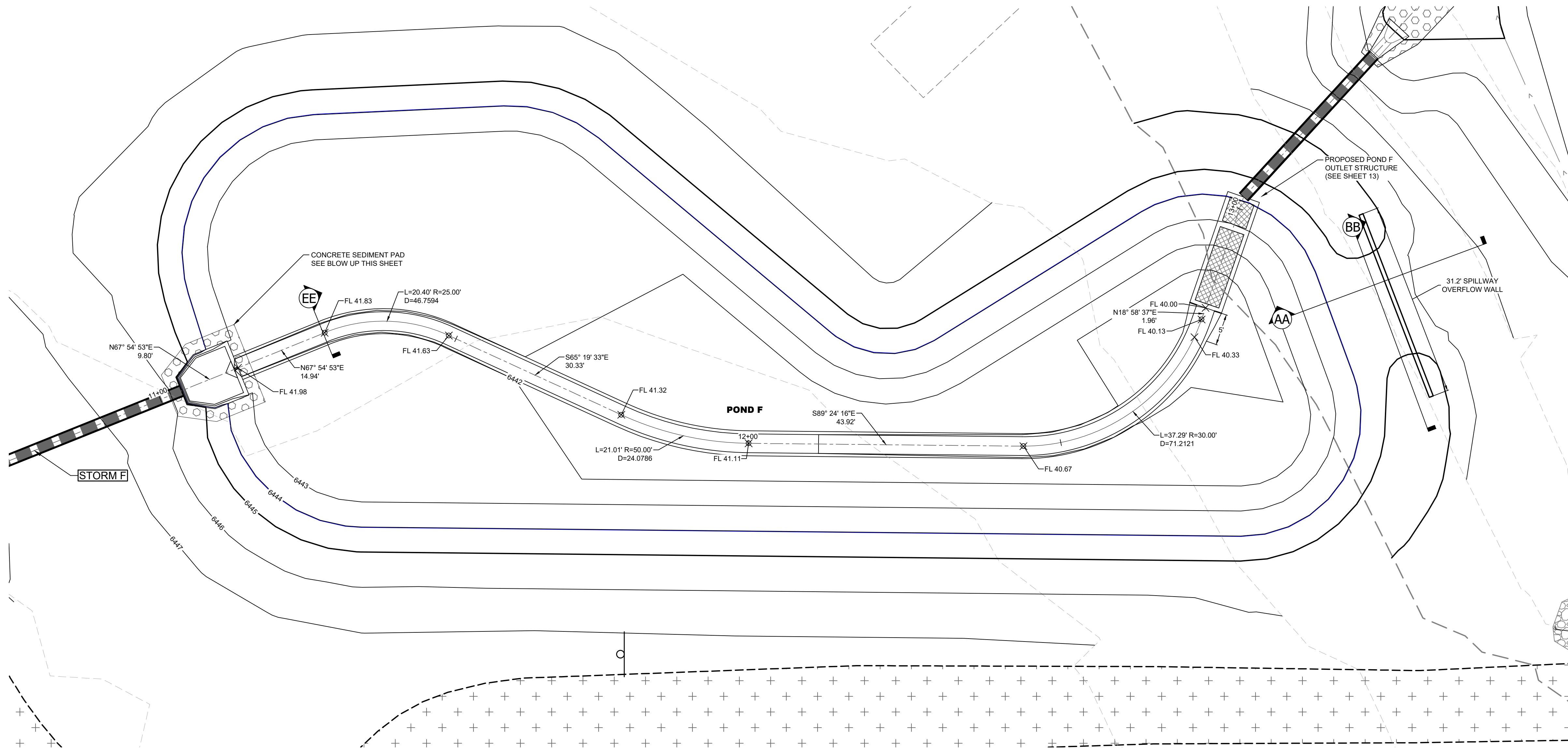
SHEET  
10 OF 31







13/02/2025 11:24 AM X:TOWN OF ELIZABETH/CADD/PLANS/01 - MAIN ST PARKING/PRELIMINARY CDS POND SHEETS.DWG POND



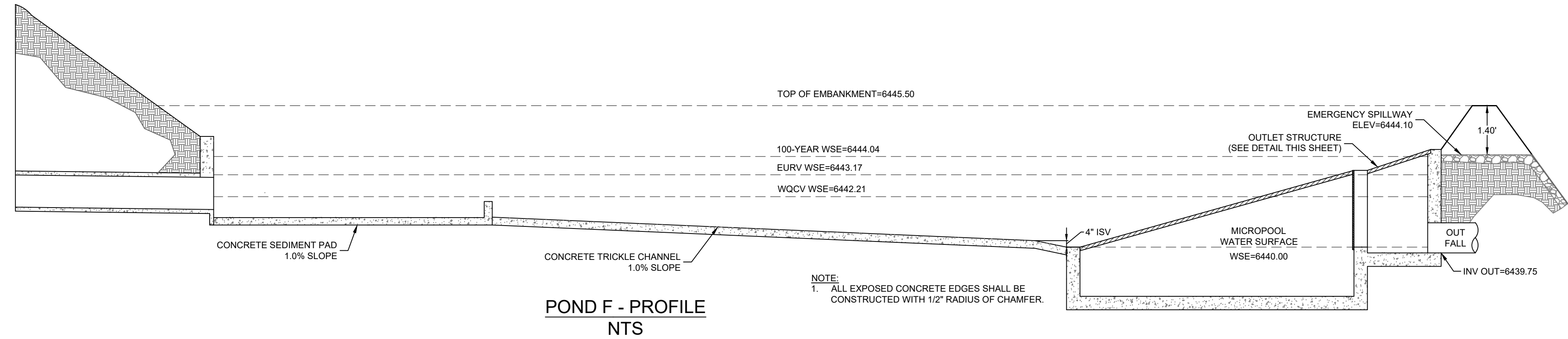
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1	1ST SUBMITTAL	11/01/2024	MM
2	2ND SUBMITTAL	01/17/2025	MM

**NOT FOR CONSTRUCTION**

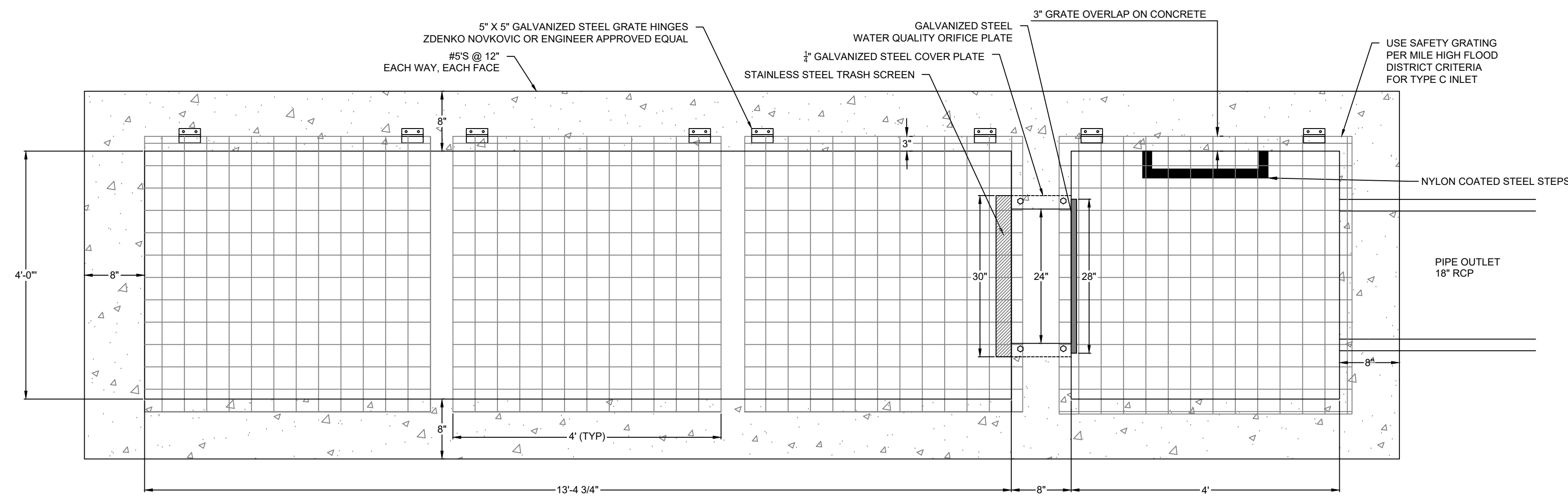
**MAIN STREET OFF-STREET PARKING LOT**  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
STORM - POND F



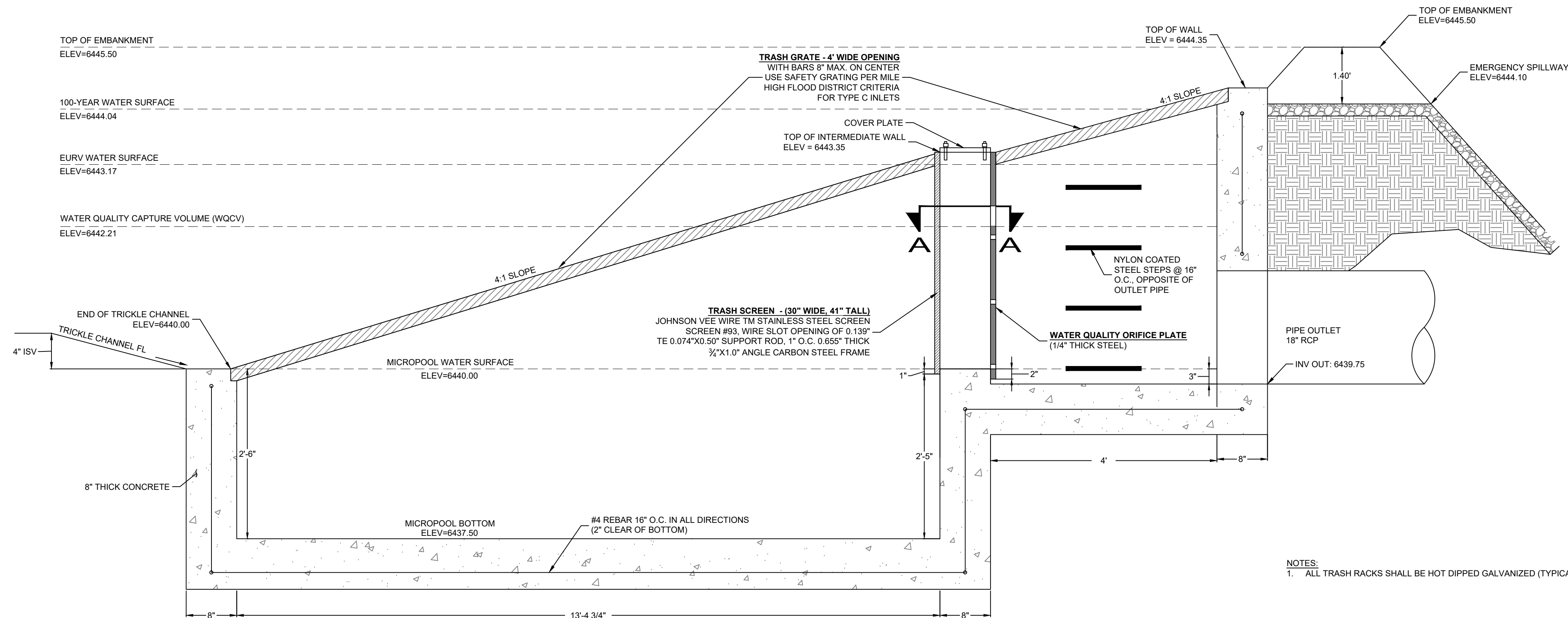
13/02/2025 11:24 AM X:\TOWN OF ELIZABETH\CD\PLANS\01 - MAIN ST PARKING\PRELIM\IN\X.DWG POND SHEETS.DWG OUTLET STRUCTURE



POND F - PROFILE  
NTS

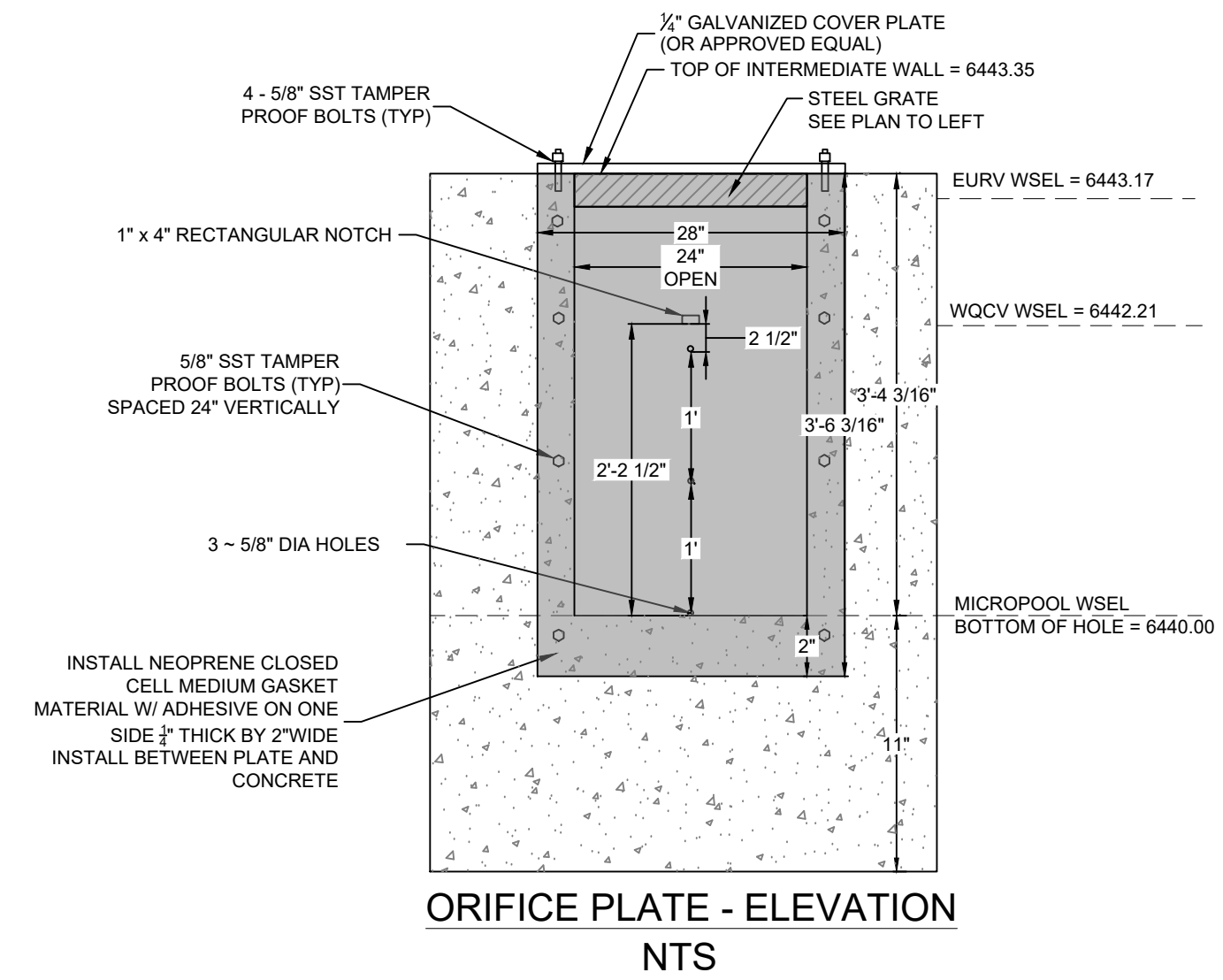


POND F - OUTLET STRUCTURE PLAN  
NTS

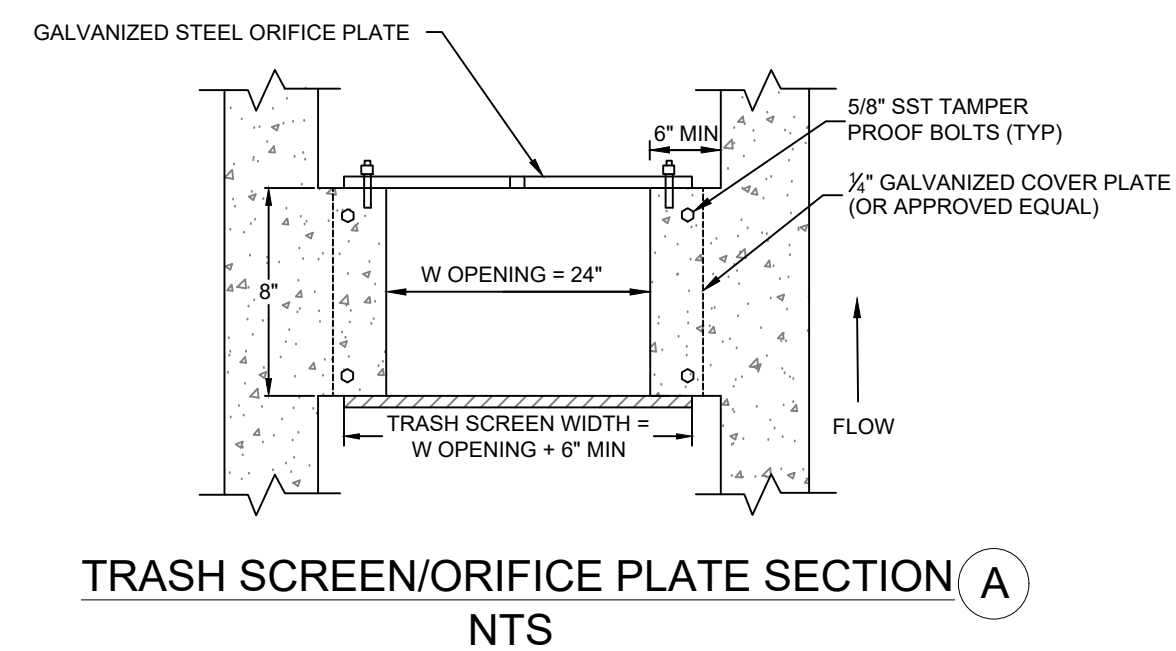


POND F - OUTLET STRUCTURE SECTION  
NTS

NOTES:  
1. ALL TRASH RACKS SHALL BE HOT DIPPED GALVANIZED (TYPICAL).



ORIFICE PLATE - ELEVATION  
NTS



TRASH SCREEN/ORIFICE PLATE SECTION A  
NTS

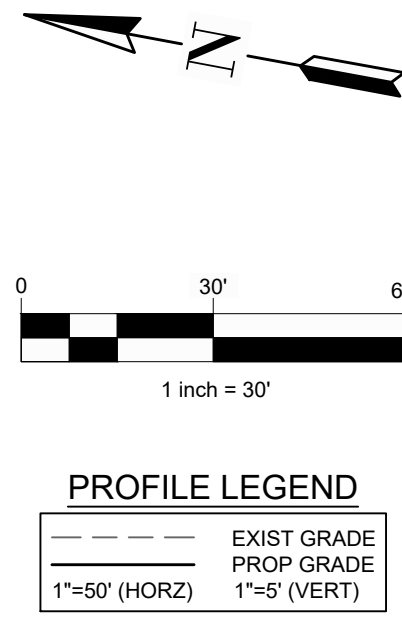
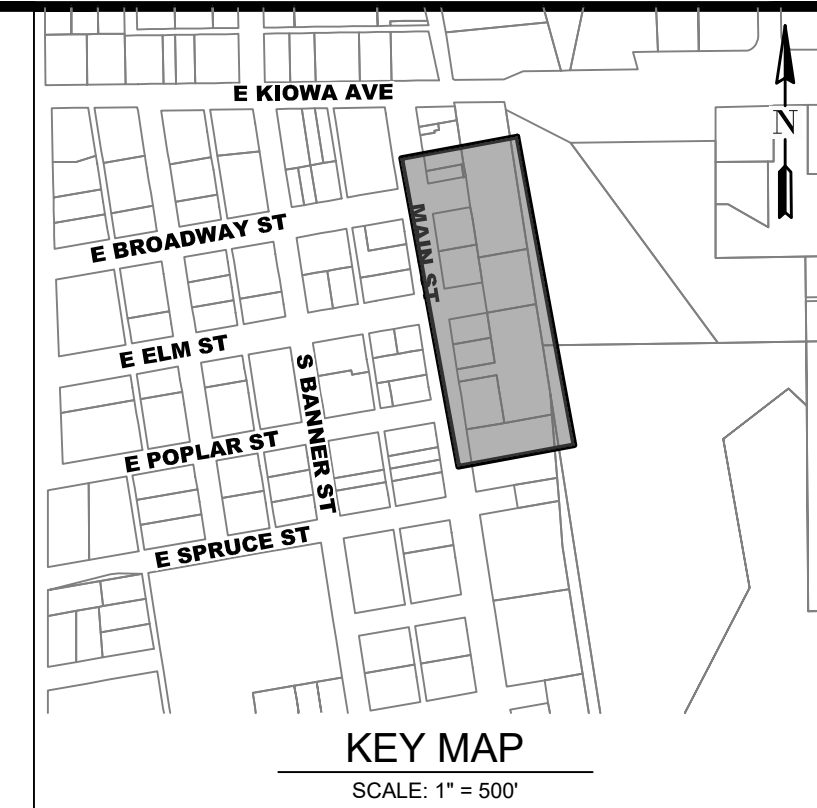
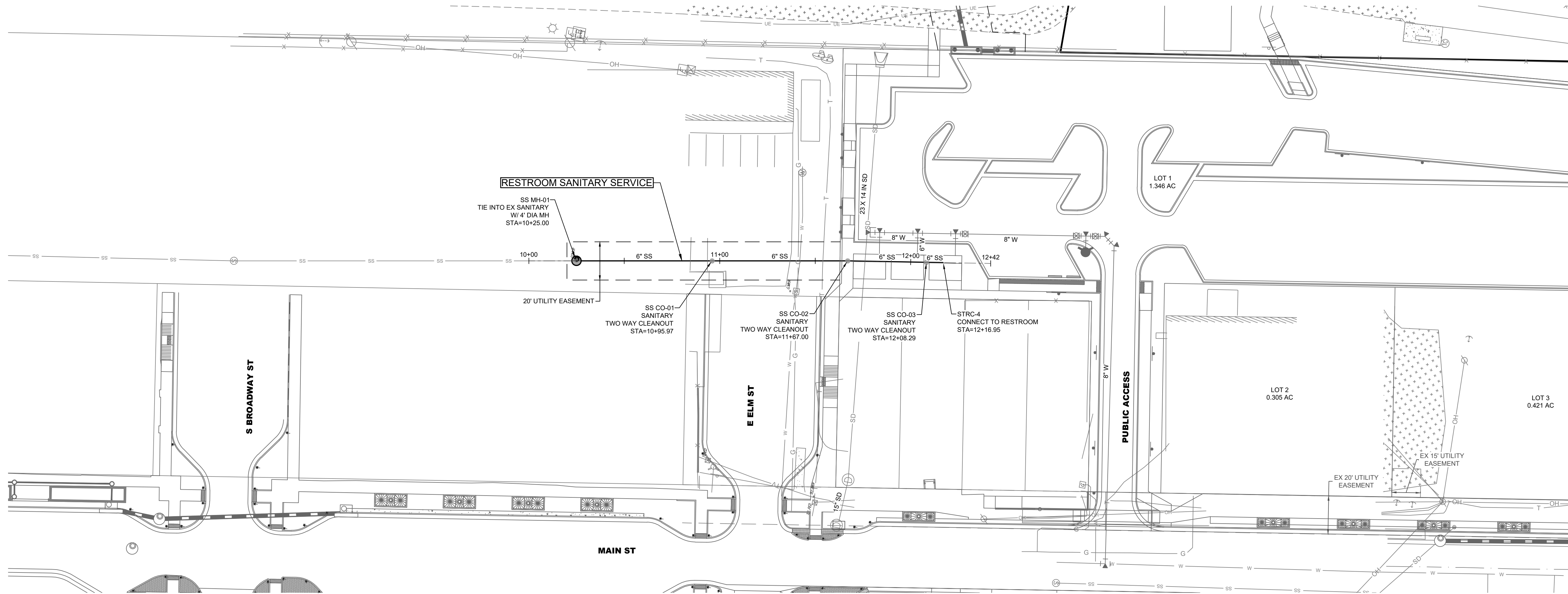
#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	11/01/2024	MM
2	2ND SUBMITTAL	01/17/2025	MM

NOT FOR  
CONSTRUCTION

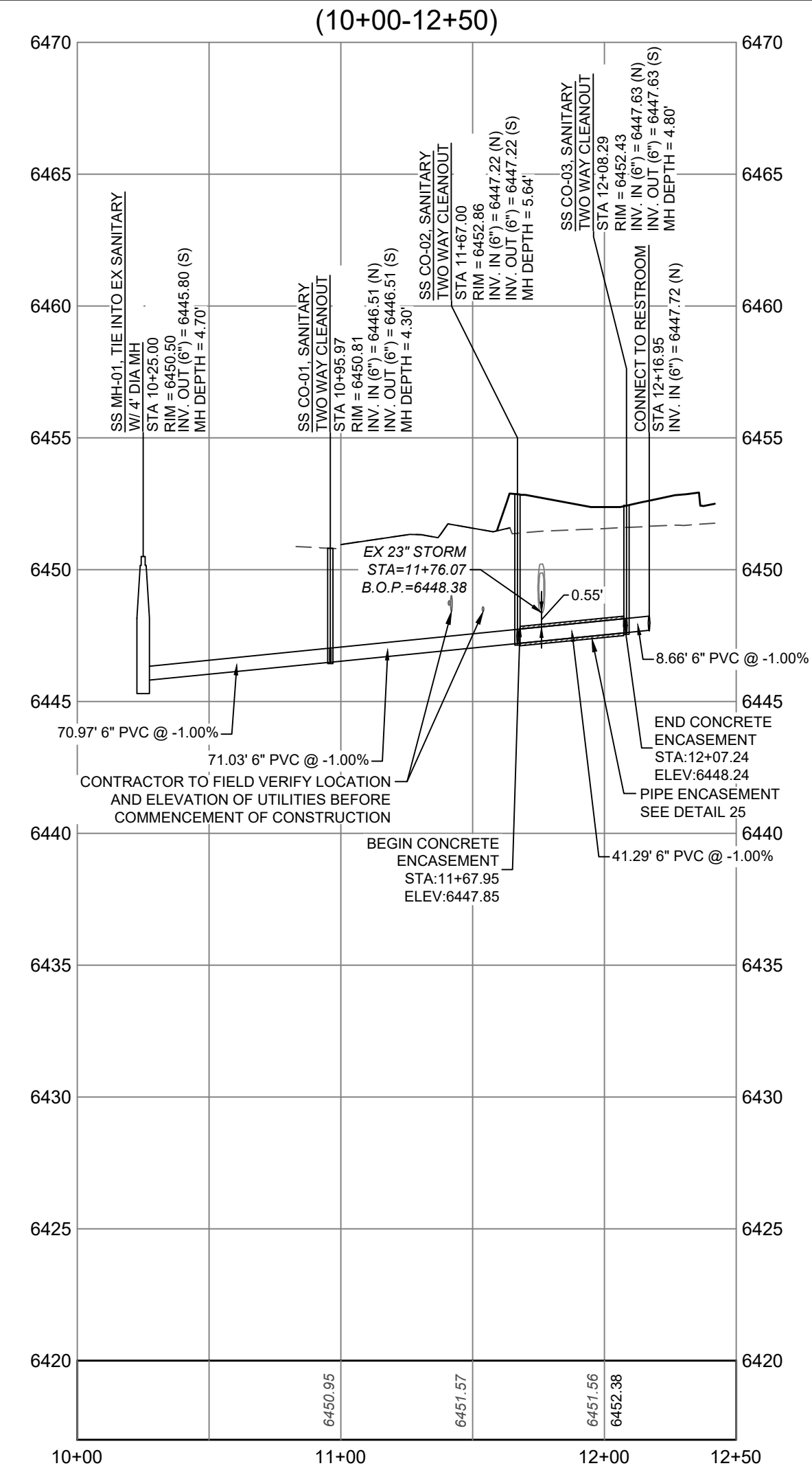
Know what's below.  
Call before you dig.







## RESTROOM SANITARY SERVICE



**NOT FOR  
CONSTRUCTION**

**MAIN STREET OFF-STREET PARKING LOT**  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
SANITARY P&P - RESTROOM SANITARY SERVICE



# REVISION DESCRIPTION

1 1ST SUBMITTAL

2 2ND SUBMITTAL

DATE

11/01/2024

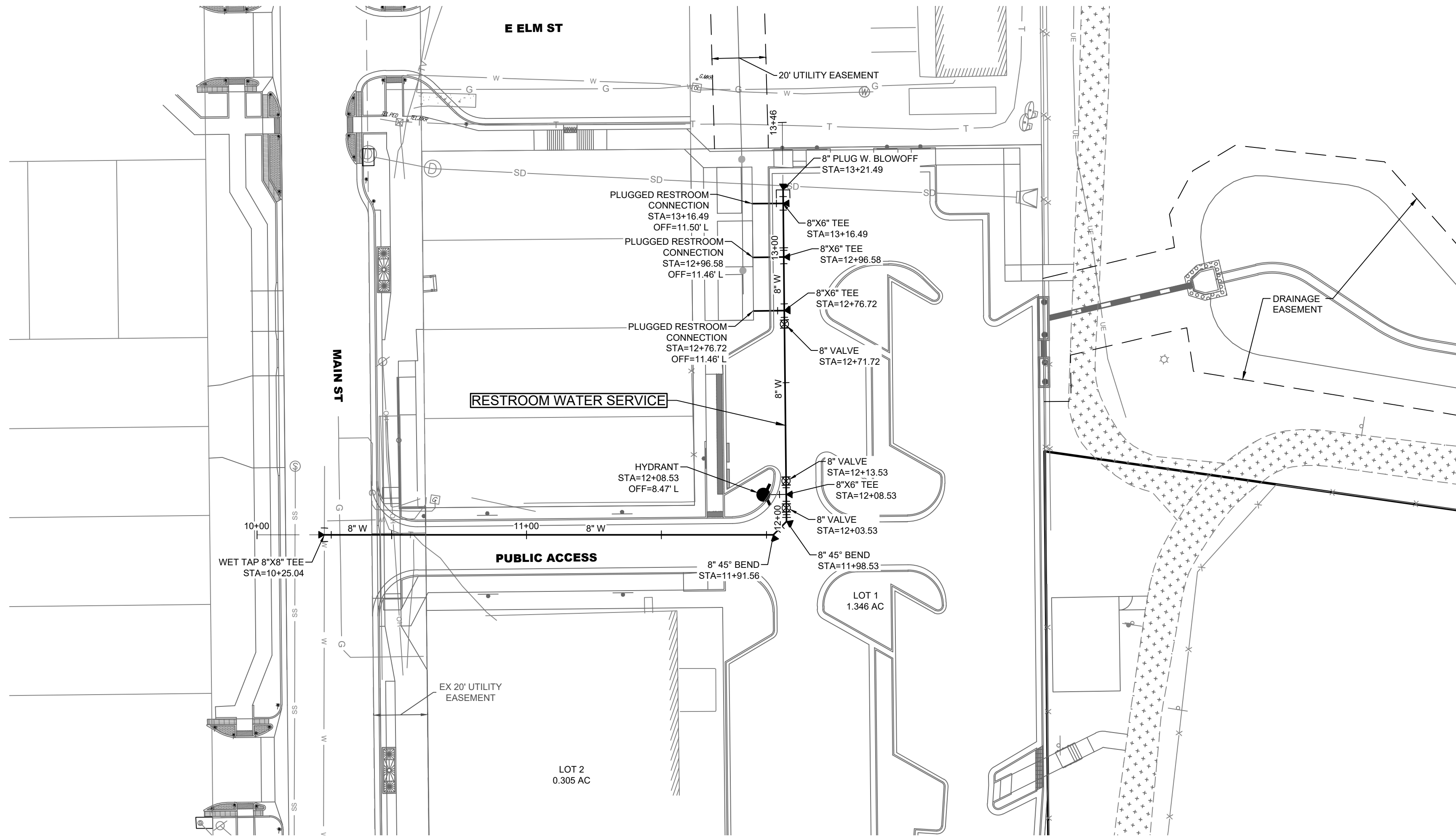
01/17/2025

BY

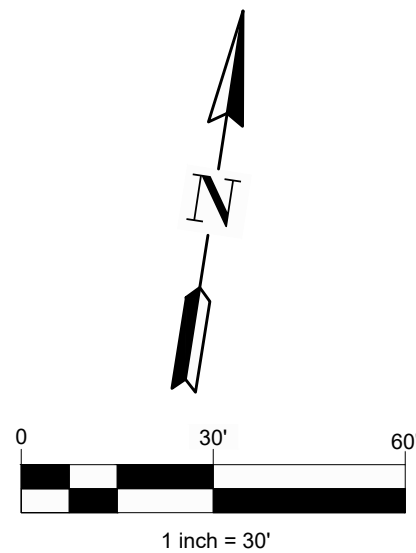
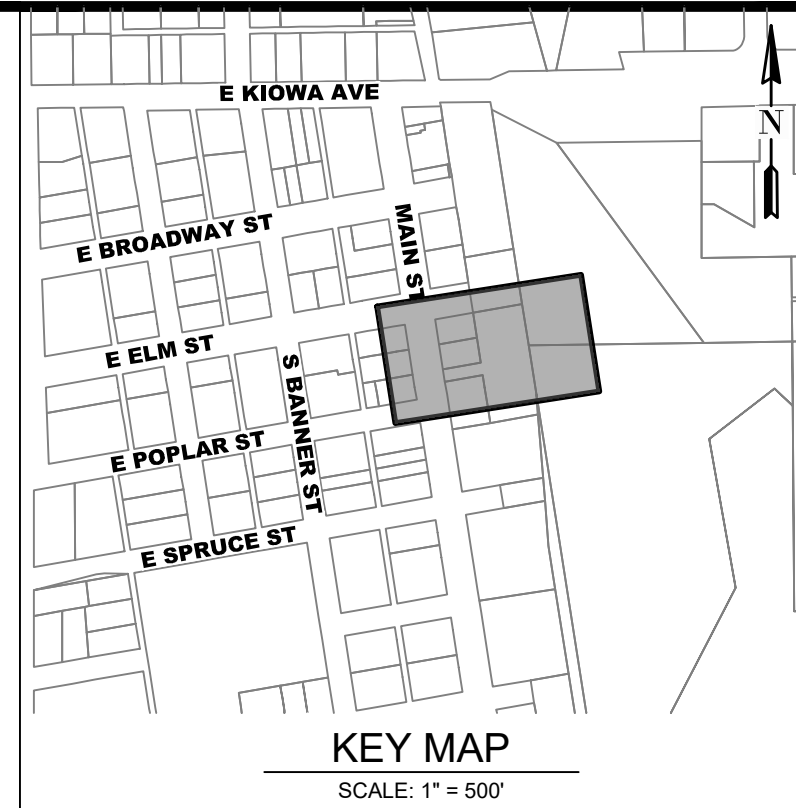
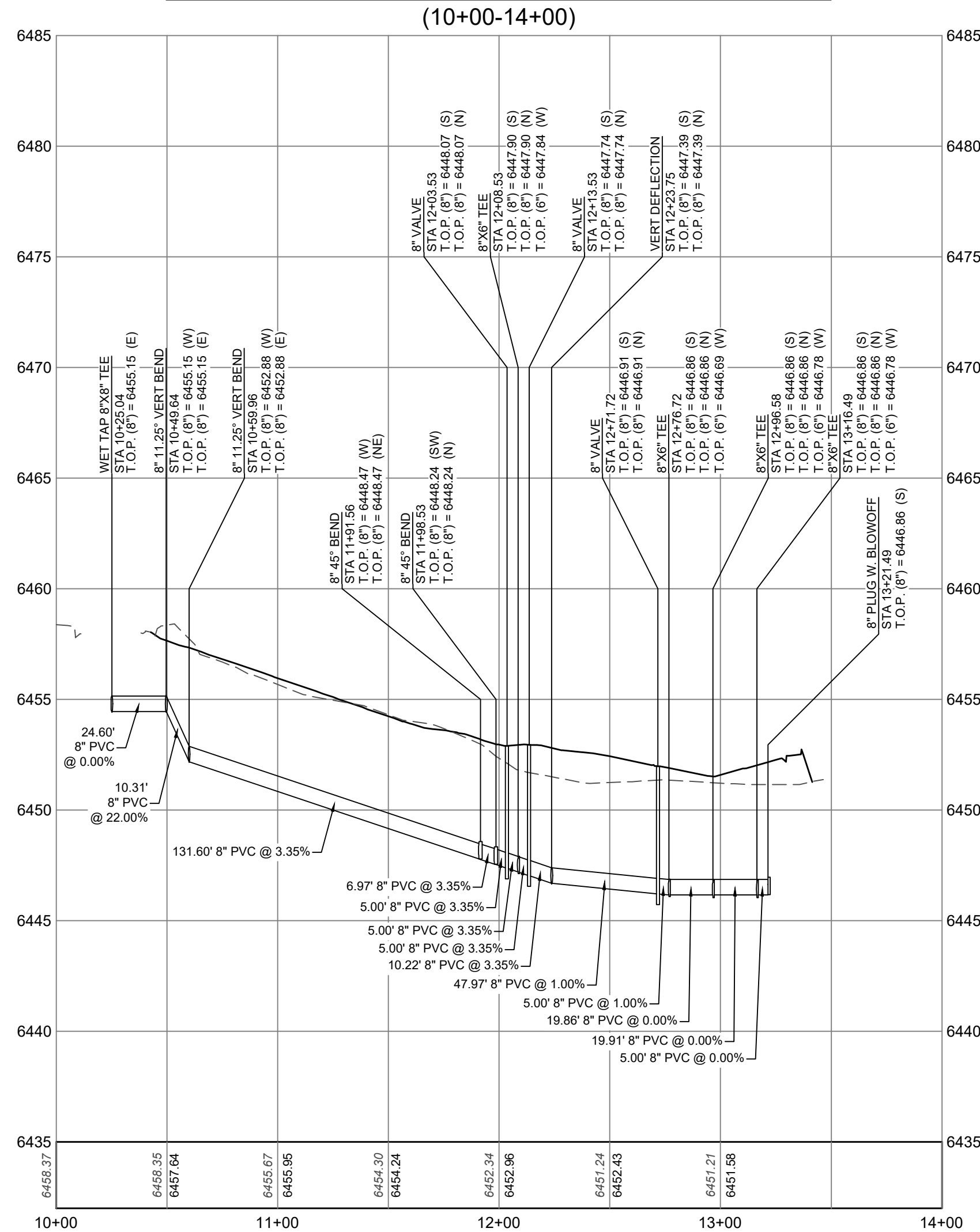
MM

MM





## RESTROOM WATER SERVICE



PROFILE LEGEND	
---	EXIST GRADE
---	PROP GRADE
1"=50' (HORZ)	1"=5' (VERT)

# REVISION DESCRIPTION

1 1ST SUBMITTAL

2 2ND SUBMITTAL

**NOT FOR CONSTRUCTION**

**MAIN STREET OFF-STREET PARKING LOT**  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
WATER P&P - RESTROOM WATER SERVICE



SHEET  
15 OF 31

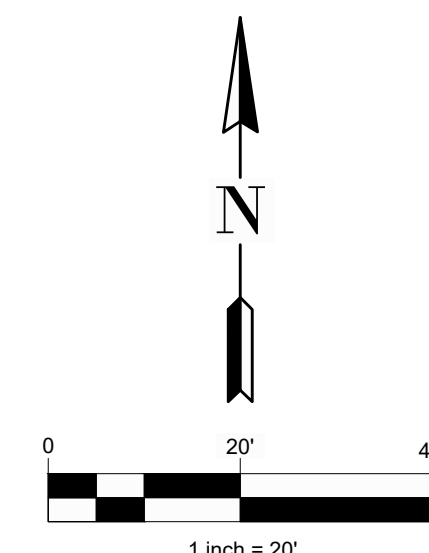
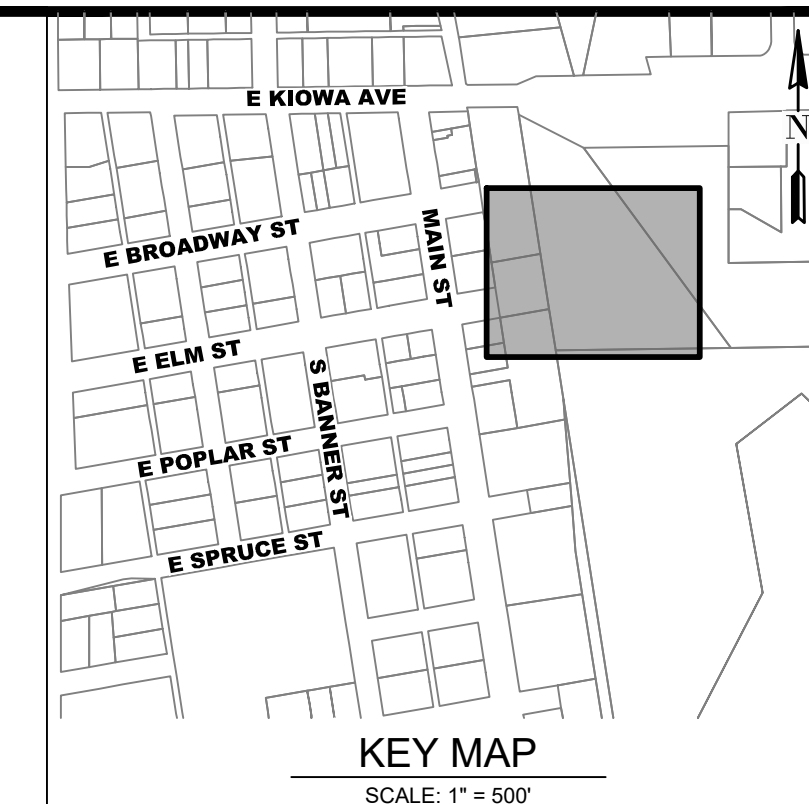
terracedesign  
10200 E. Grand Ave. A-314  
Denver, CO 80231  
PH: 303.632.8667

DATE BY

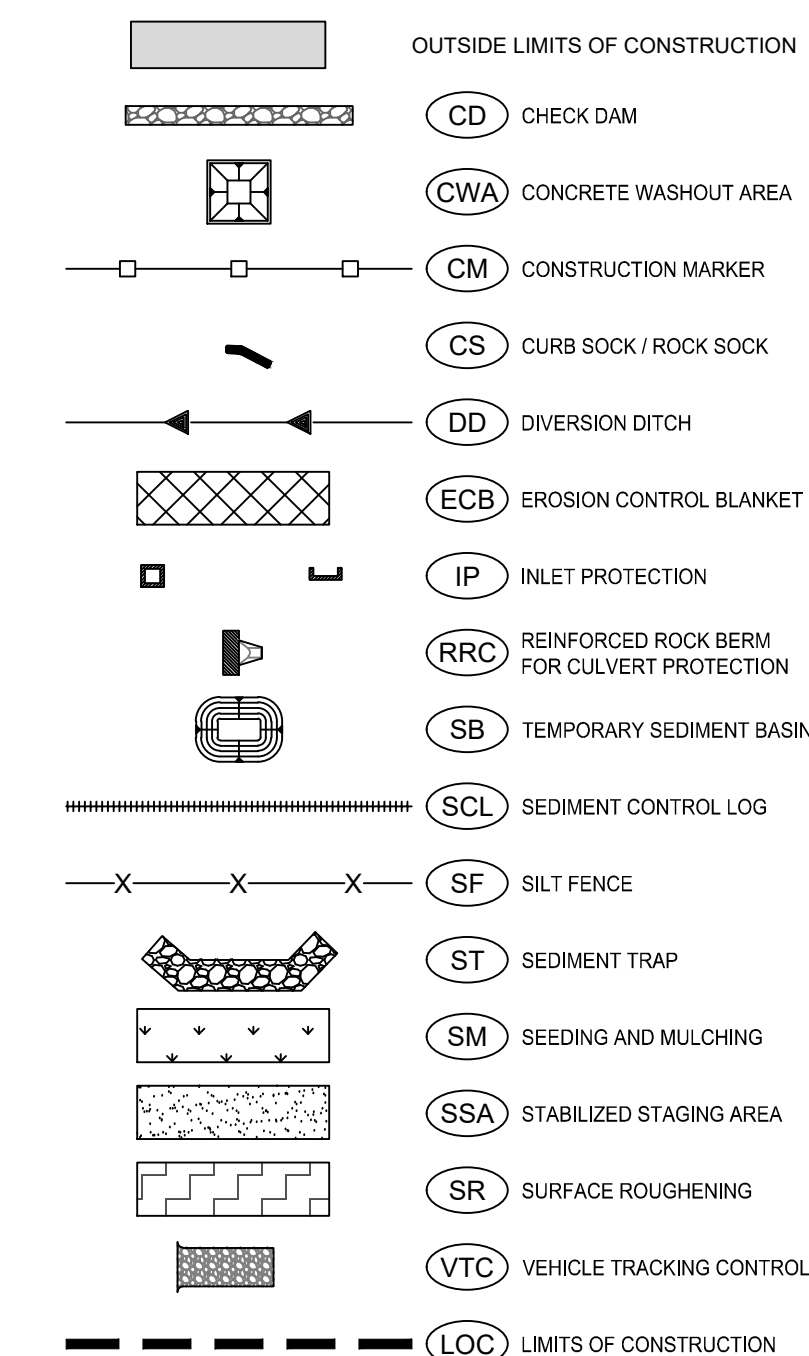
11/01/2024 MM

01/17/2025 MM





### LEGEND



NOTES:

1. SEE SHEETS 24-31 FOR GESC DETAILS.
2. THE SITE EARTHWORK:  
1966 CY CUT.      4779 CY FILL.      2814 CY NET FILL

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	11/01/2024	MM
2	2ND SUBMITTAL	01/17/2025	MM

## NOT FOR CONSTRUCTION

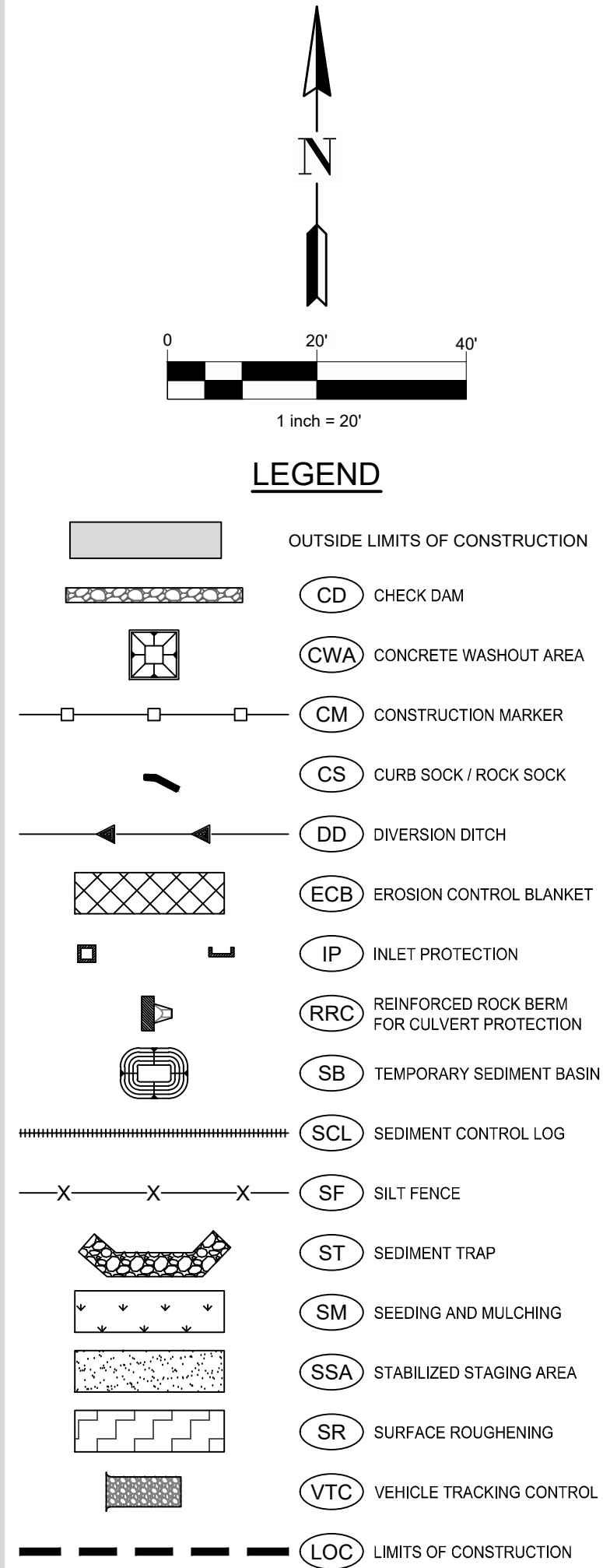
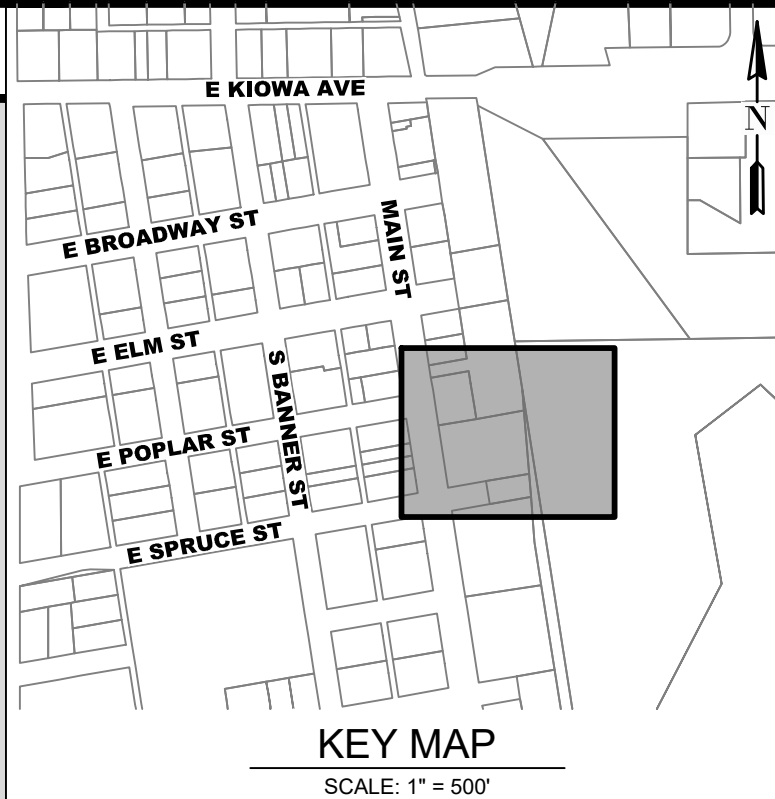
**MAIN STREET OFF-STREET PARKING LOT**

TOWN OF ELIZABETH, COLORADO

INSTRUCTION DOCUMENTS  
CSCC INITIAL PLAN



1/30/2025 11:24 AM X:TOWN OF ELIZABETH/CADD/PLANS/01 - MAIN ST PARKING/PR/INITIAL DWS GESC - INITIAL DWG 2



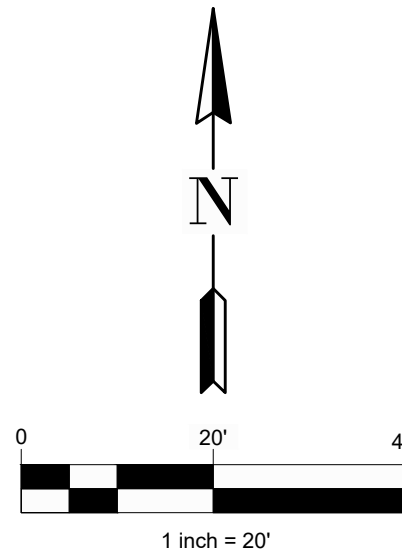
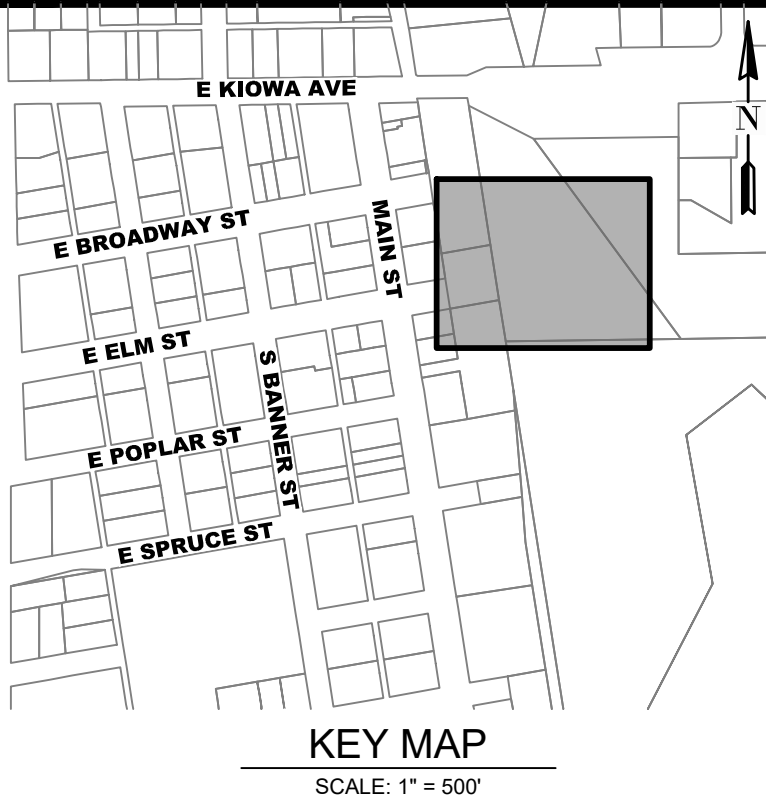
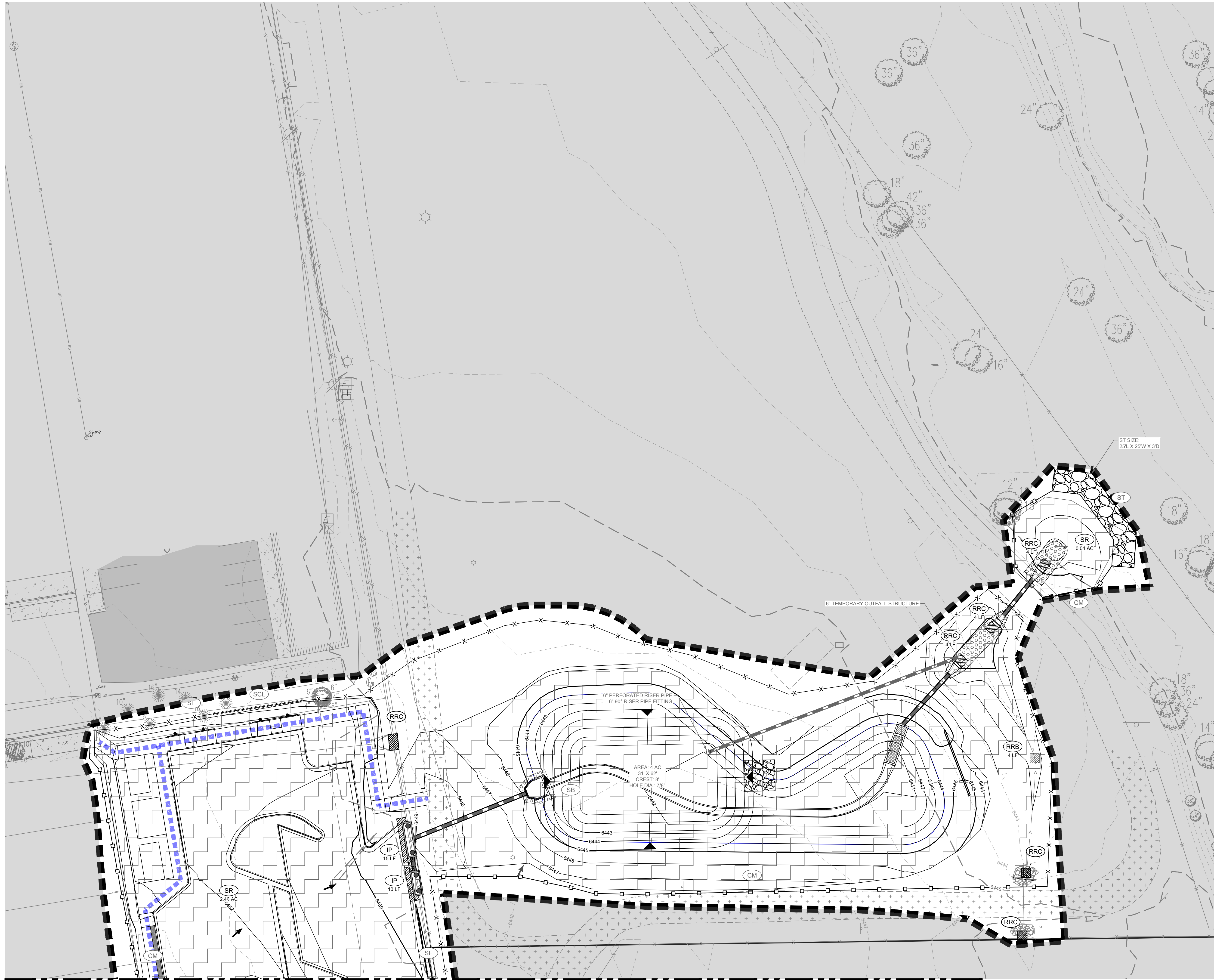
**NOT FOR CONSTRUCTION**

**MAIN STREET OFF-STREET PARKING LOT**  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
GESC - INITIAL PLAN

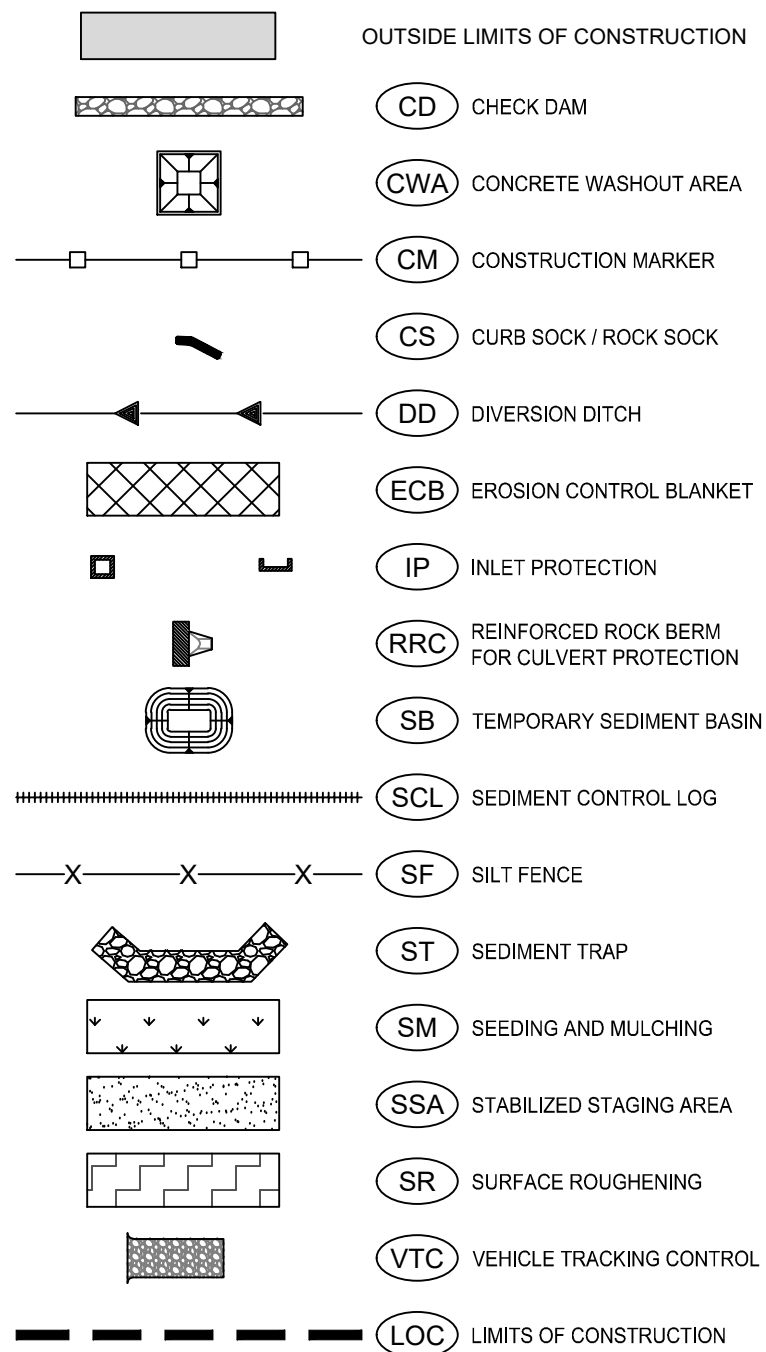
#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	11/01/2024	MM
2	2ND SUBMITTAL	01/17/2025	MM



1/30/2025 11:24 AM X:TOWN OF ELIZABETH\CD\PLANS\01-MAIN ST PARKING\PRELIM\DWG 01- GESC-INTERIM.DWG 1



LEGEND



NOTES:

- SEE SHEETS 24-31 FOR GESC DETAILS.
- THE SITE EARTHWORK:  
1966 CY CUT, 4779 CY FILL, 2814 CY NET FILL

# REVISION DESCRIPTION

DATE	BY
11/01/2024	MM
01/17/2025	MM

1	1ST SUBMITTAL
2	2ND SUBMITTAL

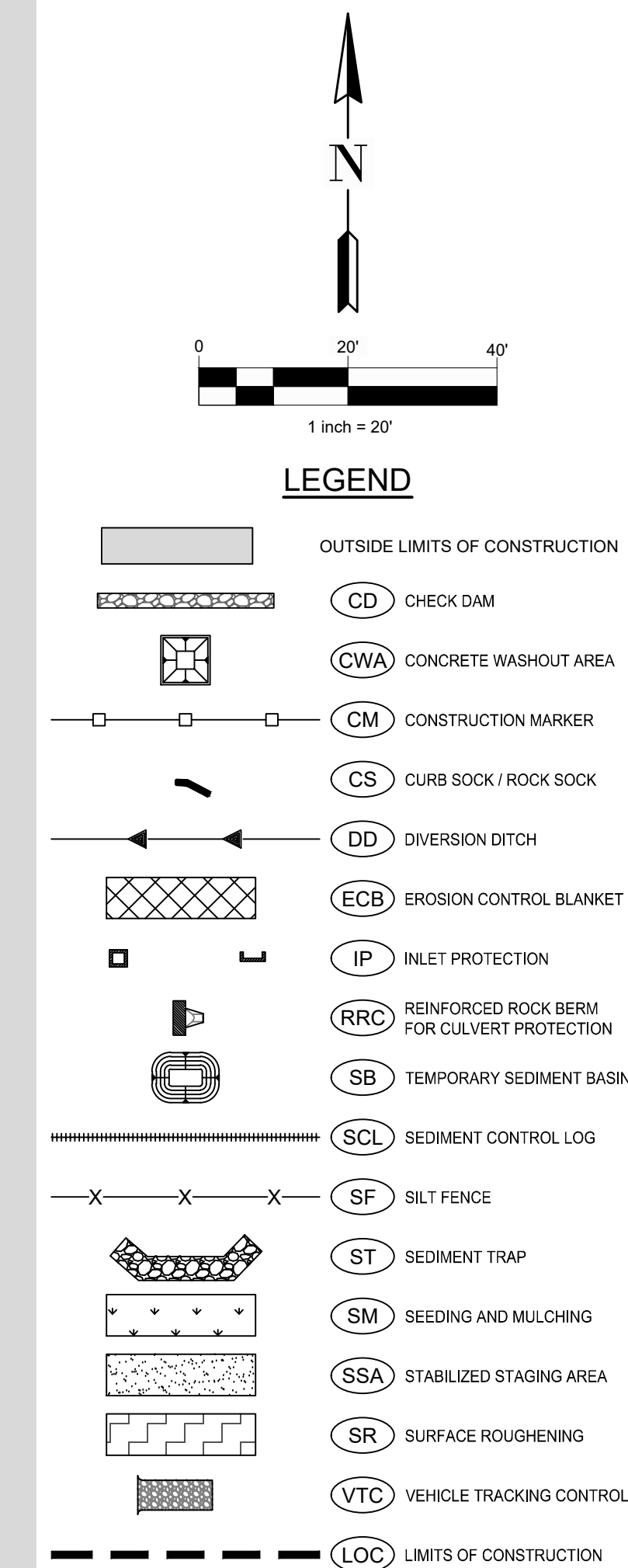
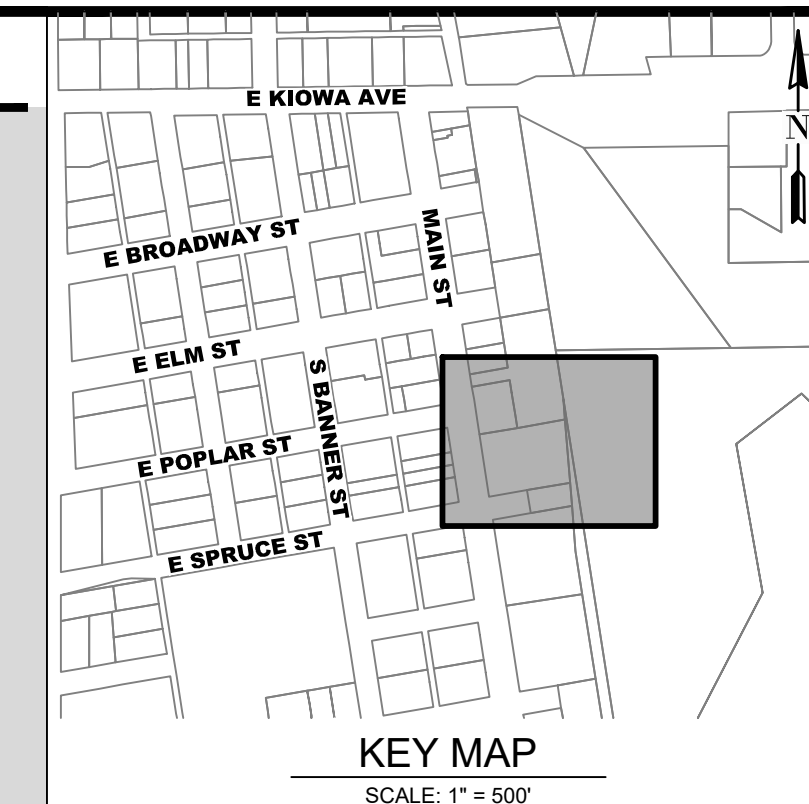
**NOT FOR CONSTRUCTION**

**MAIN STREET OFF-STREET PARKING LOT**  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
GESC - INTERIM PLAN



SHEET  
18 OF 31





**NOTES:**

1. SEE SHEETS 24-31 FOR GESC DETAILS.
2. THE SITE EARTHWORK:  
1966 CY CUT, 4779 CY FILL, 2814 CY NET FILL

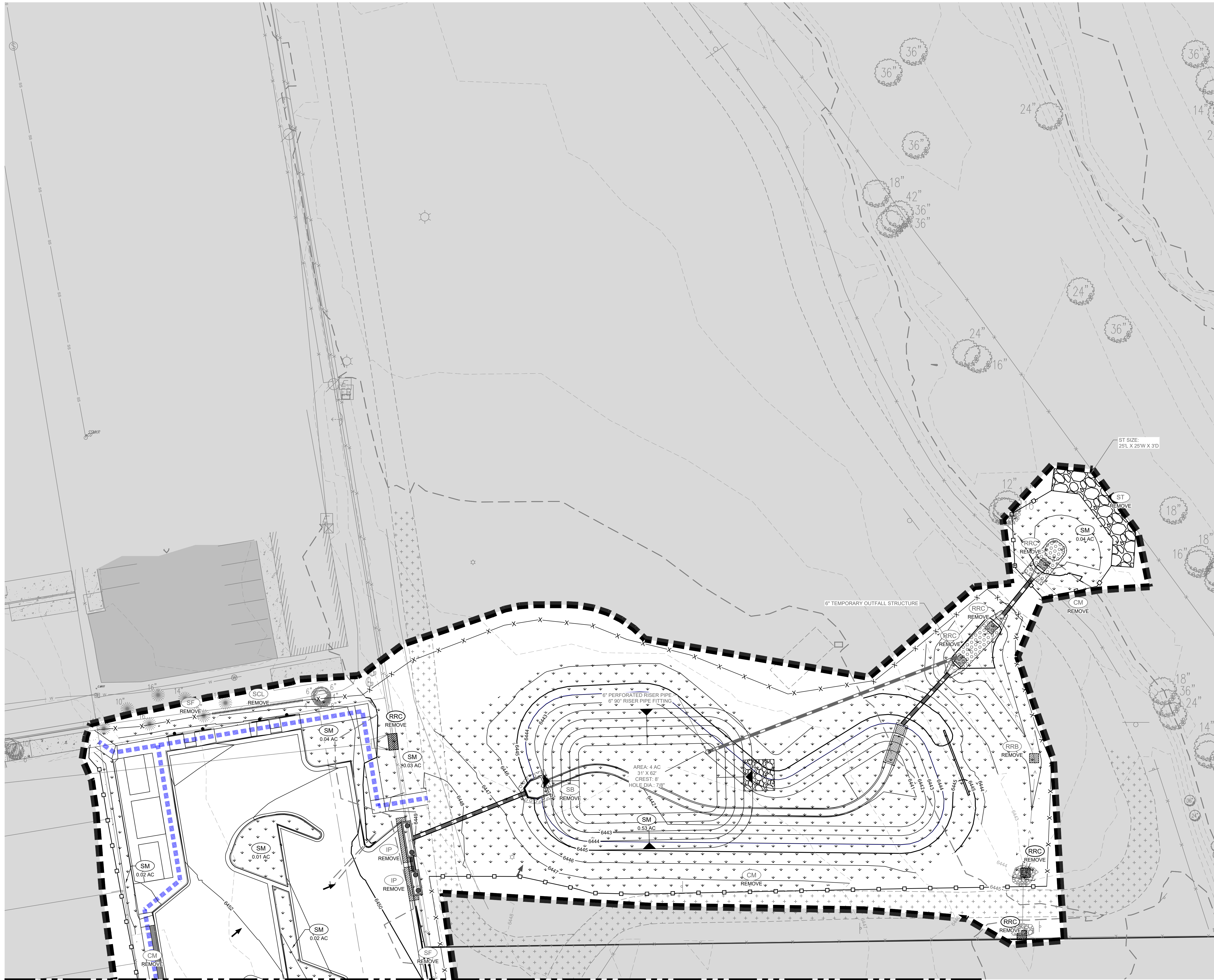
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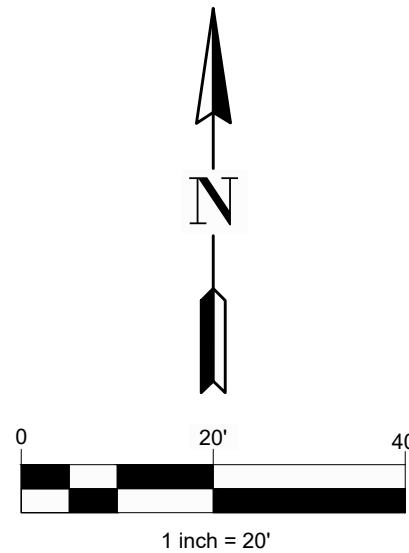
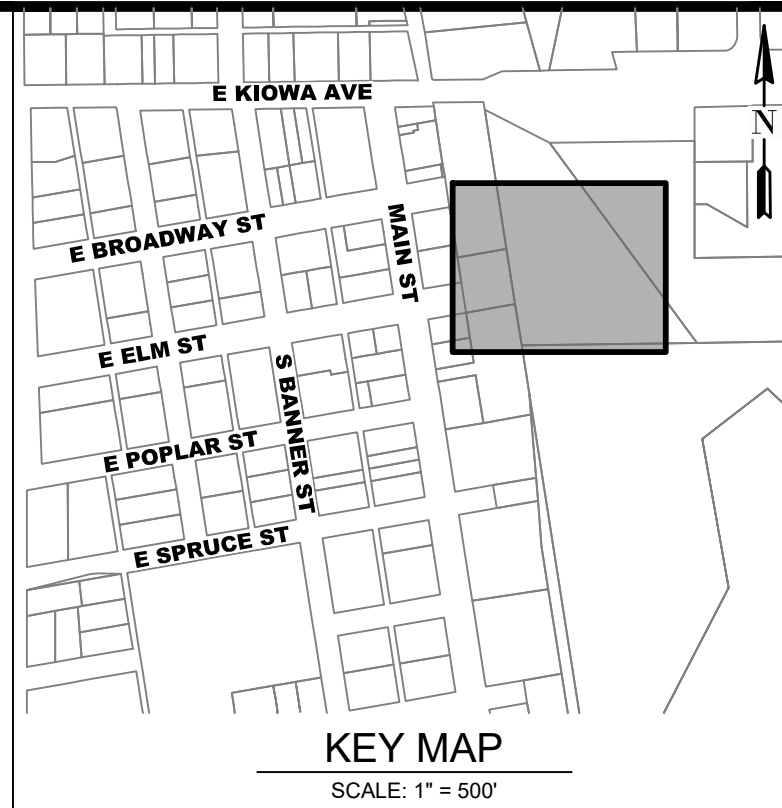
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TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
GESC - INTERIM PLAN



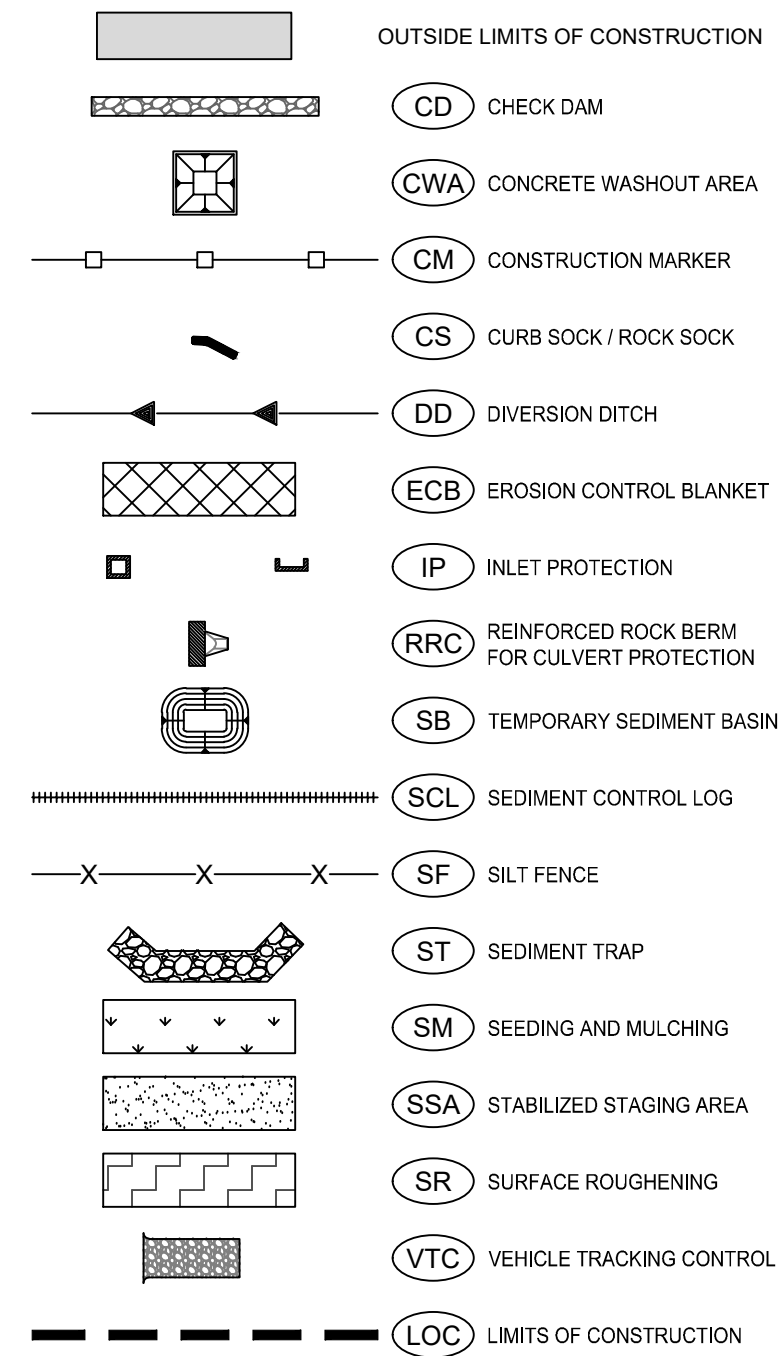
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SEE SHEET 21



LEGEND



NOTES:

1. SEE SHEETS 24-31 FOR GESC DETAILS.
2. THE SITE EARTHWORK:  
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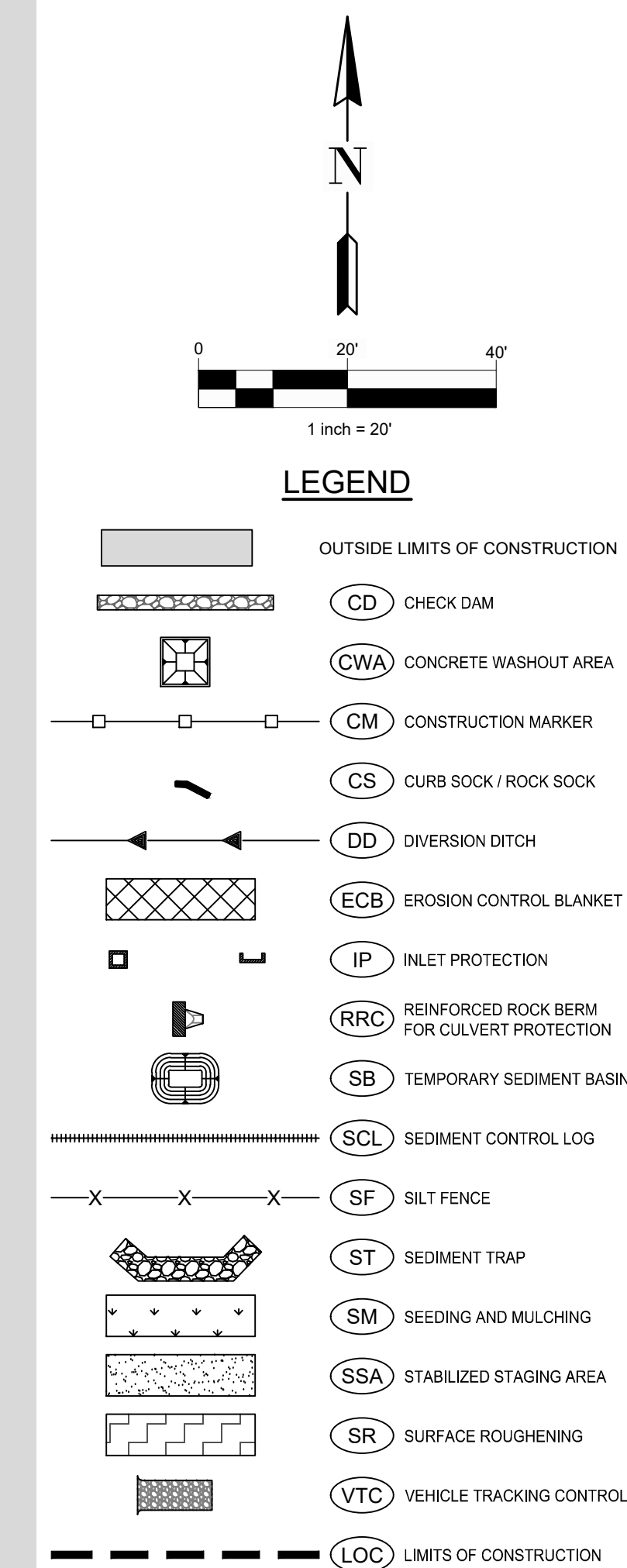
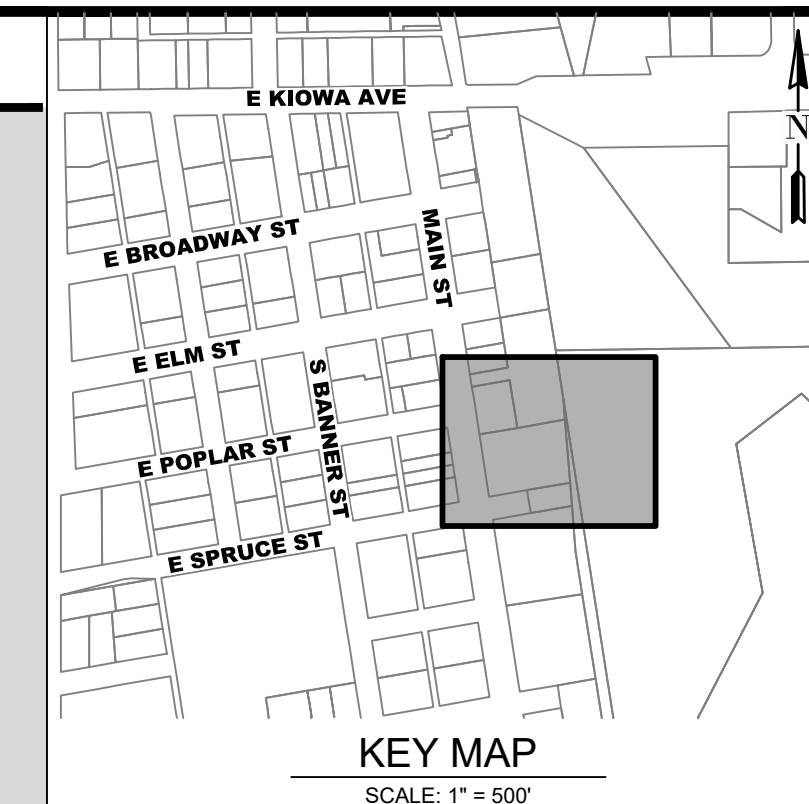
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CONSTRUCTION DOCUMENTS  
GESC - FINAL PLAN



SHEET  
20 OF 31

terraccina  
**td** design  
10200 E. Grand Ave, A-314  
Denver, CO 80231  
PH: 303.652.8667





- NOTES:**
1. SEE SHEETS 24-31 FOR GESC DETAILS.
  2. THE SITE EARTHWORK:  
1966 CY CUT,      4779 CY FILL,      2814 CY NET FILL

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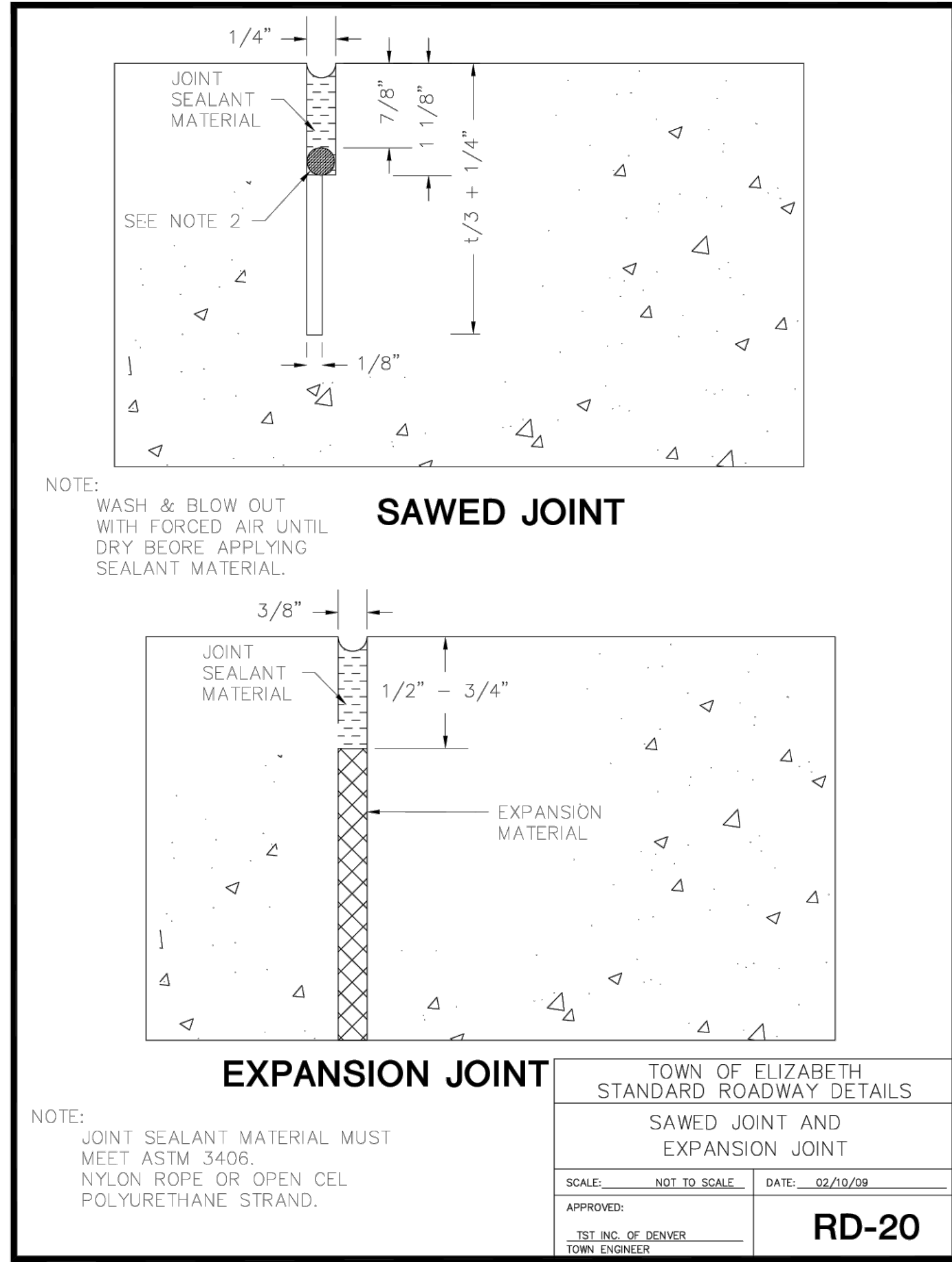
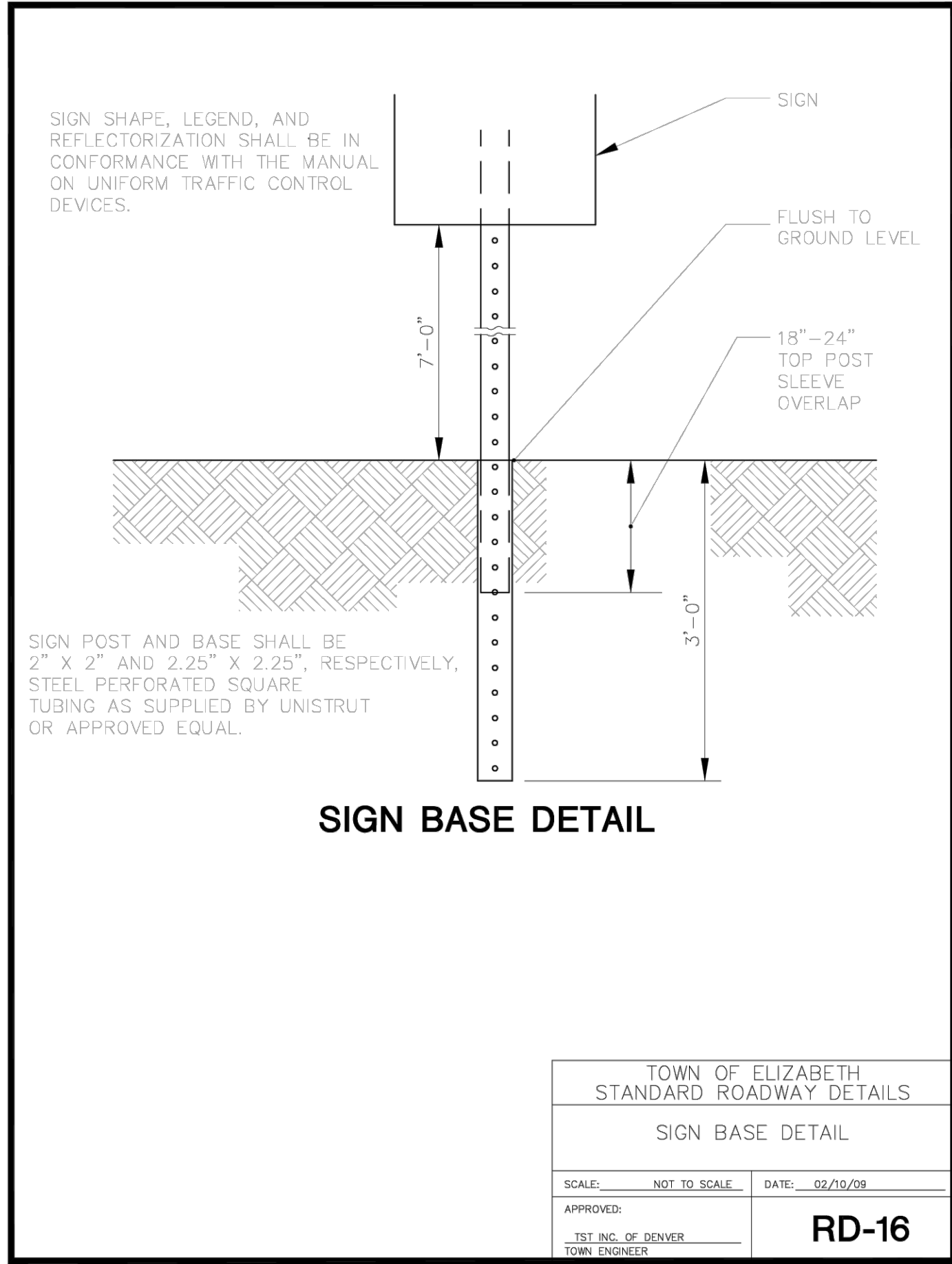
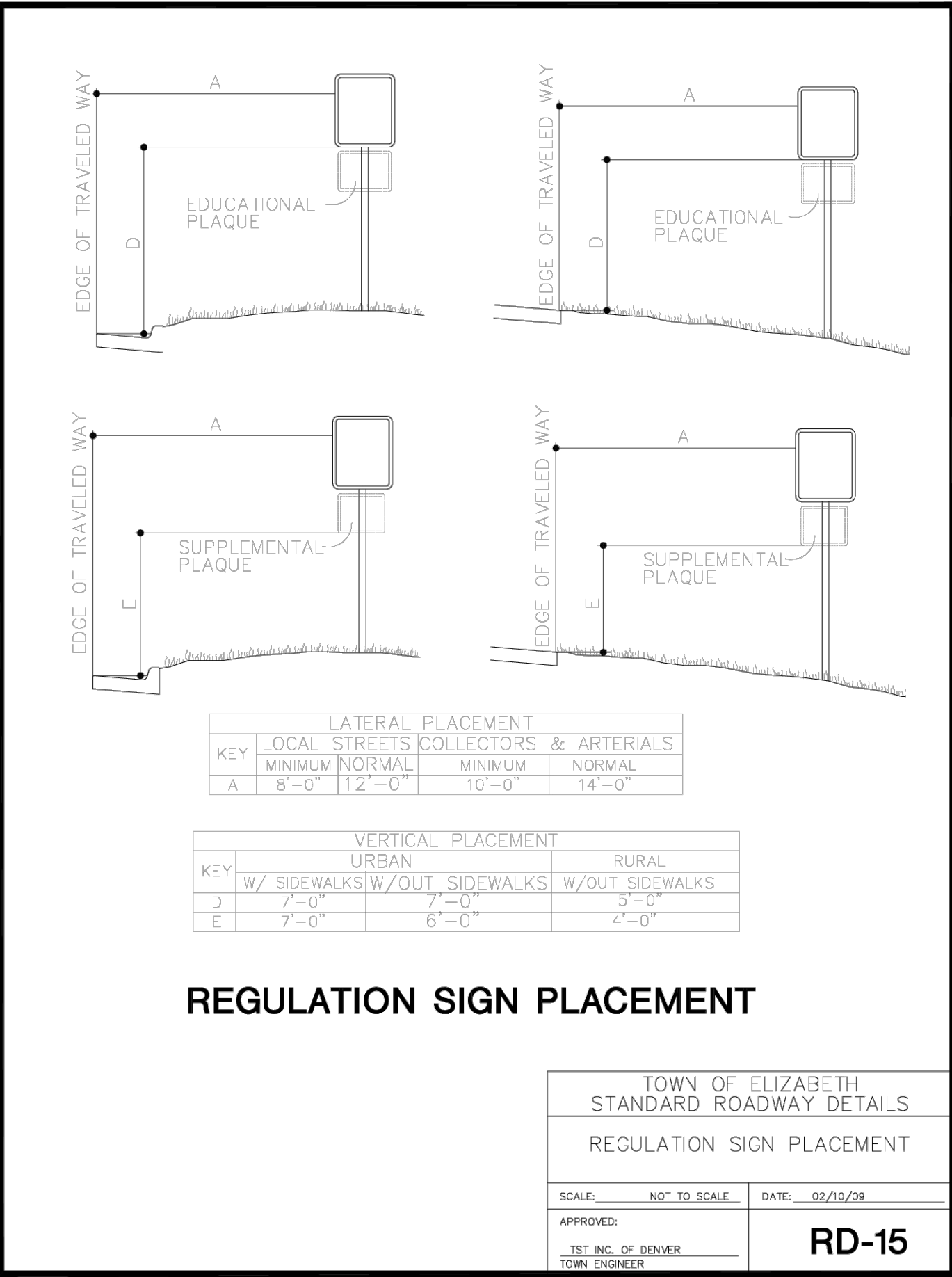
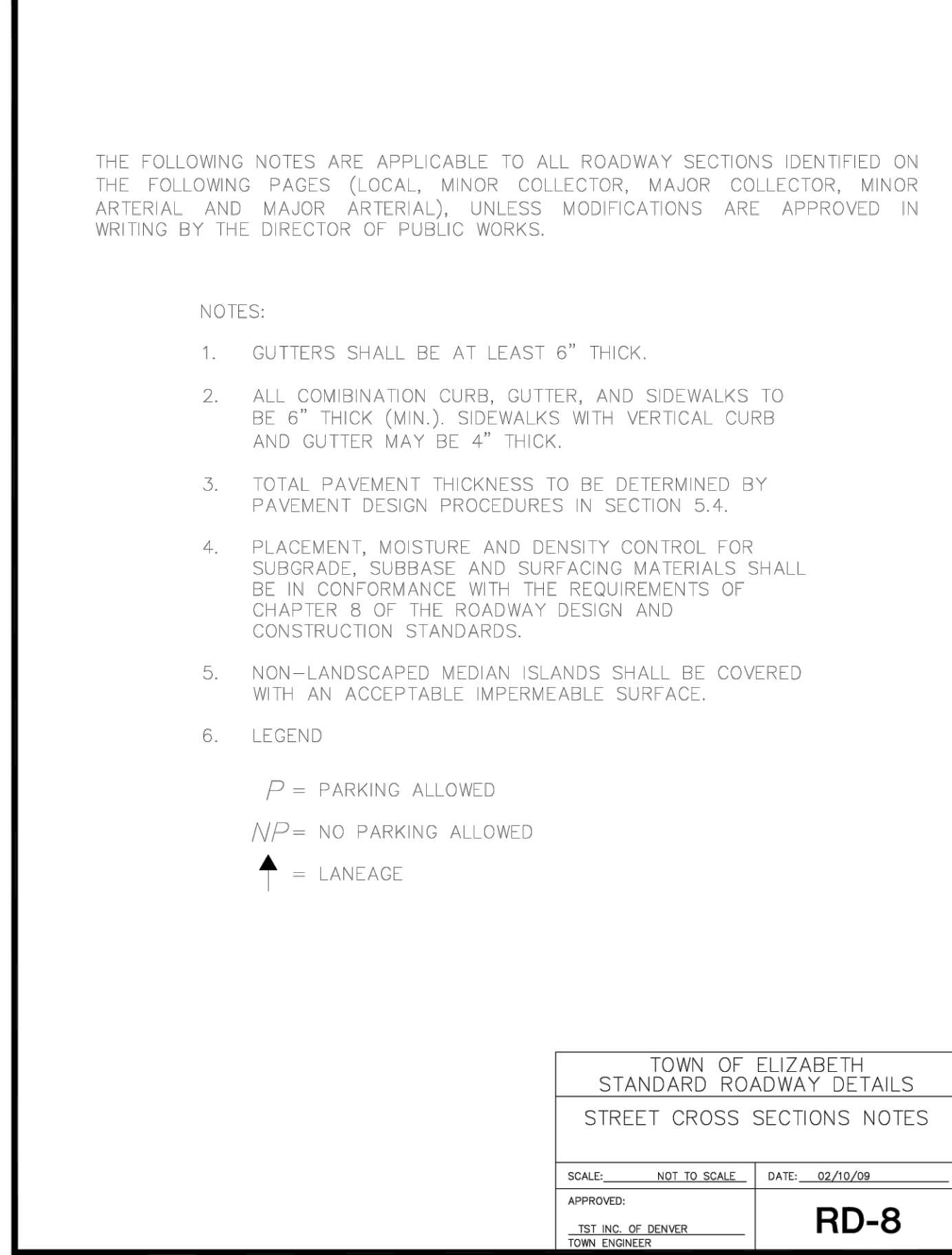
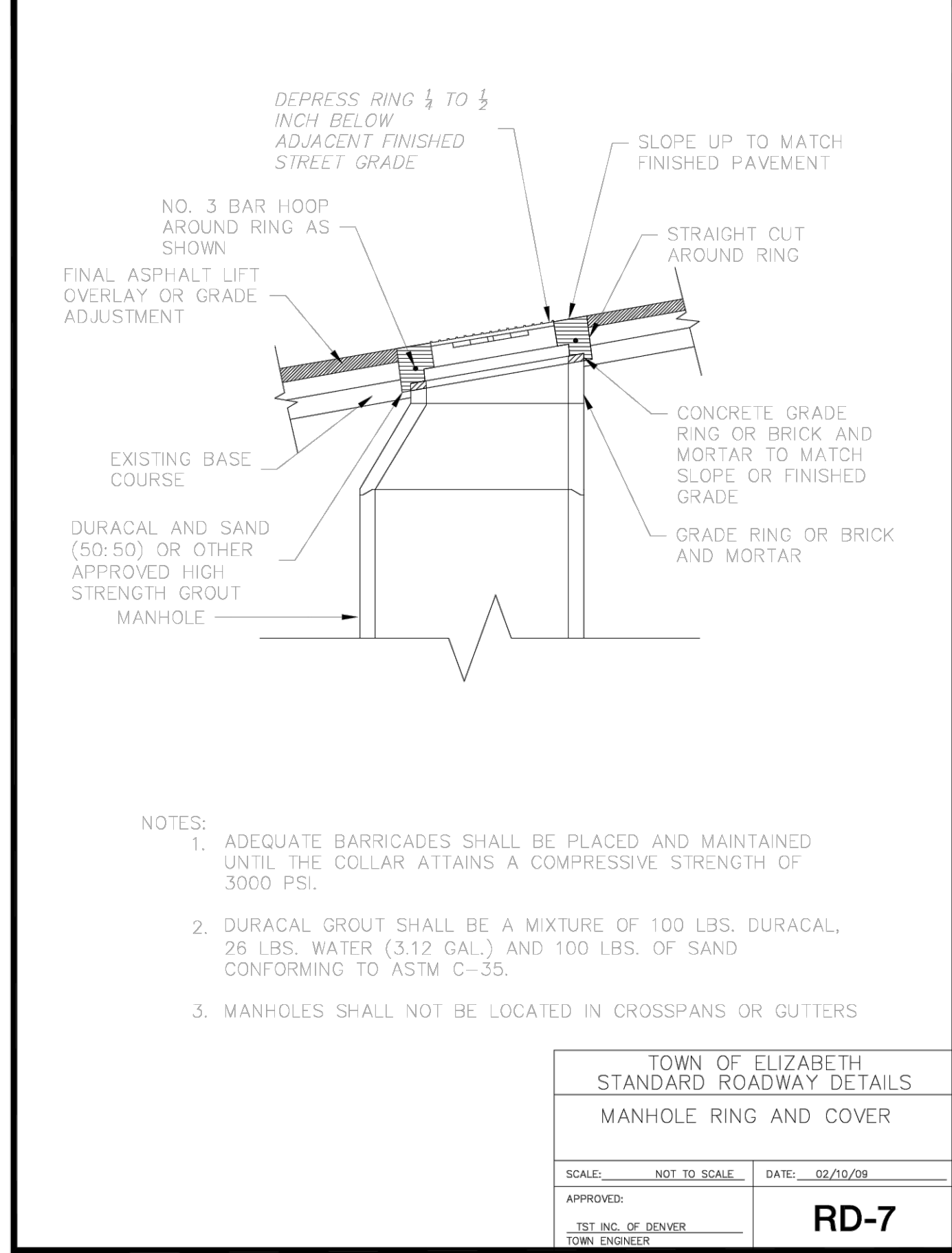
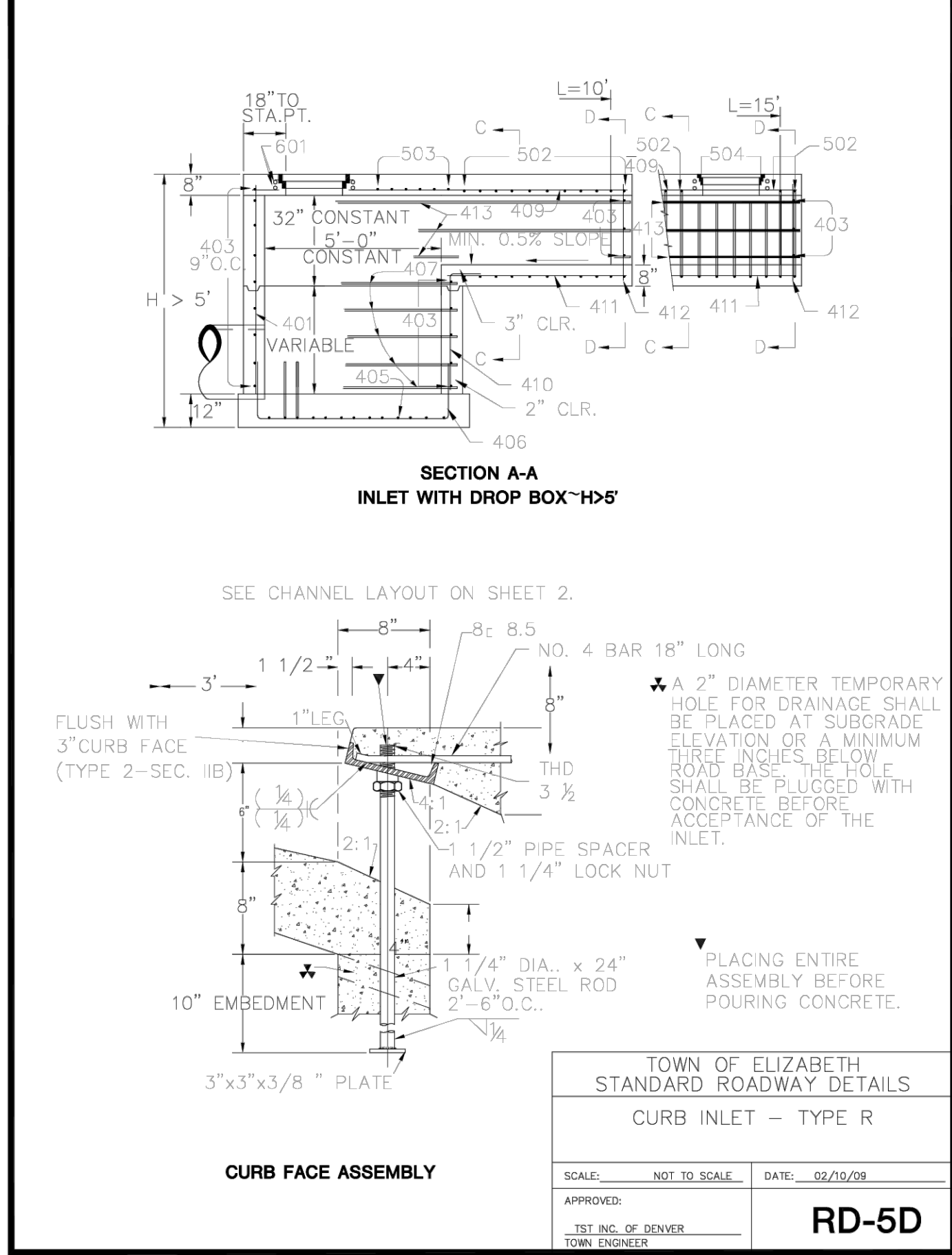
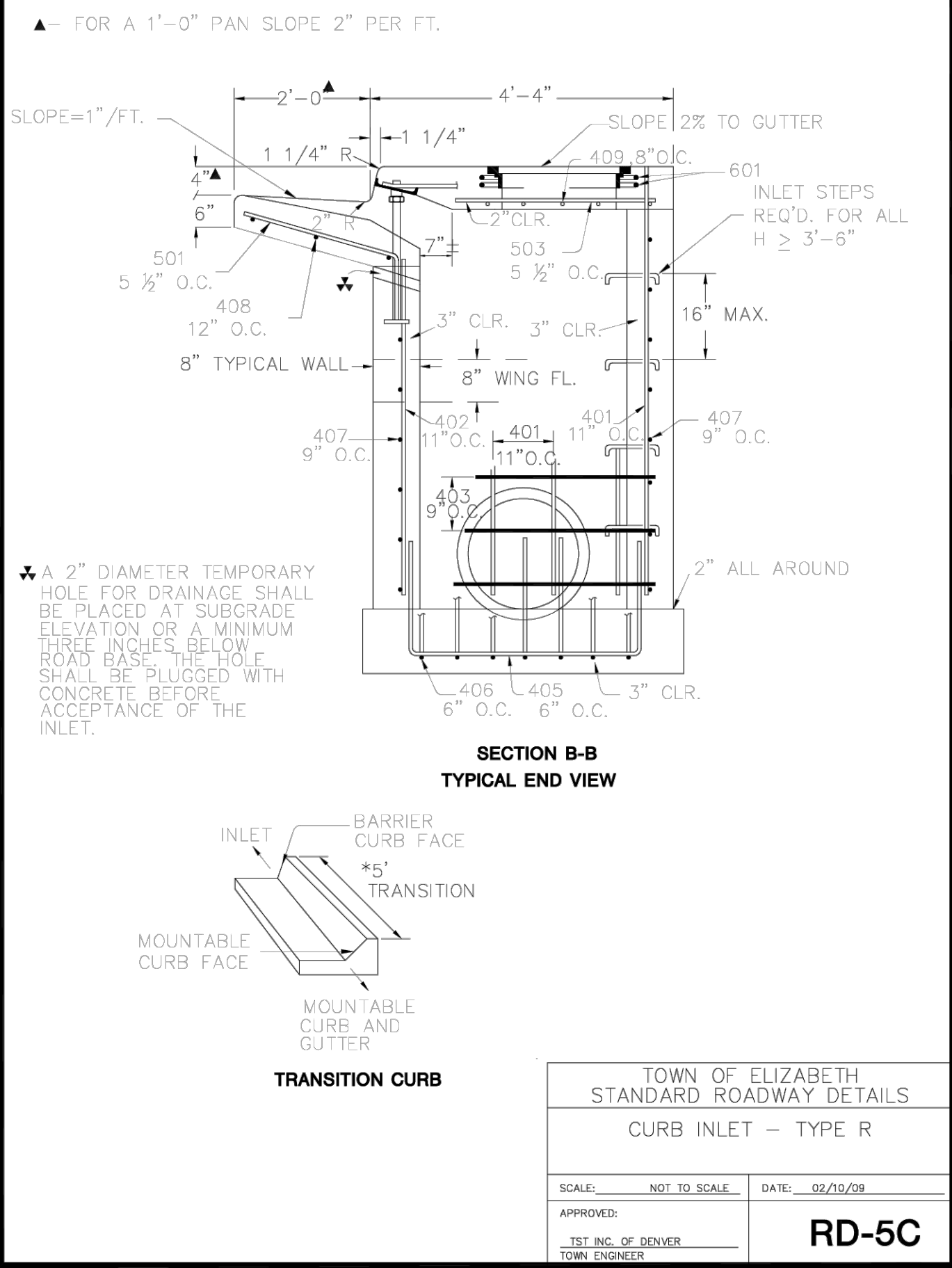
**MAIN STREET OFF-STREET PARKING LOT**  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
GESC - FINAL PLAN





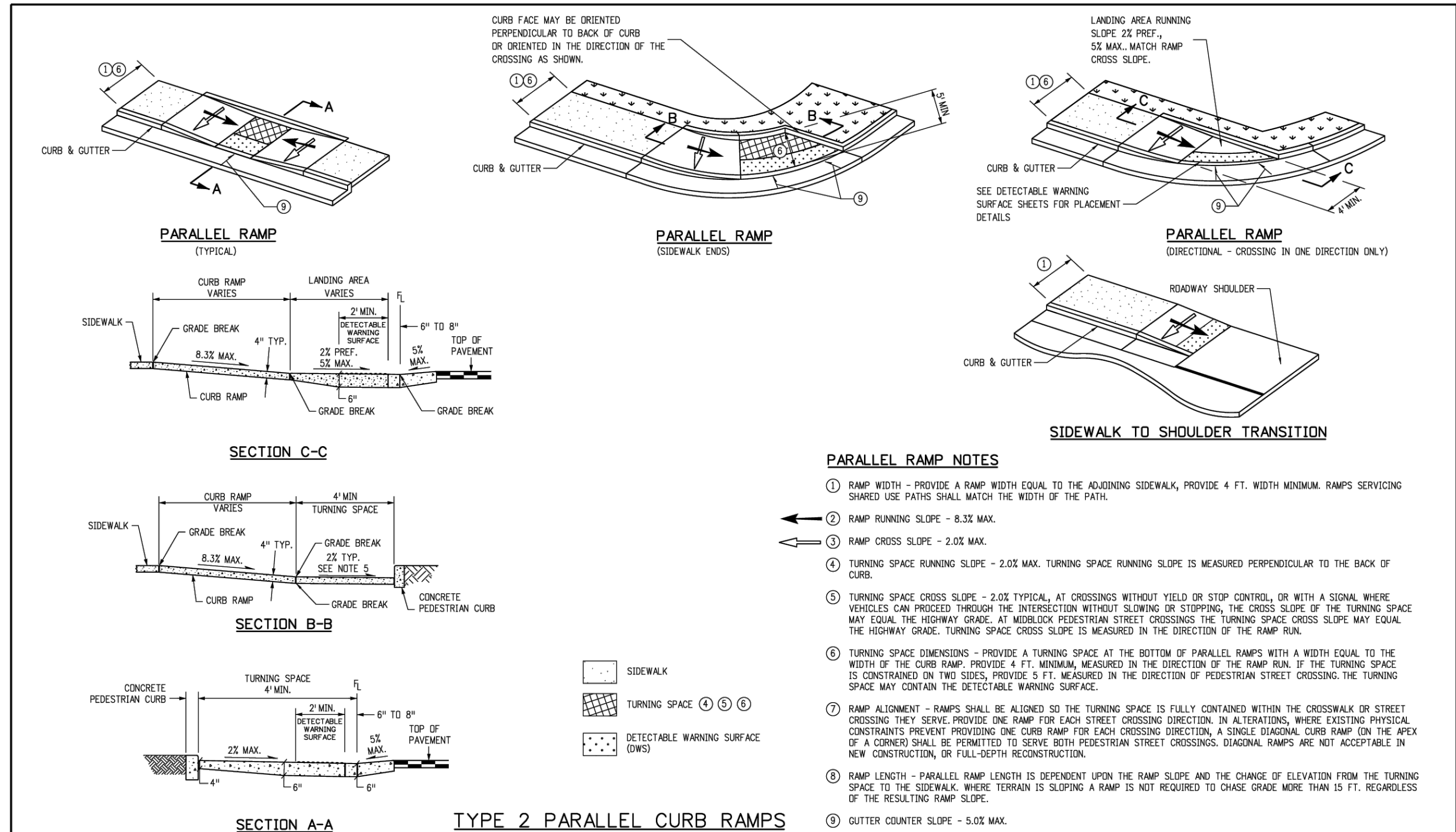
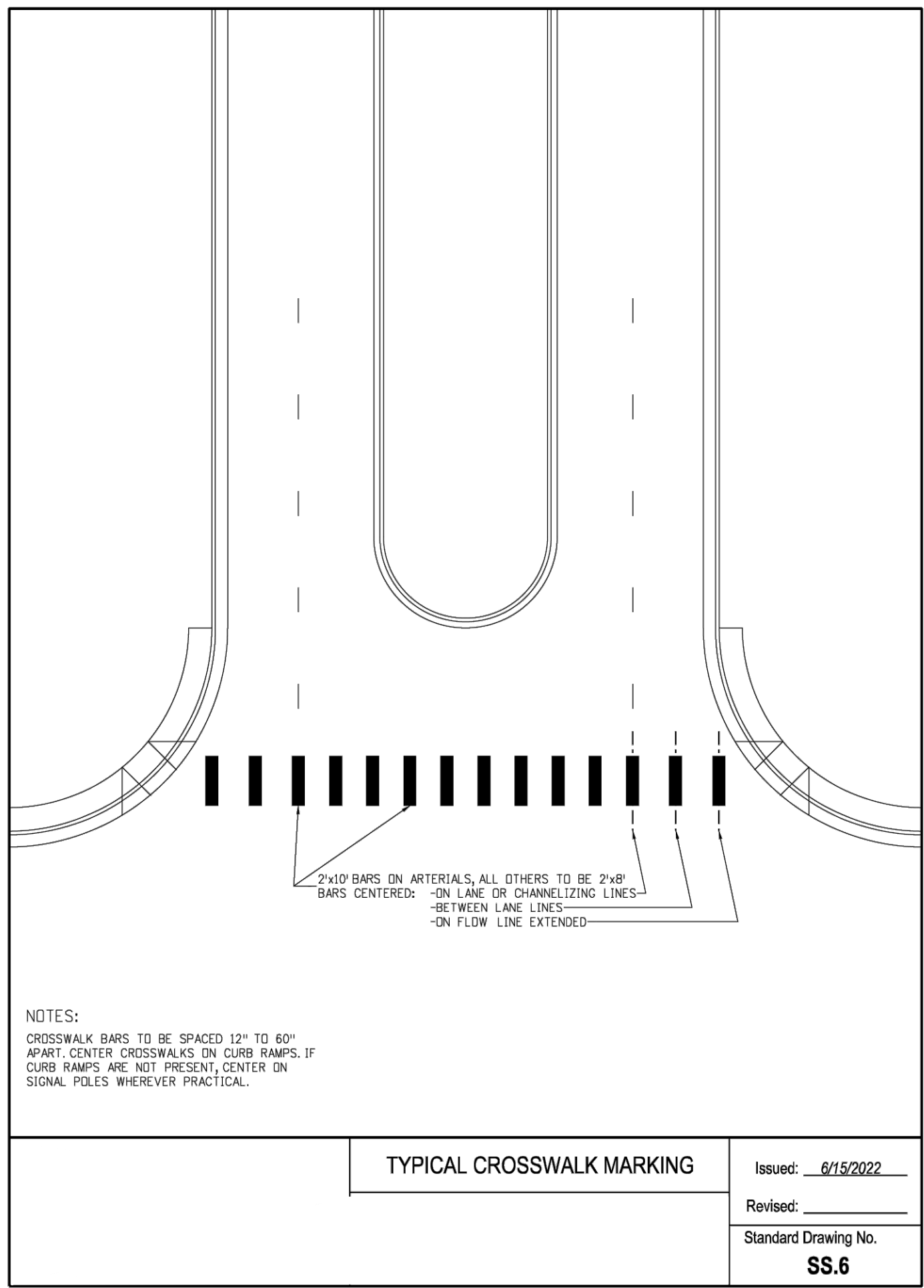
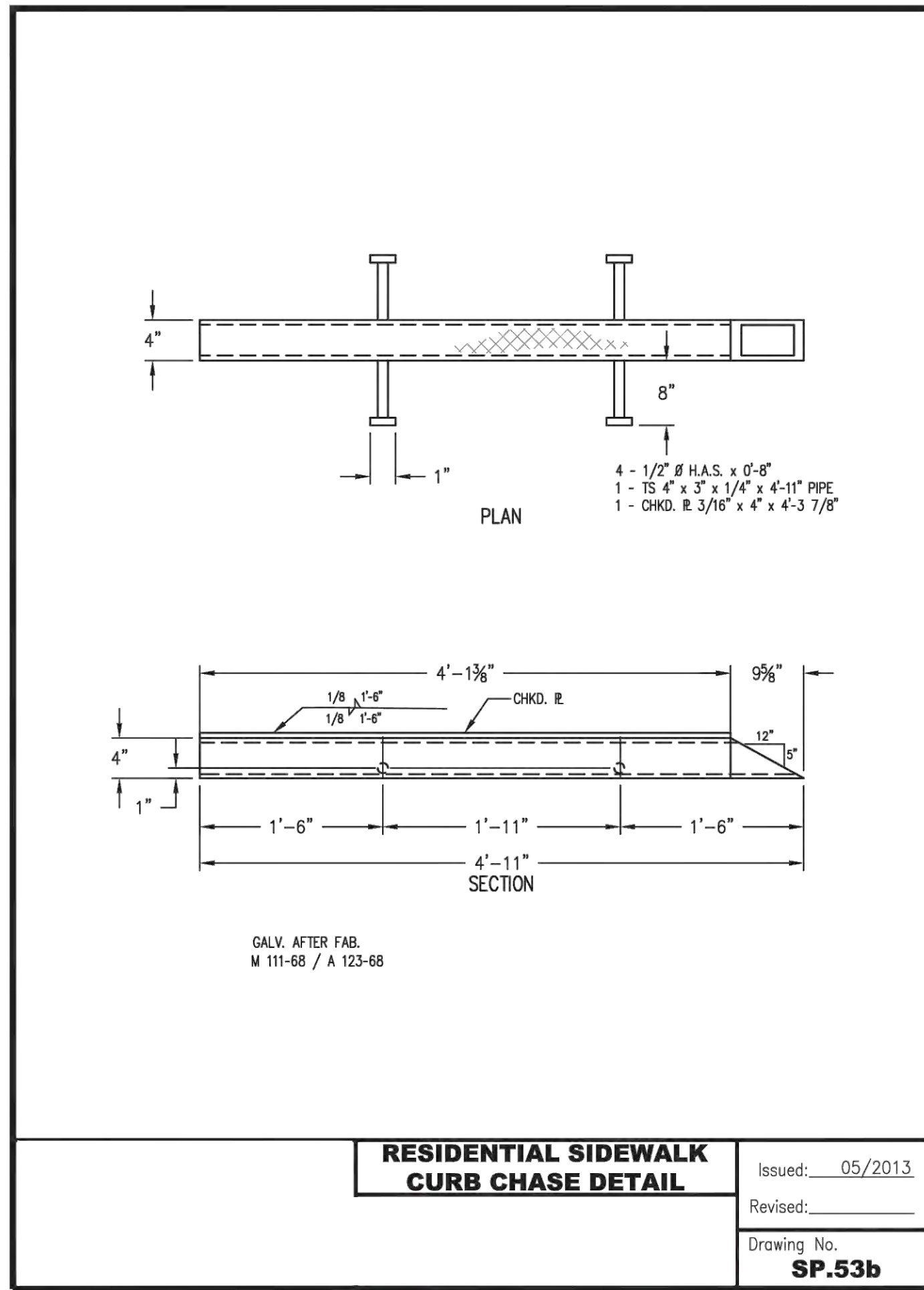
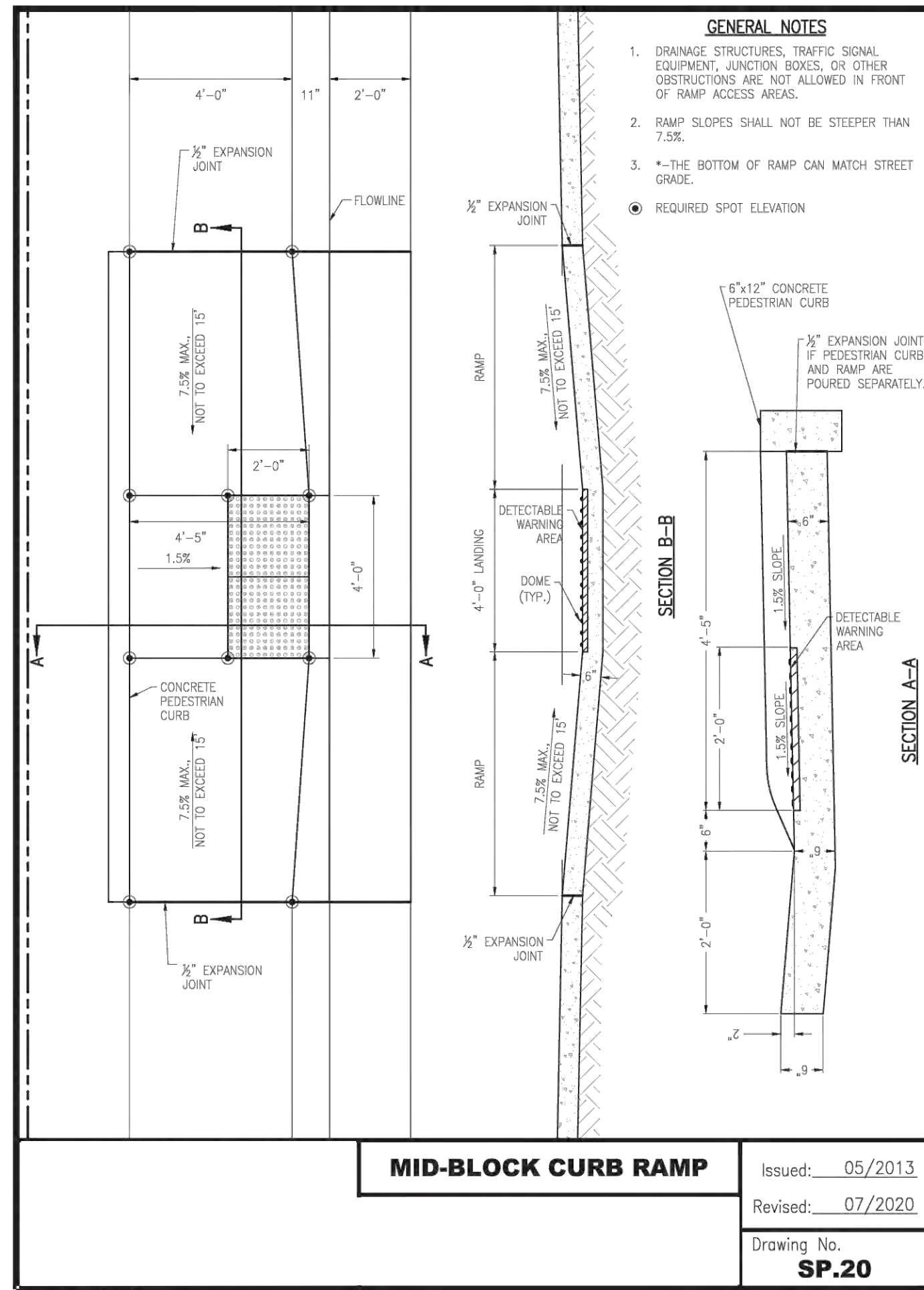
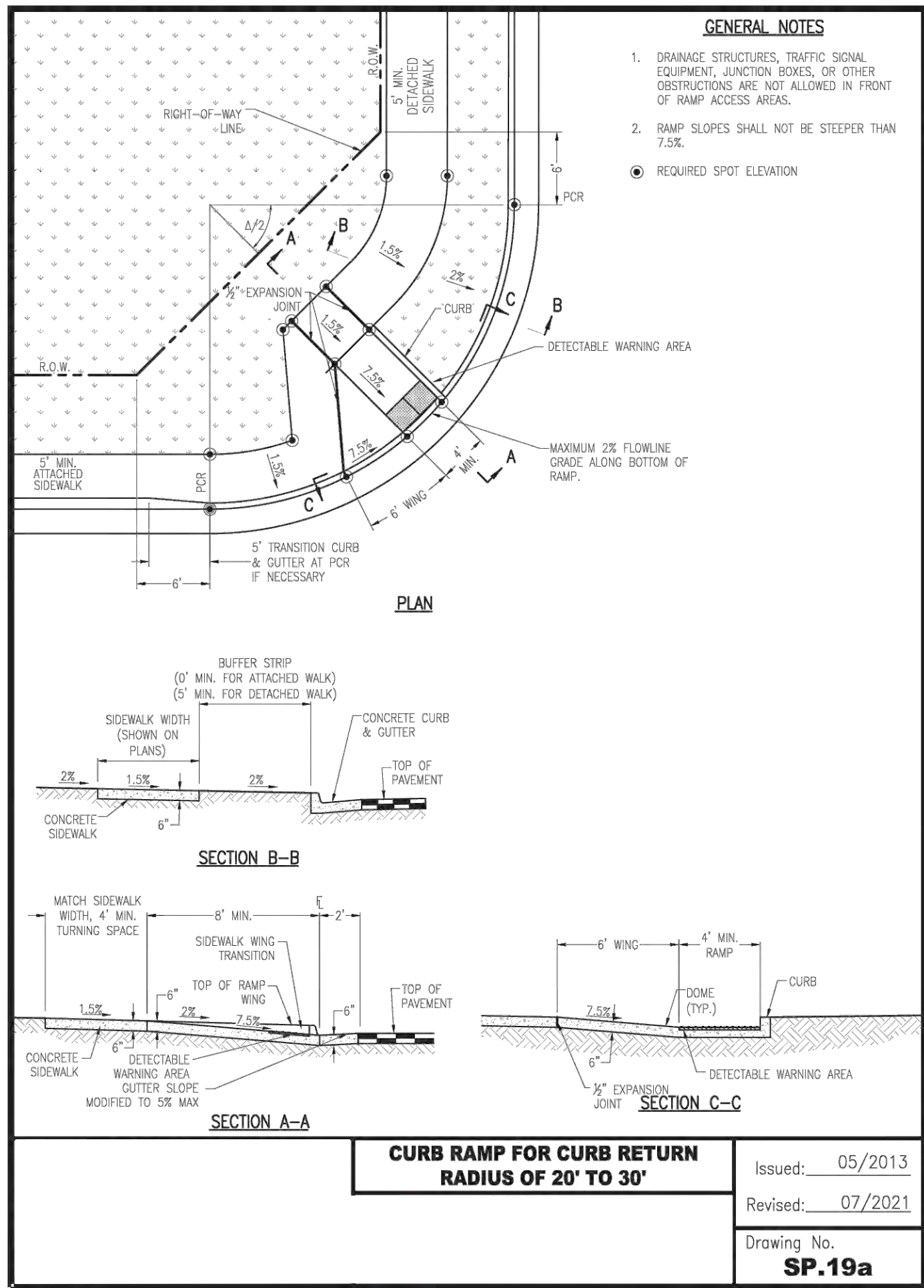


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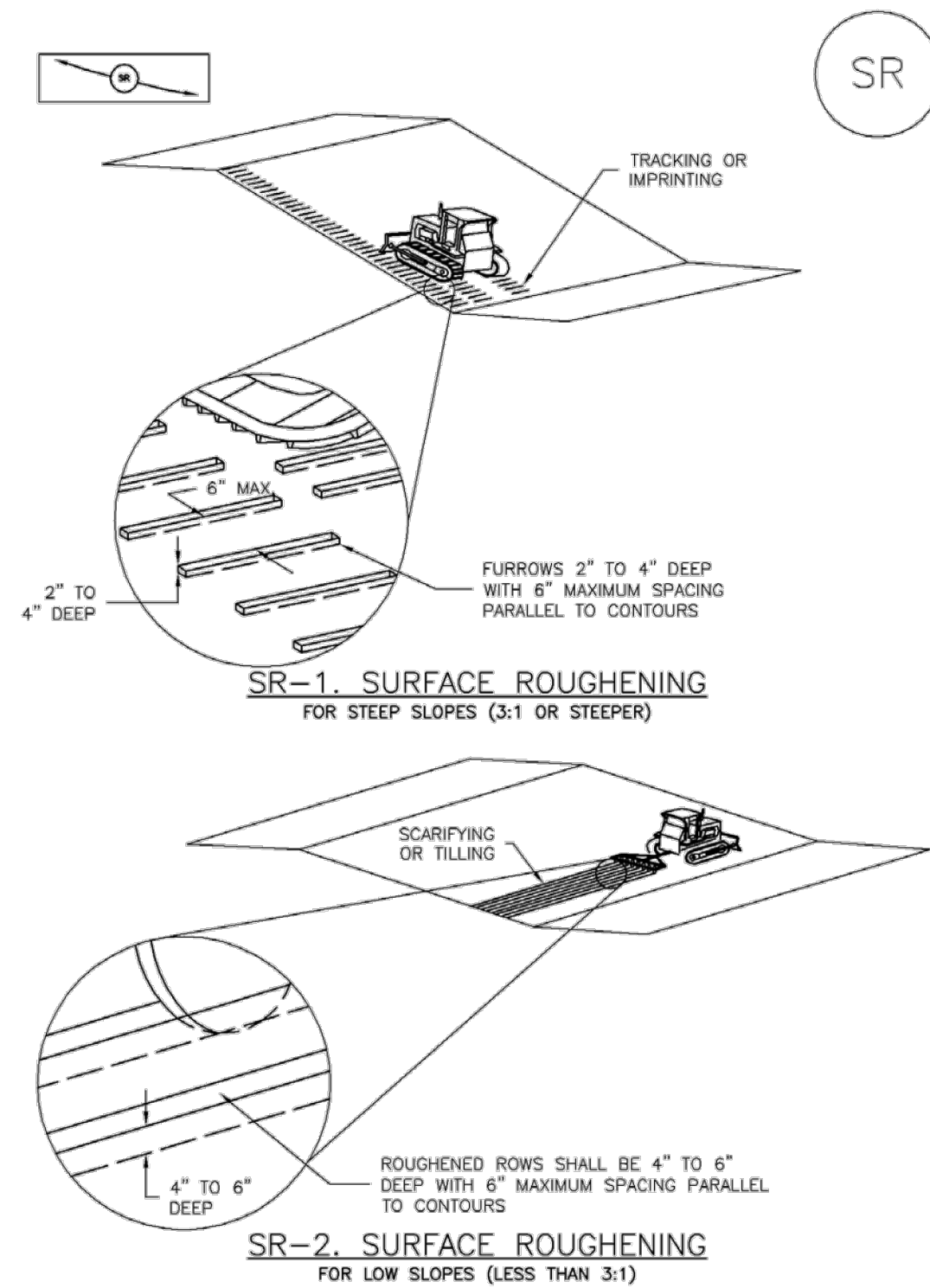


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Computer File Information		Sheet Revisions		Colorado Department of Transportation 2829 West Howard Place CDOT HQ, 3rd Floor Denver, CO 80204 Phone: 303-757-9021 FAX: 303-757-9868 Project Development Branch JBK	CURB RAMPS	STANDARD PLAN NO.	
Creation Date: 07/31/19	CEX	Date:	Comments:			M-608-1	
Designer Initials: JBK	CEX					Standard Sheet No. 4 of 10	
Last Modification Date: 07/31/19	CEX					Project Sheet Number:	
Detailer Initials: LTA	CEX						
CAD Ver: MicroStation V8 Scale: Not to Scale Units: English	CEX						

## Surface Roughening (SR) EC-1



#	REVISION DESCRIPTION	DATE	BY
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MAIN STREET OFF-STREET PARKING LOT  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
DETAILS



GENERAL NOTES

1. DIMENSIONS OF END SECTIONS MAY VARY SLIGHTLY FROM THOSE SHOWN ON THE TABLES DUE TO DIFFERENT MANUFACTURER'S WRITINGS.

2. CONCRETE END SECTIONS ARE TO BE FURNISHED WITH TONGUE OR GROOVE AS REQUIRED.

3. DESIGN LENGTH OF CULVERT OR SIDE DRAIN IS BASED ON LENGTH OF END SECTION SHOWN IN TABLE. ANY ADDITIONAL PIPE REQUIRED TO PROVIDE THE DESIGN LENGTH SHALL BE FURNISHED BY AND AT THE EXPENSE OF THE CONTRACTOR.

4. INSIDE CONFIGURATION AND JOINT OF CONCRETE END SECTION END PIPE SHALL MATCH.

5. END SECTIONS FOR CMP ARCH CULVERT SHALL MATCH THE DIMENSIONS OF THE CULVERT SHOWN ON THE PLANS.

6. GALVANIZED TOE PLATE AS SHOWN, WILL BE REQUIRED ON END SECTIONS FOR CORRUGATED STEEL PIPE AND SHALL BE THE SAME THICKNESS AS END SECTIONS. TOE PLATE SHALL BE FIELD-BOLTED TO END SECTION WITH 3/4" GALVANIZED BOLTS, NUTS AND WASHERS.

7. GALVANIZED STEEL SHALL BE IN CONFORMANCE WITH AISC1510 1111, W 218 OR W 232.

8. FOR TYPE SD END SECTIONS, BARS SHALL BE FABRICATED FROM WIP-1 GALVANIZED STEEL, SCHEDULE 40 PIPE WHICH SHALL BE IN CONFORMANCE WITH ASTM A 53.

9. FOR A TYPE SD END SECTION, THE INSTALLATION OF ALTERNATIVE 1 OR ALTERNATIVE 2 END SECTION SHALL BE THE CONTRACTOR'S OPTION.

10. CONCRETE PIPE JOINT FASTENERS SHALL BE INSTALLED AT THE FLARED END SECTION AND LAST TWO PIPE JOINTS OF ALL RCP OUTFALLS.

11. CONNECTIONS OF METAL END SECTIONS TO PLASTIC PIPE SHALL BE APPROVED BY THE ENGINEER.

12. CLASS D CONCRETE TOE WALLS ARE REQUIRED AT THE ENDS OF ALL FLARED END SECTIONS.

REINFORCED CONCRETE PIPE

PIPE Inner Diameter (inches)	Wall Thickness (inches)	A (inches)	C (inches)	L (inches)	E (inches)
18	2 1/2	3	48	73	35
24	3	59	30	73 1/2	48
30	3 1/2	12	19 3/4	73 3/4	60
36	4	11	14 3/4	87 3/4	72
42	4 1/2	21	35	88	78
48	5	24	26	98	84
54	5 1/2	27	35	100	90
60	6	30	39	99	96
66	6 1/2	37	21	99	102
72	7	34	21	99	108

PLAN

END VIEW

SECTION X-X  
END SECTION FOR REINFORCED CONCRETE CIRCULAR PIPE

3/4" INCH GALVANIZED ANCHOR BOLTS,  
NUTS AND WASHERS, MILD STEEL, ASTM A 307.  
ROD LUG SHALL BE COATED WITH COAL-TAR,  
EPOXY PAINT OR APPROVED EQUAL.

PIPE DIAMETER (inches)	F
18 - 30	5
36 - 42	6
48 - 60	7
72 - 84	8

CONCRETE JOINT FASTENER  
(TWO PER JOINT)

CONCRETE OR METAL END  
SECTIONS

Issued: 05/2013

Revised: 09/2017

Drawing No.  
SP.52a

Hydraulic Structures

Chapter 9

PLAN

PROFILE

PIPE SIZE OR BOX HEIGHT

D	W*	L
18" - 24"	1'-0"	4'
30" - 36"	1'-6"	6'
42" - 48"	2'-0"	7'
54" - 60"	2'-6"	8'
66" - 72"	3'-0"	9'

Figure 9-37. Low tailwater riprap basin

PIPE ENCASEMENT DETAIL

NOTE:

1. CONCRETE SHALL NOT BE LEANER THAN 1 CEMENT; 2-1/2 SAND;  
5 STONE AND SHALL NOT HAVE LESS THAN 3,000 PSI  
COMPRESSIVE STRENGTH AT 28 DAYS.

2. PLACE CONCRETE AGAINST EITHER SOLID FORMWORK OR  
UNDISTURBED SOIL.

3. USE GR. 40 REINFORCING BARS.

4. USE ONLY IF SANITARY SEWER IS BELOW THE WATER LINE.  
DO NOT PLACE OR SPILL CONCRETE ON WATER LINE.

Pipe Encasement Detail

THESE DETAILS ARE PROVIDED FOR STANDARDIZATION PURPOSES ONLY. THIS DETAIL REPRESENTS MINIMUM  
DESIGN STANDARDS WHICH MAY REQUIRE UPGRADING FOR SPECIFIC APPLICATIONS. REFER TO TOWN OF FRASER  
MINIMUM DESIGN CRITERIA AND CONSTRUCTION STANDARDS FOR SPECIFIC MATERIAL AND INSTALLATION  
REQUIREMENTS.

terraccina  
Ed design  
10200 E. Grand Ave. A-314  
Denver, CO 80231  
PH: 303.652.8607

#	REVISION DESCRIPTION	DATE	BY
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Know what's below.  
Call before you dig.  
811

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Temporary and Permanent Seeding (TS/PS) EC-2

Description

Temporary seeding can be used to stabilize disturbed areas that will be inactive for an extended period. Permanent seeding should be used to stabilize areas at final grade that will not be otherwise stabilized. Effective seeding includes preparing a seedbed, selecting an appropriate seed mixture, using proper planting techniques, and protecting the seeded area with mulch, geotextiles, or other appropriate measures.

Appropriate Uses

When the soil surface is disturbed and will remain inactive for an extended period (typically determined by local government requirements), proactive stabilization measures, including planting a temporary seed mix, should be implemented. If the inactive period is short-lived (on the order of two weeks), techniques such as surface roughening may be appropriate. For longer periods of inactivity of up to one year, temporary seeding and mulching can provide effective erosion control. Permanent seeding should be used on finished areas that have not been otherwise stabilized.

The USDCM Volume 2 *Revegetation* Chapter contains suggested annual grains and native seed mixes to use for temporary seeding. Alternatively, local governments may have their own seed mixes and timelines for seeding. Check jurisdictional requirements for seeding and temporary stabilization.

Design and Installation

Effective seeding requires proper seedbed preparation, selecting an appropriate seed mixture, using appropriate seeding equipment to ensure proper coverage and density, and protecting seeded areas with mulch or fabric until plants are established.

The USDCM Volume 2 *Revegetation* Chapter contains detailed seed mixes, soil preparation practices, and seeding and mulching recommendations that should be referenced to supplement this Fact Sheet.

Drill seeding is the preferred seeding method. Hydroseeding is not recommended except in areas where steep slopes prevent use of drill seeding equipment, and even in these instances it is preferable to hand seed and mulch. Some jurisdictions do not allow hydroseeding or hydromulching.

Seedbed Preparation

Prior to seeding, ensure that areas to be revegetated have soil conditions capable of supporting vegetation. Overlot grading can result in loss of topsoil and compaction, resulting in poor quality subsoils at the ground surface that



Photograph TS/PS-1. Equipment used to drill seed. Photo courtesy of Douglas County.

Temporary and Permanent Seeding	
Functions	
Erosion Control	Yes
Sediment Control	No
Site/Material Management	No

January 2021	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	TS/PS-1
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Temporary and Permanent Seeding (TS/PS) EC-2

Table TS/PS-2. Seeding Dates for Annual and Perennial Grasses

Seeding Dates	Annual Grasses (Numbers in table reference species in Table TS/PS-1)		Perennial Grasses	
	Warm	Cool	Warm	Cool
January 1–March 15			✓	✓
March 16–April 30		1,2,3	✓	✓
May 1–May 15			✓	
May 16–June 30	5			
July 1–July 15	5			
July 16–August 31				
September 1–September 30		6, 7, 8, 9		
October 1–December 31			✓	✓

Mulch

Cover seeded areas with mulch or an appropriate rolled erosion control product to promote establishment of vegetation. Anchor mulch by crimping, netting or use of a non-toxic tackifier. See the USDCM Volume 2 *Revegetation* Chapter and Volume 3 Mulching BMP Fact Sheet (EC-04) for additional guidance.

Maintenance and Removal

Monitor and observe seeded areas to identify areas of poor growth or areas that fail to germinate. Reseed and mulch these areas, as needed.

If a temporary annual seed was planted, the area should be reseeded with the desired perennial mix when there will be no further work in the area. To minimize competition between annual and perennial species, the annual mix needs time to mature and die before seeding the perennial mix. To increase success of the perennial mix, it should be seeded during the appropriate seeding dates the second year after the temporary annual mix was seeded. Alternatively, if this timeline is not feasible, the annual mix seed heads should be removed and then the area seeded with the perennial mix.

An area that has been permanently seeded should have a good stand of vegetation within one growing season if irrigated and within three growing seasons without irrigation in Colorado. Reseed portions of the site that fail to germinate or remain bare after the first growing season.

Seeded areas may require irrigation, particularly during extended dry periods. Targeted weed control may also be necessary.

Protect seeded areas from construction equipment and vehicle access.

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EC-2 Temporary and Permanent Seeding (TS/PS)

have low nutrient value, little organic matter content, few soil microorganisms, rooting restrictions, and conditions less conducive to infiltration of precipitation. As a result, it is typically necessary to provide stockpiled topsoil, compost, or other soil amendments and rototill them into the soil to a depth of 6 inches or more.

Topsoil should be salvaged during grading operations for use and spread on areas to be revegetated later. Topsoil should be viewed as an important resource to be utilized for vegetation establishment, due to its water-holding capacity, structure, texture, organic matter content, biological activity, and nutrient content. The rooting depth of most native grasses in the semi-arid Denver metropolitan area is 6 to 18 inches. If present, at a minimum of the upper 6 inches of topsoil should be stripped, stockpiled, and ultimately respread across areas that will be revegetated.

Where topsoil is not available, subsoils should be amended to provide an appropriate plant-growth medium. Organic matter, such as well digested compost, can be added to improve soil characteristics conducive to plant growth. Other treatments can be used to adjust soil pH conditions when needed. Soil testing, which is typically inexpensive, should be completed to determine and optimize the types and amounts of amendments that are required.

If the disturbed ground surface is compacted, rip or rototill the upper 12 inches of the surface prior to placing topsoil. If adding compost to the existing soil surface, rototilling is necessary. Surface roughening will assist in placing a stable topsoil layer on steeper slopes, and allow infiltration and root penetration to greater depth. Topsoil should not be placed when either the salvaged topsoil or receiving ground are frozen or snow covered.

Prior to seeding, the soil surface should be rough and the seedbed should be firm, but neither too loose nor compacted. The upper layer of soil should be in a condition suitable for seeding at the proper depth and conducive to plant growth. Seed-to-soil contact is the key to good germination.

Refer to MHFD’s Topsoil Management Guidance for detailed information on topsoil assessment, design, and construction.

Temporary Vegetation

To provide temporary vegetative cover on disturbed areas which will not be paved, built upon, or fully landscaped or worked for an extended period (typically 30 days or more), plant an annual grass appropriate for the time of planting and mulch the planted areas. Temporary grain seed mixes suitable for the Denver metropolitan area are listed in Table TS/PS-1. Native temporary seed mixes are provided in USDCM Volume 2, Chapter 13, Appendix A. These are to be considered only as general recommendations when specific design guidance for a particular site is not available. Local governments typically specify seed mixes appropriate for their jurisdiction.

Permanent Revegetation

To provide vegetative cover on disturbed areas that have reached final grade, a perennial grass mix should be established. Permanent seeding should be performed promptly (typically within 14 days) after reaching final grade. Each site will have different characteristics and a landscape professional or the local jurisdiction should be contacted to determine the most suitable seed mix for a specific site. In lieu of a specific recommendation, one of the perennial grass mixes appropriate for site conditions and growth season listed in seed mix tables in the USDCM Volume 2 *Revegetation* Chapter can be used. The pure live seed (PLS) rates of application recommended in these tables are considered to be absolute minimum rates for seed applied using proper drill-seeding equipment. These are to be considered only as general

TS/PS-2	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	January 2021
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Mulching (MU) EC-4

Description

Mulching consists of evenly applying straw, hay, shredded wood mulch, rock, bark or compost to disturbed soils and securing the mulch by crimping, tackifiers, netting or other measures. Mulching helps reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff. Although often applied in conjunction with temporary or permanent seeding, it can also be used for temporary stabilization of areas that cannot be reseeded due to seasonal constraints.

Mulch can be applied either using standard mechanical dry application methods or using hydromulching equipment that hydraulically applies a slurry of water, wood fiber mulch, and often a tackifier.

Appropriate Uses

Use mulch in conjunction with seeding to help protect the seedbed and stabilize the soil. Mulch can also be used as a temporary cover on low to mild slopes to help temporarily stabilize disturbed areas where growing season constraints prevent effective reseeded. Disturbed areas should be properly mulched and tacked, or seeded, mulched and tacked promptly after final grade is reached (typically within no longer than 14 days) on portions of the site not otherwise permanently stabilized.

Standard dry mulching is encouraged in most jurisdictions; however, hydromulching may not be allowed in certain jurisdictions or may not be allowed near waterways.

Do not apply mulch during windy conditions.

Design and Installation

Prior to mulching, surface-roughen areas by rolling with a crimping or punching type roller or by track walking. Track walking should only be used where other methods are impractical because track walking with heavy equipment typically compacts the soil.

A variety of mulches can be used effectively at construction sites. Consider the following:

Mulch	
Functions	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material Management	No

June 2012	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	MU-1
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Photograph MU-1. An area that was recently seeded, mulched, and crimped.

Temporary and Permanent Seeding (TS/PS) EC-2

recommendations when specific design guidance for a particular site is not available. Local governments typically specify seed mixes appropriate for their jurisdiction.

If desired for wildlife habitat or landscape diversity, shrubs such as rubber rabbithrush (*Chrysothamnus nanceus*), fourwing saltbush (*Atriplex canescens*) and skunkbrush sumac (*Rhus trilobata*) could be added to the upland seed mixes at 0.25, 0.5 and 1 pound PLS/acre, respectively. In riparian zones, planting root stock of such species as American plum (*Prunus americana*), woods rose (*Rosa woodsii*), plains cottonwood (*Populus sargentii*), and willow (*Salix spp.*) may be considered. On non-topsoiled upland sites, a legume such as Ladak alfalfa at 1 pound PLS/acre can be included as a source of nitrogen for perennial grasses.

Timing of seeding is an important aspect of the revegetation process. For upland and riparian areas on the Colorado Front Range, the suitable timing for seeding is from October through May. The most favorable time to plant non-irrigated areas is during the fall, so that seed can take advantage of winter and spring moisture. Seed should not be planted if the soil is frozen, snow covered, or wet.

Seeding dates for the highest success probability of perennial species along the Front Range are generally in the spring from April through early May and in the fall after the first of September until the ground freezes. If the area is irrigated, seeding may occur in summer months, as well. See Table TS/PS-2 for appropriate seeding dates.

January 2021	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	TS/PS-3
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EC-4 Mulching (MU)

- Clean, weed-free and seed-free cereal grain straw should be applied evenly at a rate of 2 tons per acre and must be tacked or fastened by a method suitable for the condition of the site. Straw mulch must be anchored (and not merely placed) on the surface. This can be accomplished mechanically by crimping or with the aid of tackifiers or nets. Anchoring with a crimping implement is preferred, and is the recommended method for areas flatter than 3:1. Mechanical crimpers must be capable of tucking the long mulch fibers into the soil to a depth of 3 inches without cutting them. An agricultural disk, while not an ideal substitute, may work if the disk blades are dull or blunted and set vertically; however, the frame may have to be weighted to afford proper soil penetration.
- Grass hay may be used in place of straw; however, because hay is comprised of the entire plant including seed, mulching with hay may seed the site with non-native grass species which might in turn out-compete the native seed. Alternatively, native species of grass hay may be purchased, but can be difficult to find and are more expensive than straw. Purchasing and utilizing a certified weed-free straw is an easier and less costly mulching method. When using grass hay, follow the same guidelines as for straw (provided above).
- On small areas sheltered from the wind and heavy runoff, spraying a tackifier on the mulch is satisfactory for holding it in place. For steep slopes and special situations where greater control is needed, erosion control blankets anchored with stakes should be used instead of mulch.
- Hydraulic mulching consists of wood cellulose fibers mixed with water and a tackifying agent and should be applied at a rate of no less than 1,500 pounds per acre (1,425 lbs of fibers mixed with at least 75 lbs of tackifier) with a hydraulic mulcher. For steeper slopes, up to 2000 pounds per acre may be required for effective hydroseeding. Hydromulch typically requires up to 24 hours to dry; therefore, it should not be applied immediately prior to inclement weather. Application to roads, waterways and existing vegetation should be avoided.
- Some tackifiers or binders may be used to anchor mulch. Check with the local jurisdiction for allowed tackifiers. Manufacturer’s recommendations should be followed at all times. (See the Soil Binder BMP for more information on general types of tackifiers.)
- Rock can also be used as mulch. It provides protection of exposed soils to wind and water erosion and allows infiltration of precipitation. An aggregate base course can be spread on disturbed areas for temporary or permanent stabilization. The rock mulch layer should be thick enough to provide full coverage of exposed soil on the area it is applied.

Maintenance and Removal

After mulching, the bare ground surface should not be more than 10 percent exposed. Reapply mulch, as needed, to cover bare areas.

MU-2	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	June 2012
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EC-2 Temporary and Permanent Seeding (TS/PS)

Table TS/PS-1. Minimum Drill Seeding Rates for Various Temporary Annual Grasses

Species* (Common name)	Growth Season <sup>b</sup>	Pounds of Pure Live Seed (PLS)/acre <sup>c</sup>	Planting Depth (inches)
1. Oats	Cool	35 - 50	1 - 2
2. Spring wheat	Cool	25 - 35	1 - 2
3. Spring barley	Cool	25 - 35	1 - 2
4. Annual ryegrass	Cool	10 - 15	½
5. Millet	Warm	3 - 15	½ - ¾
6. Winter wheat	Cool	20-35	1 - 2
7. Winter barley	Cool	20-35	1 - 2
8. Winter rye	Cool	20-35	1 - 2
9. Triticale	Cool	25-40	1 - 2

<sup>a</sup> Successful seeding of annual grass resulting in adequate plant growth will usually produce enough dead-plant residue to provide protection from wind and water erosion for an additional year. This assumes that the cover is not disturbed or mowed closer than 8 inches.

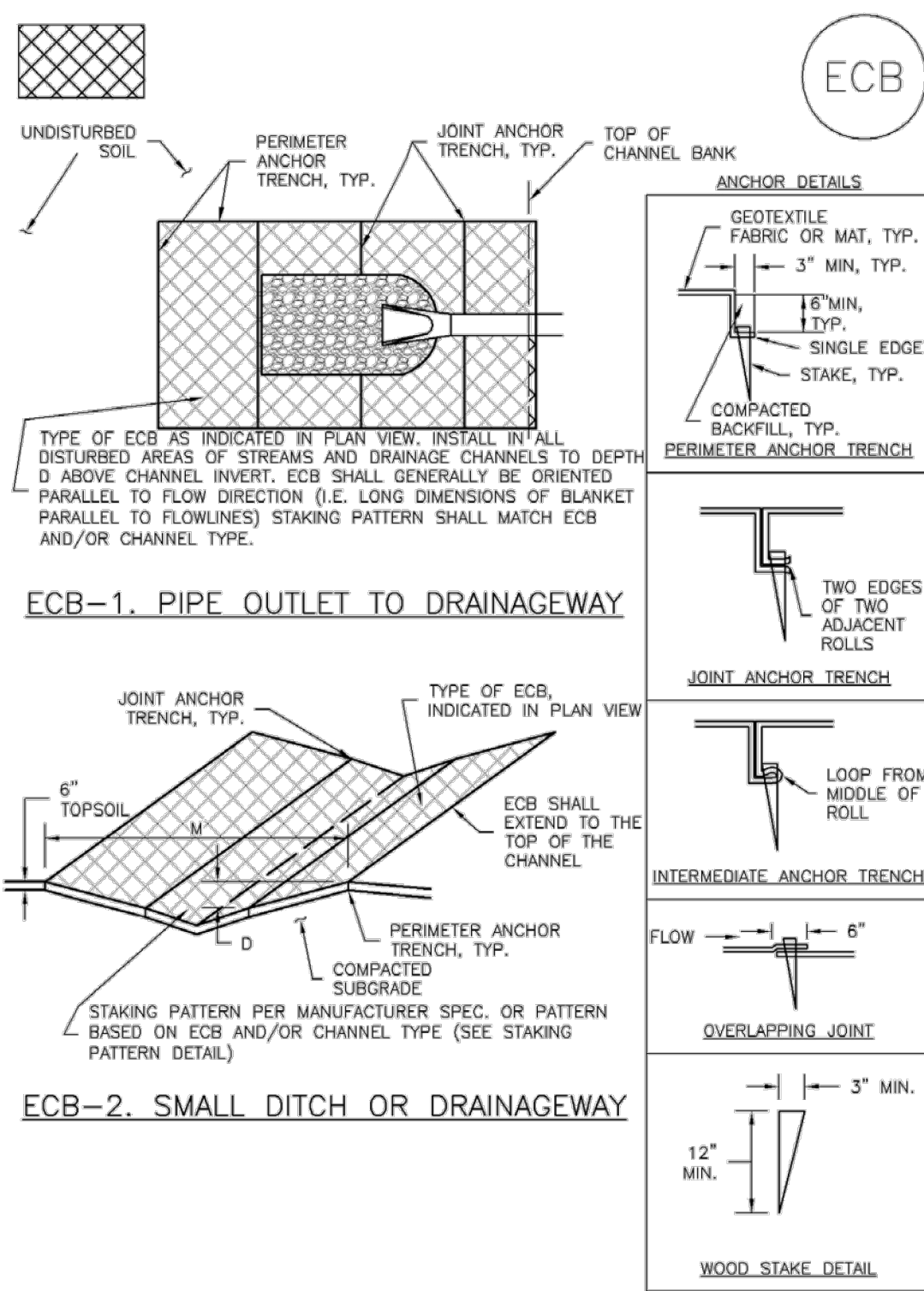
Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1 or where access limitations exist. When hydraulic seeding is used, hydraulic mulching should be applied as a separate operation, when practical, to prevent the seeds from being encapsulated in the mulch.

<sup>b</sup> See Table TS/PS-2 for seeding dates. Irrigation, if consistently applied, may extend the use of cool season species during the summer months.

<sup>c</sup> Seeding rates should be doubled if seed is broadcast, or increased by 50 percent if done using a Brillion Drill or by hydraulic seeding.

TS/PS-4	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	January 2021
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EC-6 Rolled Erosion Control Products (RECP)



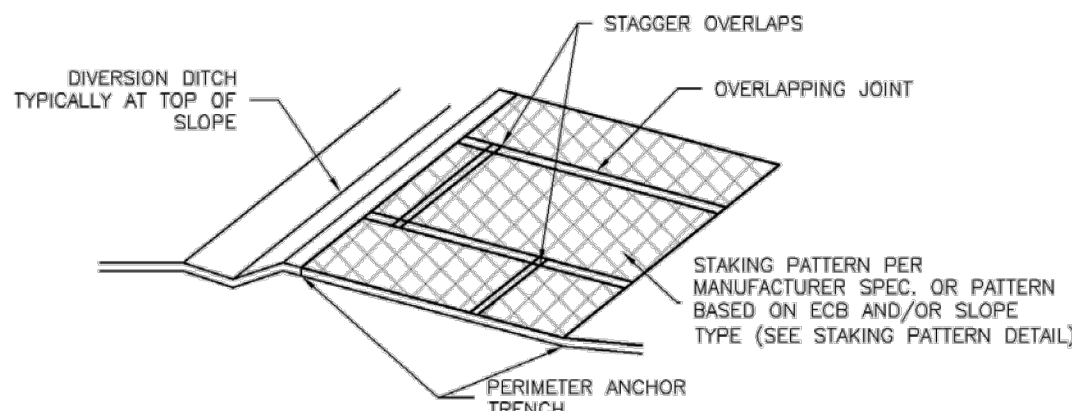
RECP-6	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	November 2010
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#	REVISION DESCRIPTION	DATE	BY
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2	2ND SUBMITTAL	01/17/2025	MM

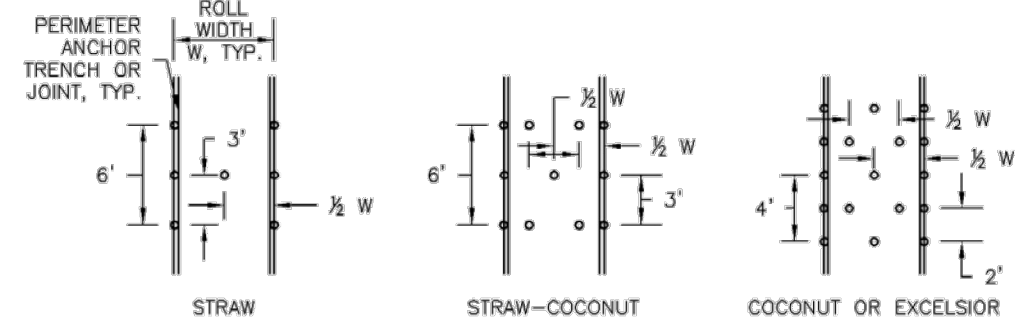
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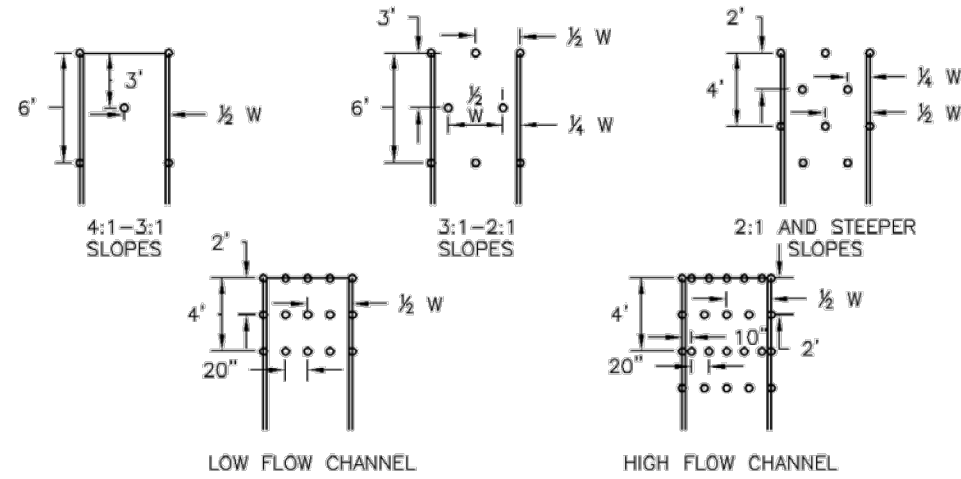
Rolled Erosion Control Products (RECP) EC-6



ECB-3. OUTSIDE OF DRAINAGEWAY



STAKING PATTERNS BY ECB TYPE



STAKING PATTERNS BY SLOPE OR CHANNEL TYPE

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EC-6 Rolled Erosion Control Products (RECP)

EROSION CONTROL BLANKET INSTALLATION NOTES

- SEE PLAN VIEW FOR:
  - LOCATION OF ECB.
  - TYPE OF ECB (STRAW, STRAW-COCONUT, COCONUT, OR EXCELSIOR).
  - AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.
- 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPs, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.
- IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
- PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
- JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.
- INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.
- OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.
- MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-1.
- ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBs SHALL BE RESEED AND MULCHED.
- DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

TABLE ECB-1. ECB MATERIAL SPECIFICATIONS				
TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING**
STRAW*	-	100%	-	DOUBLE/NATURAL
STRAW-COCONUT	30% MIN	70% MAX	-	DOUBLE/NATURAL
COCONUT	100%	-	-	DOUBLE/NATURAL
EXCELSIOR	-	-	100%	DOUBLE/NATURAL

\*STRAW ECBs MAY ONLY BE USED OUTSIDE OF STREAMS AND DRAINAGE CHANNELS.  
\*\*ALTERNATE NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS

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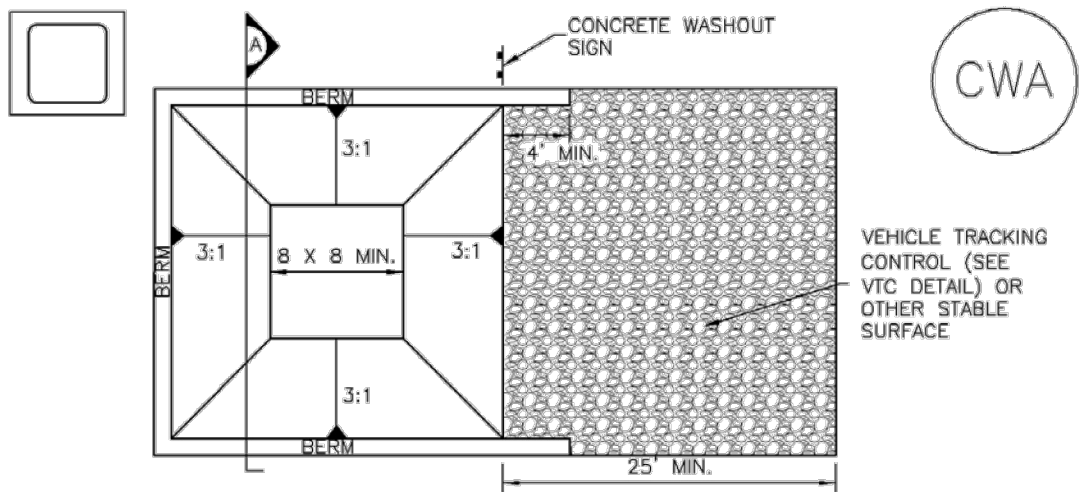
Rolled Erosion Control Products (RECP) EC-6

EROSION CONTROL BLANKET MAINTENANCE NOTES

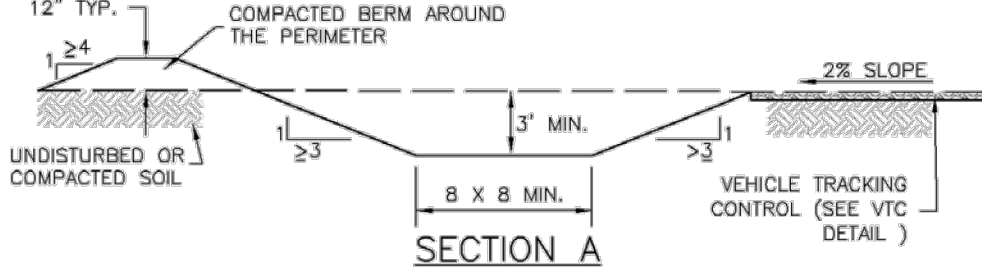
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  - ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.
  - ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

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Concrete Washout Area (CWA) MM-1



CONCRETE WASHOUT AREA PLAN



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

- SEE PLAN VIEW FOR:
  - CWA INSTALLATION LOCATION.
- DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (18 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
- THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
- BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
- VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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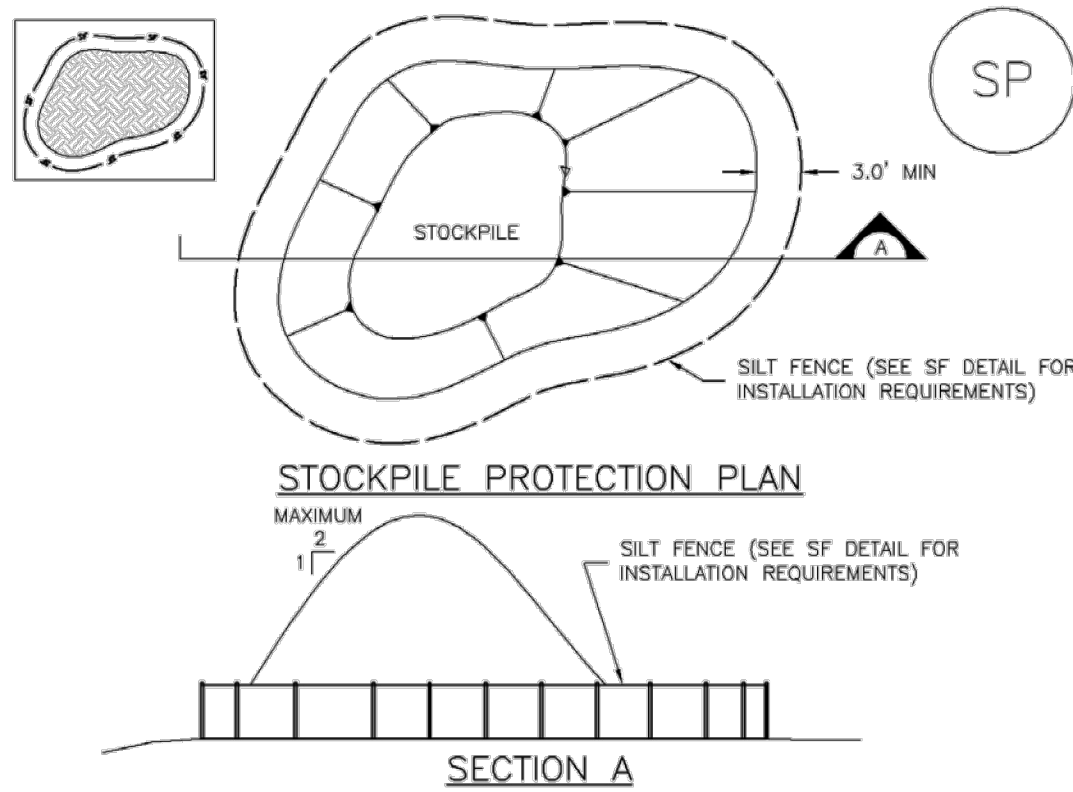
MM-1 Concrete Washout Area (CWA)

CWA MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  - THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
  - CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
  - THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
  - WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- (DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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Stockpile Management (SP) MM-2



STOCKPILE PROTECTION PLAN

SECTION A

SP-1. STOCKPILE PROTECTION

STOCKPILE PROTECTION INSTALLATION NOTES

- SEE PLAN VIEW FOR:
  - LOCATION OF STOCKPILES.
  - TYPE OF STOCKPILE PROTECTION.
- INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PEROUS OR IMPEROUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.
- STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS).
- FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

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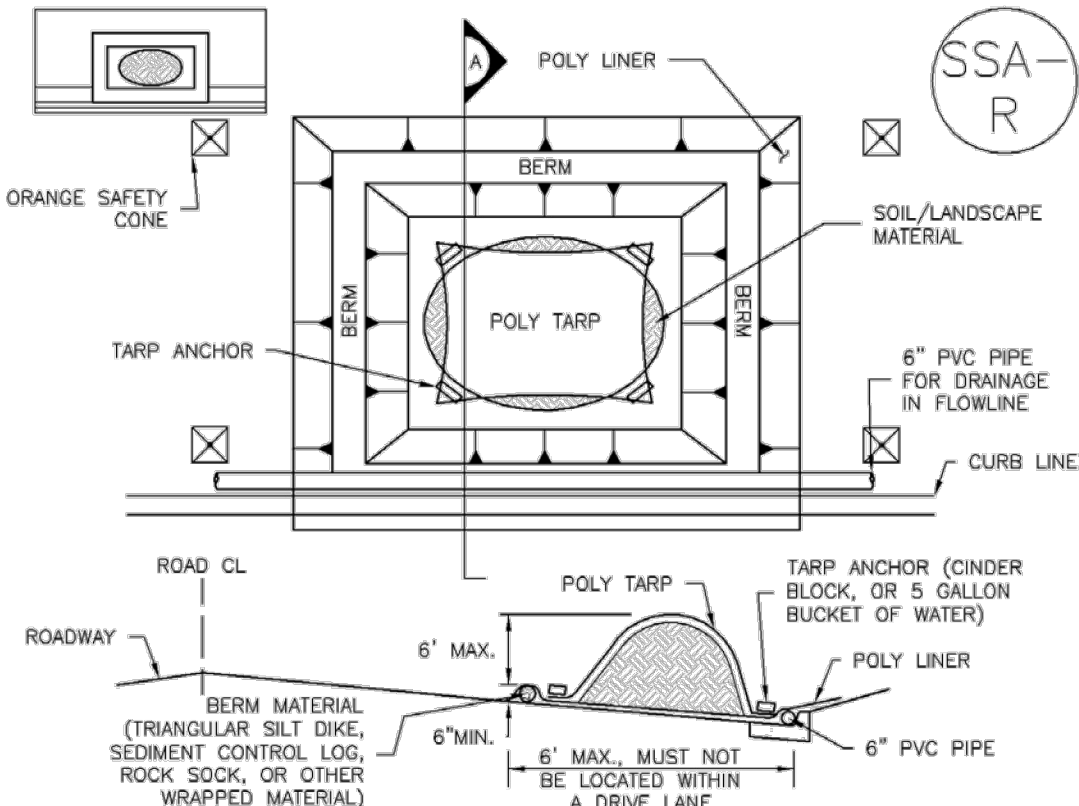
MM-2 Stockpile Management (SM)

STOCKPILE PROTECTION MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- STOCKPILE PROTECTION MAINTENANCE NOTES
- IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
  - STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.
- (DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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Stockpile Management (SP) MM-2



SP-2. MATERIALS STAGING IN ROADWAY

MATERIALS STAGING IN ROADWAYS INSTALLATION NOTES

- SEE PLAN VIEW FOR:
  - LOCATION OF MATERIAL STAGING AREA(S).
  - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
- FEATURE MUST BE INSTALLED PRIOR TO EXCAVATION, EARTHWORK OR DELIVERY OF MATERIALS.
- MATERIALS MUST BE STATIONED ON THE POLY LINER. ANY INCIDENTAL MATERIALS DEPOSITED ON PAVED SECTION OR ALONG CURB LINE MUST BE CLEANED UP PROMPTLY.
- POLY LINER AND TARP COVER SHOULD BE OF SIGNIFICANT THICKNESS TO PREVENT DAMAGE OR LOSS OF INTEGRITY.
- SAND BAGS MAY BE SUBSTITUTED TO ANCHOR THE COVER TARP OR PROVIDE BERMING UNDER THE BASE LINER.
- FEATURE IS NOT INTENDED FOR USE WITH WET MATERIAL THAT WILL BE DRAINING AND/OR SPREADING OUT ON THE POLY LINER OR FOR DEMOLITION MATERIALS.
- THIS FEATURE CAN BE USED FOR:
  - UTILITY REPAIRS.
  - WHEN OTHER STAGING LOCATIONS AND OPTIONS ARE LIMITED.
  - OTHER LIMITED APPLICATION AND SHORT DURATION STAGING.

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1	1ST SUBMITTAL	11/01/2024	MM
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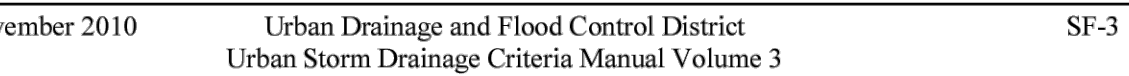
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MAIN STREET OFF-STREET PARKING LOT  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
DETAILS



## Sediment Control Log (SCL)

(DETAILS ADAPTED FROM AURORA, COLORADO)



## Sediment Control Log (SCL) SC-2

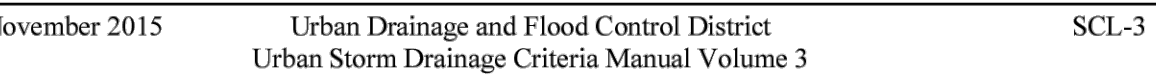


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## Control Log (SCL)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS.  
CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN



### SC-3 Straw Bale Barrier (SBB)



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## Straw Bale Barrier (SBB)

SC-3

### STRAW BALE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
  - LOCATION(S) OF STRAW BALES.
2. STRAW BALES SHALL CONSIST OF CERTIFIED WEED FREE STRAW OR HAY. LOCAL JURISDICTIONS MAY REQUIRE PROOF THAT BALES ARE WEED FREE.
3. STRAW BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF STRAW OR HAY AND WEIGH NOT LESS THAN 35 POUNDS.
4. WHEN STRAW BALES ARE USED IN SERIES AS A BARRIER, THE END OF EACH BALE SHALL BE TIGHTLY ABUTTING ONE ANOTHER.
5. STRAW BALE DIMENSIONS SHALL BE APPROXIMATELY 36"x18"x18".
6. A UNIFORM ANCHOR TRENCH SHALL BE EXCAVATED TO A DEPTH OF 4". STRAW BALES SHALL BE PLACED SO THAT BINDING TWINE IS ENCOMPASSING THE VERTICAL SIDES OF THE BALE(S). ALL EXCAVATED SOIL SHALL BE PLACED ON THE UPHILL SIDE OF THE STRAW BALE(S) AND COMPACTED.
7. TWO (2) WOODEN STAKES SHALL BE USED TO HOLD EACH BALE IN PLACE. WOODEN STAKES SHALL BE 2"x2"x24". WOODEN STAKES SHALL BE DRIVEN 6" INTO THE GROUND.

### STRAW BALE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. STRAW BALES SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, ROTTEN, OR DAMAGED BEYOND REPAIR.
5. SEDIMENT ACCUMULATED UPSTREAM OF STRAW BALE BARRIER SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/4 OF THE HEIGHT OF THE STRAW BALE BARRIER.
6. STRAW BALES ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
7. WHEN STRAW BALES ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

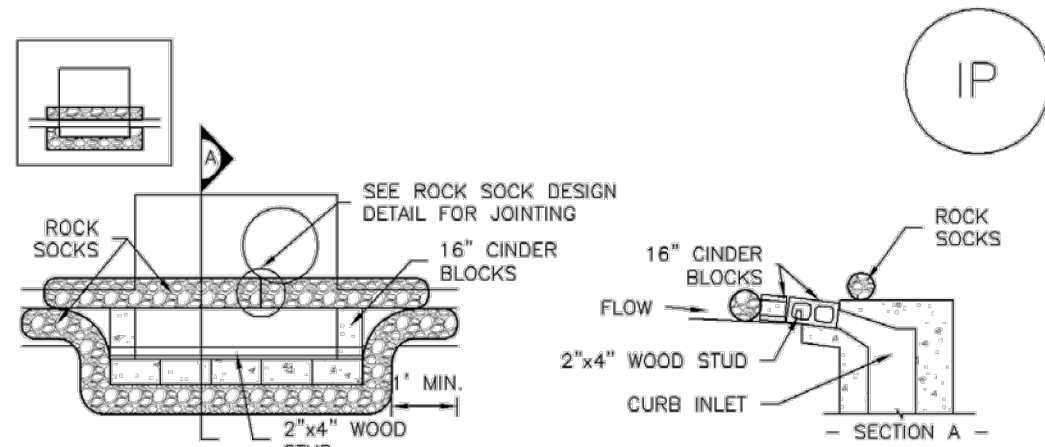
(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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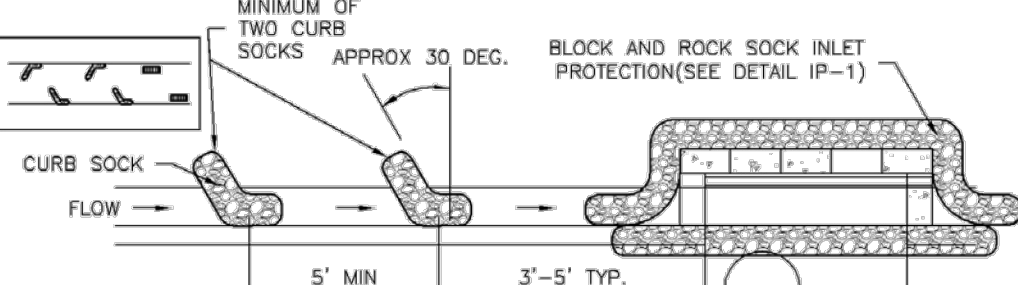
## Inlet Protection (IP)



IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

### BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.
3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

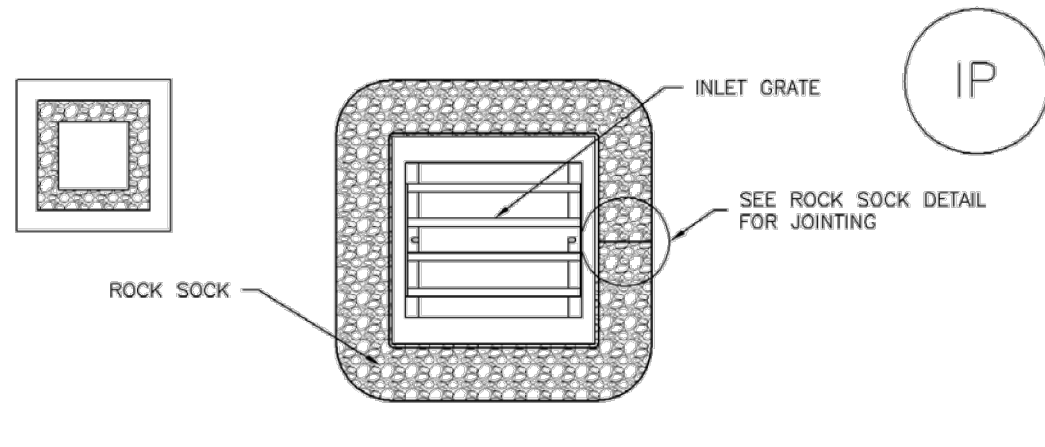
### CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

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## Inlet Protection (IP)

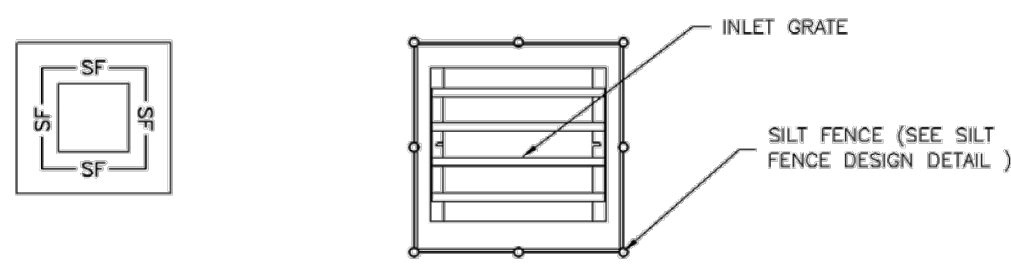
SC-6



IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION

### ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



IP-4. SILT FENCE FOR SUMP INLET PROTECTION

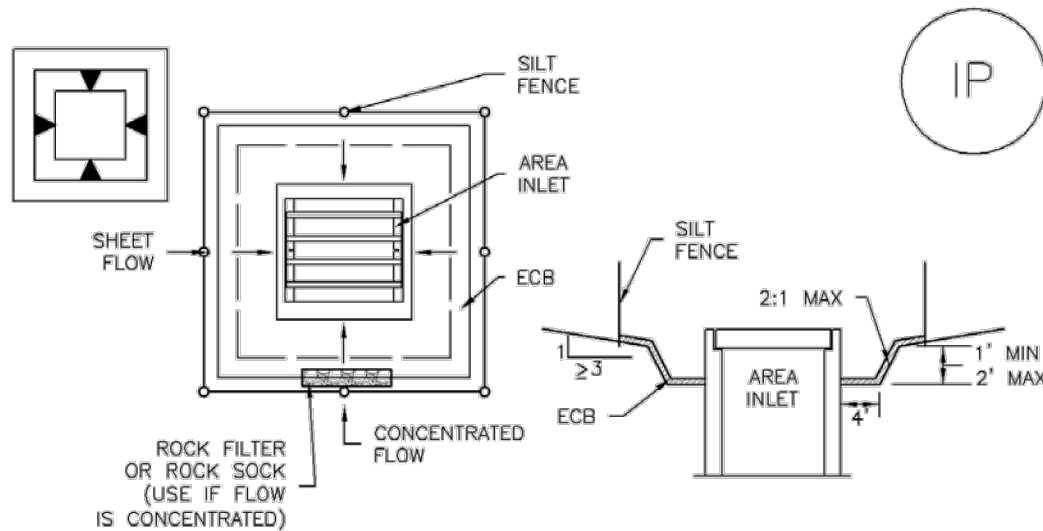
### SILT FENCE INLET PROTECTION INSTALLATION NOTES

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.
3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

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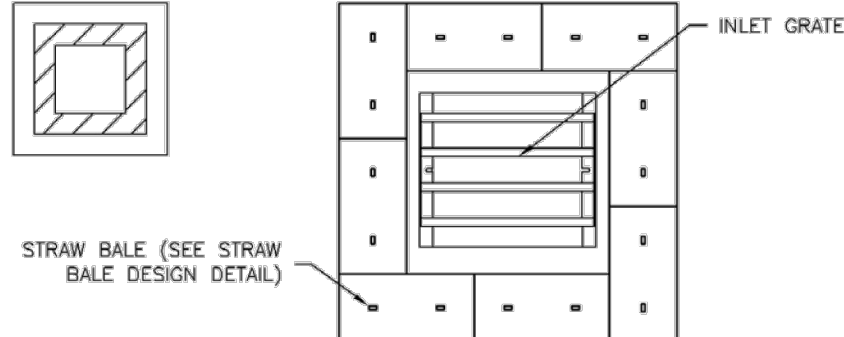
## Inlet Protection (IP)



IP-5. OVEREXCAVATION INLET PROTECTION

### OVEREXCAVATION INLET PROTECTION INSTALLATION NOTES

1. THIS FORM OF INLET PROTECTION IS PRIMARILY APPLICABLE FOR SITES THAT HAVE NOT YET REACHED FINAL GRADE AND SHOULD BE USED ONLY FOR INLETS WITH A RELATIVELY SMALL CONTRIBUTING DRAINAGE AREA.
2. WHEN USING FOR CONCENTRATED FLOWS, SHAPE BASIN IN 2:1 RATIO WITH LENGTH ORIENTED TOWARDS DIRECTION OF FLOW.
3. SEDIMENT MUST BE PERIODICALLY REMOVED FROM THE OVEREXCAVATED AREA.



IP-6. STRAW BALE FOR SUMP INLET PROTECTION

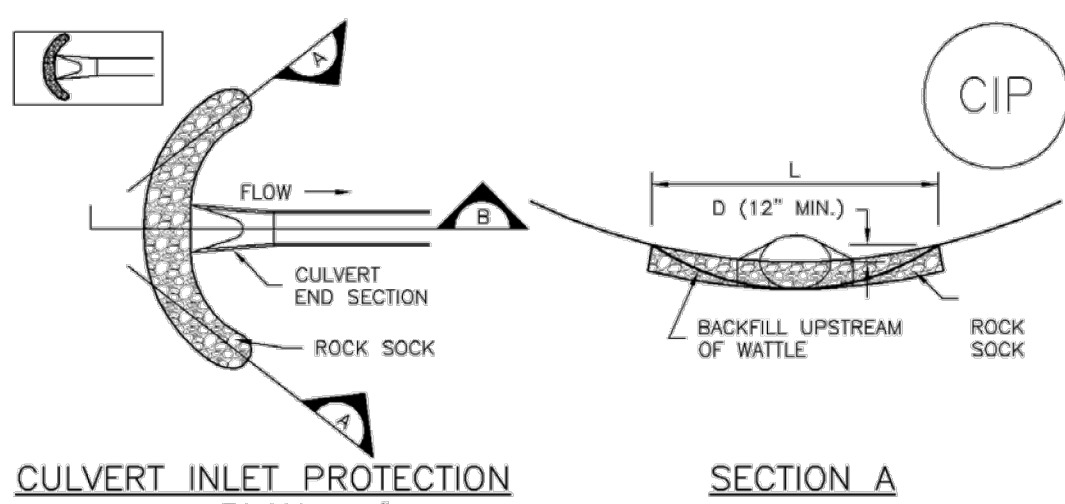
### STRAW BALE BARRIER INLET PROTECTION INSTALLATION NOTES

1. SEE STRAW BALE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH ENDS OF BALES TIGHTLY ABUTTING ONE ANOTHER.

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## Inlet Protection (IP)

SC-6



CIP-1. CULVERT INLET PROTECTION

### CULVERT INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
  - LOCATION OF CULVERT INLET PROTECTION.
2. SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINING DETAIL.

### CULVERT INLET PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS 1/2 THE HEIGHT OF THE ROCK SOCK.
5. CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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## Inlet Protection (IP)

### GENERAL INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
  - LOCATION OF INLET PROTECTION.
  - TYPE OF INLET PROTECTION (P.1, IP.2, IP.3, IP.4, IP.5, IP.6)
2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.
3. MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

### INLET PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY. A DEPTH OF 6" WHEN SILT FENCE IS USED, OR 1/4 OF THE HEIGHT FOR STRAW BALES.
5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

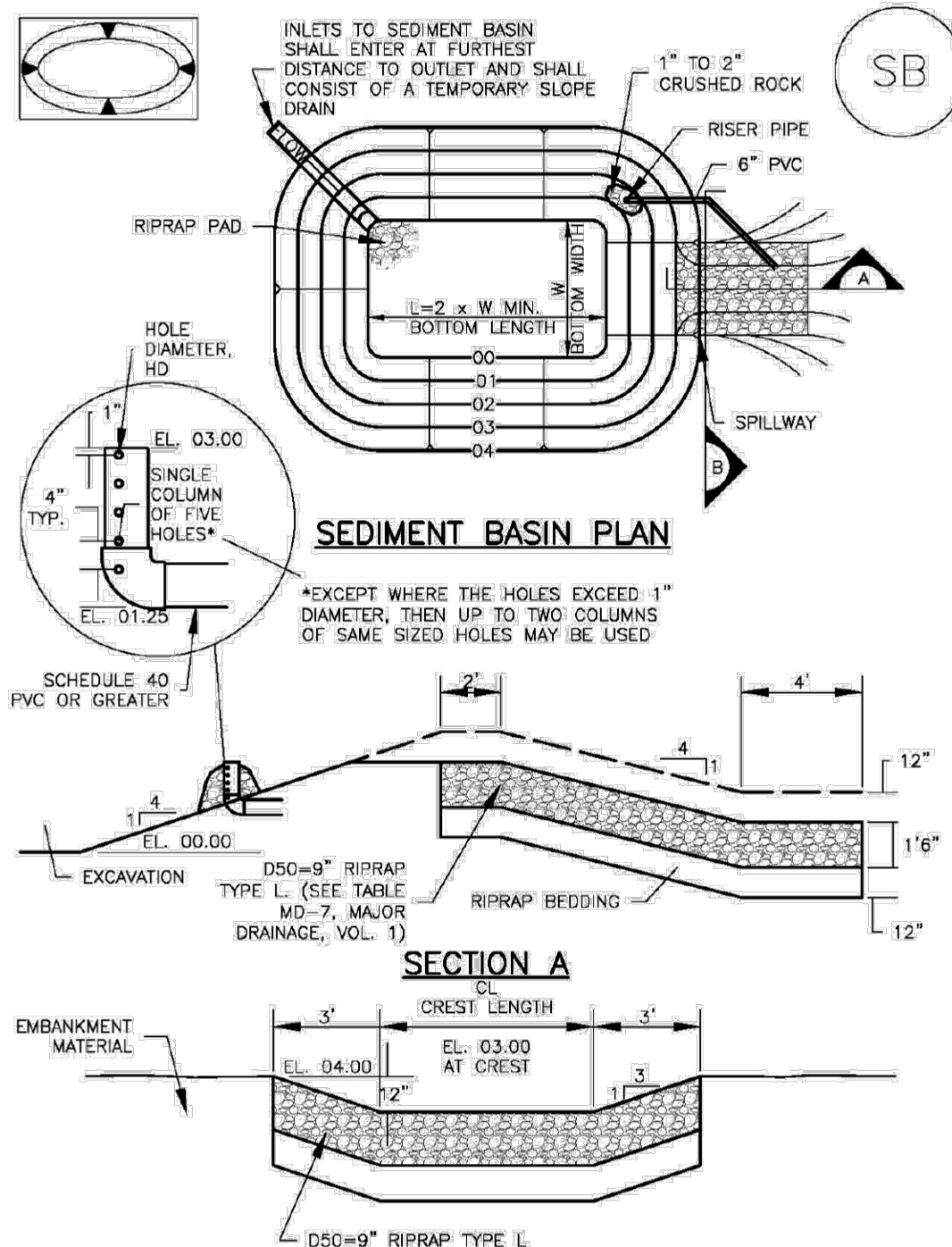
NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.

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## Sediment Basin (SB)

SC-7



SEDIMENT BASIN PLAN

\*EXCEPT WHERE THE HOLES EXCEED 1" DIAMETER, THEN UP TO TWO COLUMNS OF SAME SIZED HOLES MAY BE USED

SCHEDULE 40 PVC OR GREATER

EXCAVATION

D50=9" RIPRAP

TYPE L (SEE TABLE MD-7, MAJOR DRAINAGE, VOL. 1)

RIPRAP BEDDING

SECTION A

EL. 04.00

EL. 03.00 AT CREST

EL. 04.00

D50=9" RIPRAP TYPE L

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SC-7

## Sediment Basin (SB)

Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 1/2	2	9/32
2	21	3	15/16
3	28	5	3/4
4	33 1/2	6	9/8
5	38 1/2	8	7/8
6	43	9	1 1/8
7	47 1/2	11	1 1/4
8	51	12	1 1/2
9	55	13	1 5/8
10	58 1/2	15	1 3/4
11	61	16	1 7/8
12	64	18	2
13	67 1/2	19	1 1/2
14	70 1/2	21	1 5/8
15	73 1/2	22	1 3/4

### SEDIMENT BASIN INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
  - LOCATION OF SEDIMENT BASIN.
  - TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
  - FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
  - FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
2. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
3. SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON ON BASINS AS A STORMWATER CONTROL.
4. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
5. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
6. PIPE SCH 40 OR GREATER SHALL BE USED.
7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

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Sediment Basin (SB)

SC-7

SEDIMENT BASIN MAINTENANCE NOTES

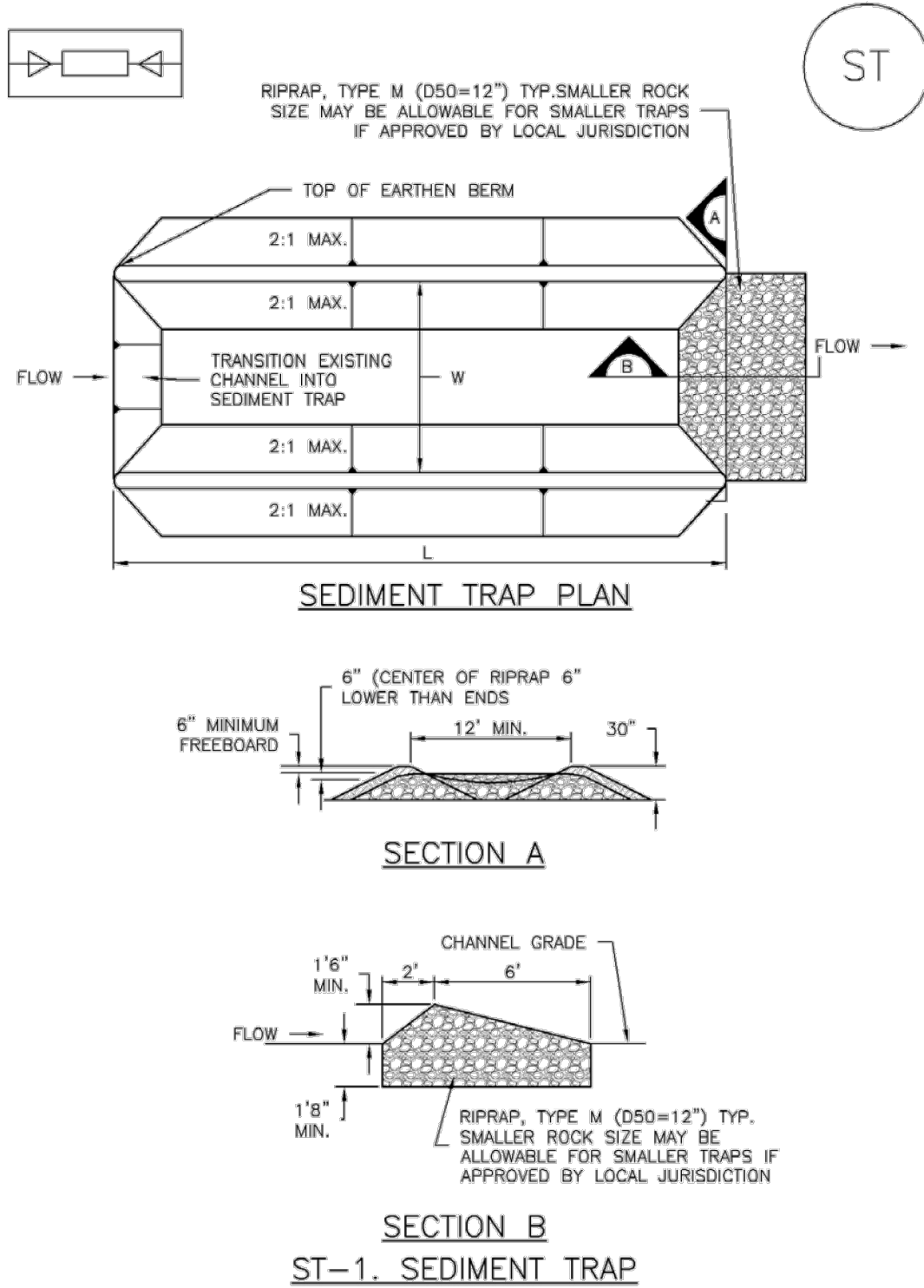
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS. TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E., TWO FEET BELOW THE SPILLWAY CREST).
5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
6. WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SC-8

Sediment Trap (ST)



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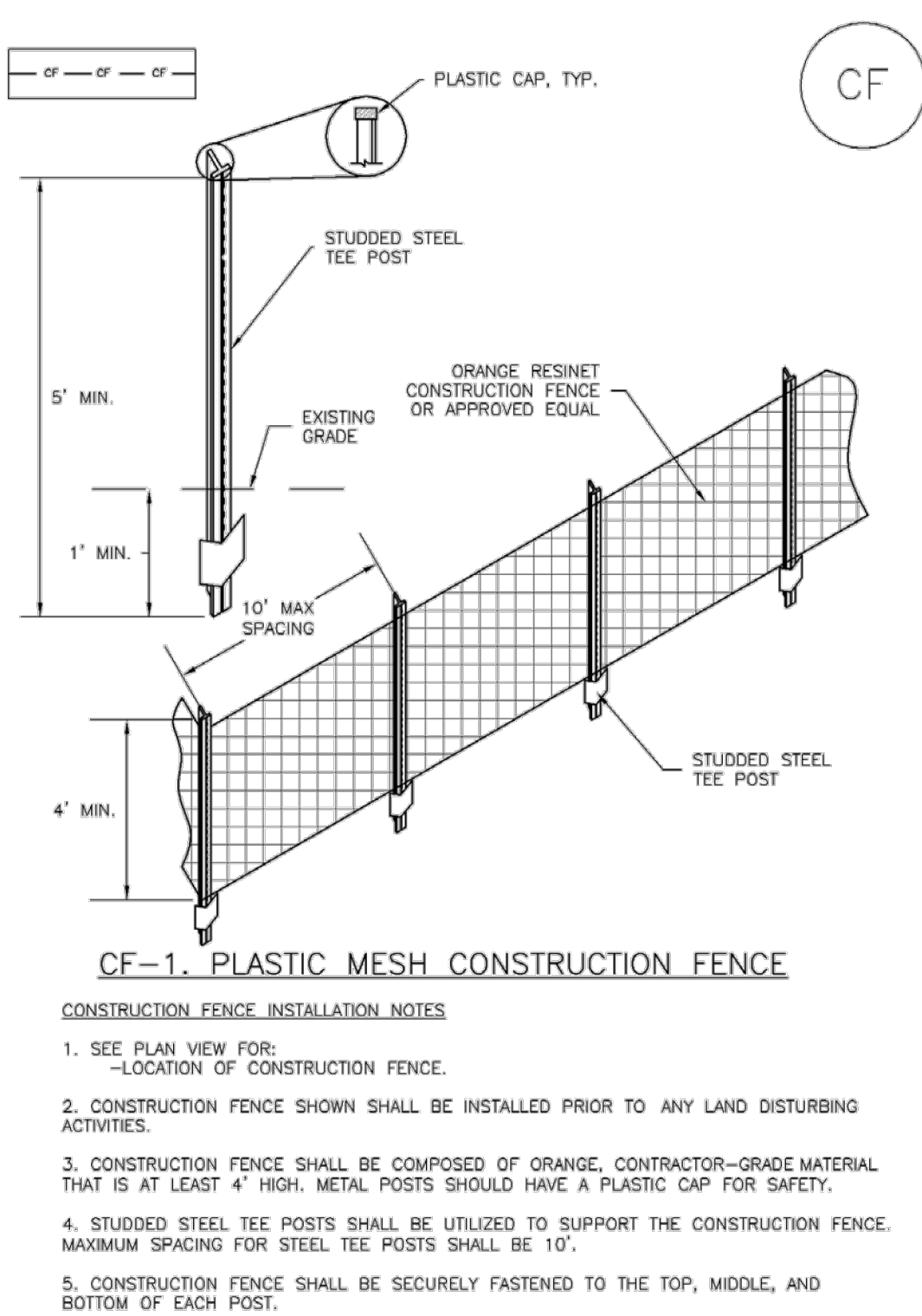
ST-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

SM-1 Construction Phasing/Sequencing (CP)

Project Phase	BMPs
Utility And Infrastructure Installation	<b>In Addition to the Above BMPs:</b> <ul style="list-style-type: none"><li>• Close trench as soon as possible (generally at the end of the day).</li><li>• Use rough-cut street control or apply road base for streets that will not be promptly paved.</li><li>• Provide inlet protection as streets are paved and inlets are constructed.</li><li>• Protect and repair BMPs, as necessary.</li><li>• Perform street sweeping as needed.</li></ul>
Building Construction	<b>In Addition to the Above BMPs:</b> <ul style="list-style-type: none"><li>• Implement materials management and good housekeeping practices for home building activities.</li><li>• Use perimeter controls for temporary stockpiles from foundation excavations.</li><li>• For lots adjacent to streets, lot-line perimeter controls may be necessary at the back of curb.</li></ul>
Final Grading	<b>In Addition to the Above BMPs:</b> <ul style="list-style-type: none"><li>• Remove excess or waste materials.</li><li>• Remove stored materials.</li></ul>
Final Stabilization	<b>In Addition to the Above BMPs:</b> <ul style="list-style-type: none"><li>• Seed and mulch/tackify.</li><li>• Seed and install blankets on steep slopes.</li><li>• Remove all temporary BMPs when site has reached final stabilization.</li></ul>

CP-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

SM-3 Construction Fence (CF)



CF-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Sediment Trap (ST)

SC-8

SEDIMENT TRAP INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
  - LOCATION, LENGTH AND WIDTH OF SEDIMENT TRAP.
2. ONLY USE FOR DRAINAGE AREAS LESS THAN 1 ACRE.
3. SEDIMENT TRAPS SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.
4. SEDIMENT TRAP BERM SHALL BE CONSTRUCTED FROM MATERIAL FROM EXCAVATION. THE BERM SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
5. SEDIMENT TRAP OUTLET TO BE CONSTRUCTED OF RIPRAP, TYPE M (D50=12") TYP. SMALLER ROCK SIZE MAY BE ALLOWABLE FOR SMALLER TRAPS IF APPROVED BY LOCAL JURISDICTION.
6. THE TOP OF THE EARTHEN BERM SHALL BE A MINIMUM OF 6" HIGHER THAN THE TOP OF THE RIPRAP OUTLET STRUCTURE.
7. THE ENDS OF THE RIPRAP OUTLET STRUCTURE SHALL BE A MINIMUM OF 6" HIGHER THAN THE CENTER OF THE OUTLET STRUCTURE.

SEDIMENT TRAP MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. REMOVE SEDIMENT ACCUMULATED IN TRAP AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP. TYPICALLY WHEN THE SEDIMENT DEPTH REACHES 1/2 THE HEIGHT OF THE RIPRAP OUTLET.
5. SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
6. WHEN SEDIMENT TRAPS ARE REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 ST-3

Construction Fence (CF)

SM-3

CONSTRUCTION FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

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Construction Phasing/Sequencing (CP)

SM-1

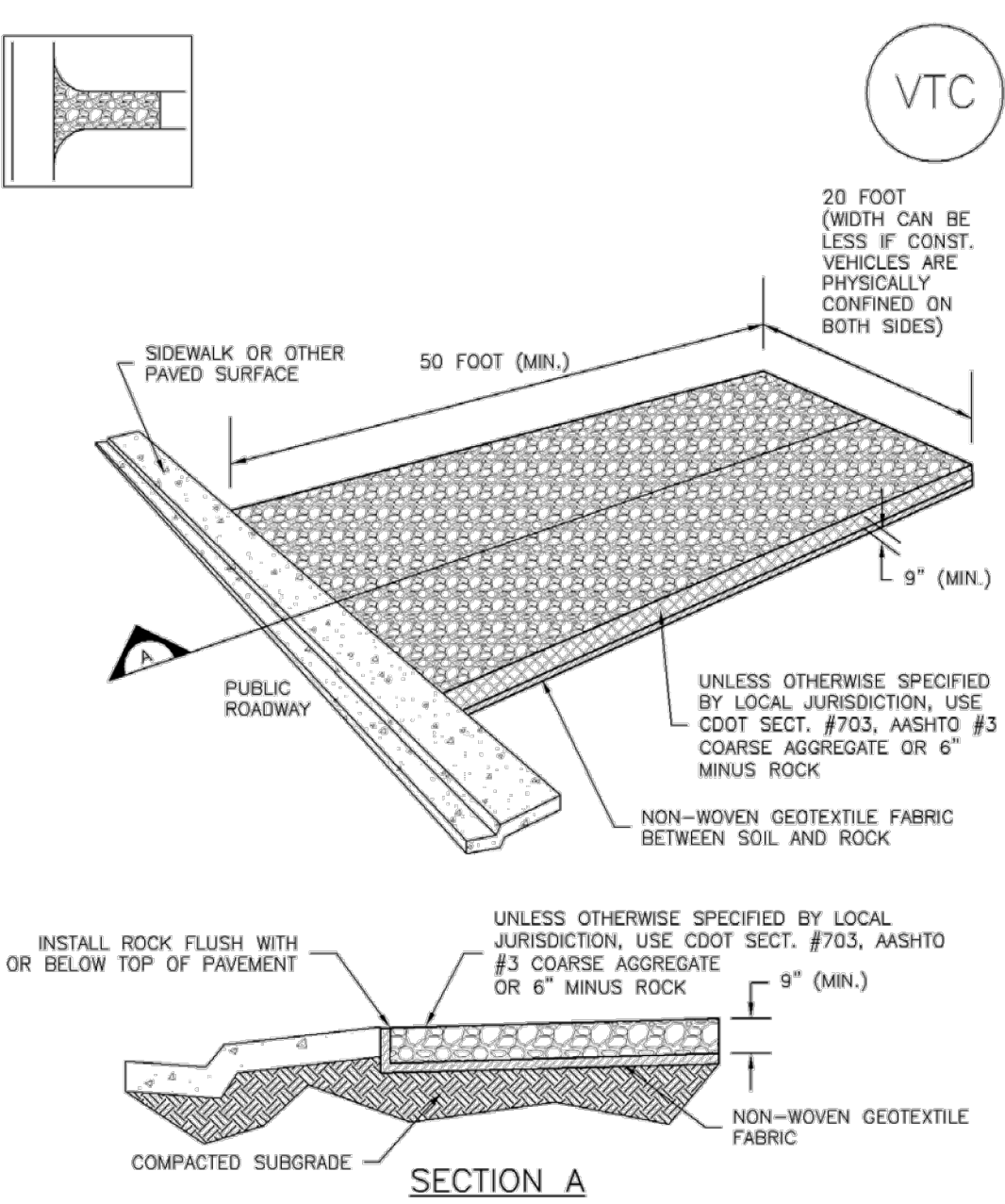
Table CP-1. Typical Phased BMP Installation for Construction Projects

Project Phase	BMPs
Pre-disturbance, Site Access	<ul style="list-style-type: none"><li>• Install sediment controls downgradient of access point (on paved streets this may consist of inlet protection).</li><li>• Establish vehicle tracking control at entrances to paved streets. Fence as needed.</li><li>• Use construction fencing to define the boundaries of the project and limit access to areas of the site that are not to be disturbed.</li></ul> <p><b>Note: it may be necessary to protect inlets in the general vicinity of the site, even if not downgradient, if there is a possibility that sediment tracked from the site could contribute to the inlets.</b></p>
Site Clearing and Grubbing	<ul style="list-style-type: none"><li>• Install perimeter controls as needed on downgradient perimeter of site (silt fence, wattles, etc).</li><li>• Limit disturbance to those areas planned for disturbance and protect undisturbed areas within the site (construction fence, flagging, etc).</li><li>• Preserve vegetative buffer at site perimeter.</li><li>• Create stabilized staging area.</li><li>• Locate portable toilets on flat surfaces away from drainage paths. Stake in areas susceptible to high winds.</li><li>• Construct concrete washout area and provide signage.</li><li>• Establish waste disposal areas.</li><li>• Install sediment basins.</li><li>• Create dirt perimeter berms and/or brush barriers during grubbing and clearing.</li><li>• Separate and stockpile topsoil, leave roughened and/or cover.</li><li>• Protect stockpiles with perimeter control BMPs. Stockpiles should be located away from drainage paths and should be accessed from the upgradient side so that perimeter controls can remain in place on the downgradient side. Use erosion control blankets, temporary seeding, and/or mulch for stockpiles that will be inactive for an extended period.</li><li>• Leave disturbed area of site in a roughened condition to limit erosion. Consider temporary revegetation for areas of the site that have been disturbed but that will be inactive for an extended period.</li><li>• Water to minimize dust but not to the point that watering creates runoff.</li></ul>

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Vehicle Tracking Control (VTC)

SM-4



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

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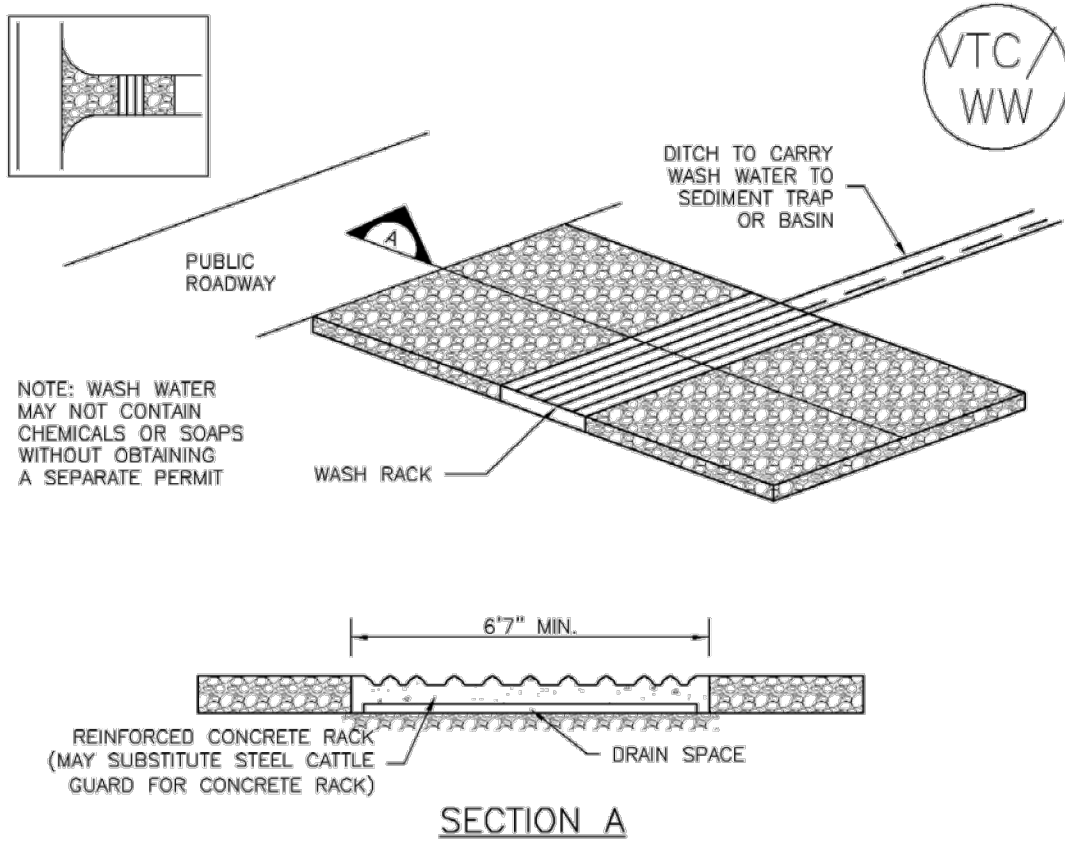
#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	11/01/2024	MM
2	2ND SUBMITTAL	01/17/2025	MM

NOT FOR  
CONSTRUCTION

MAIN STREET OFF-STREET PARKING LOT  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
DETAILS



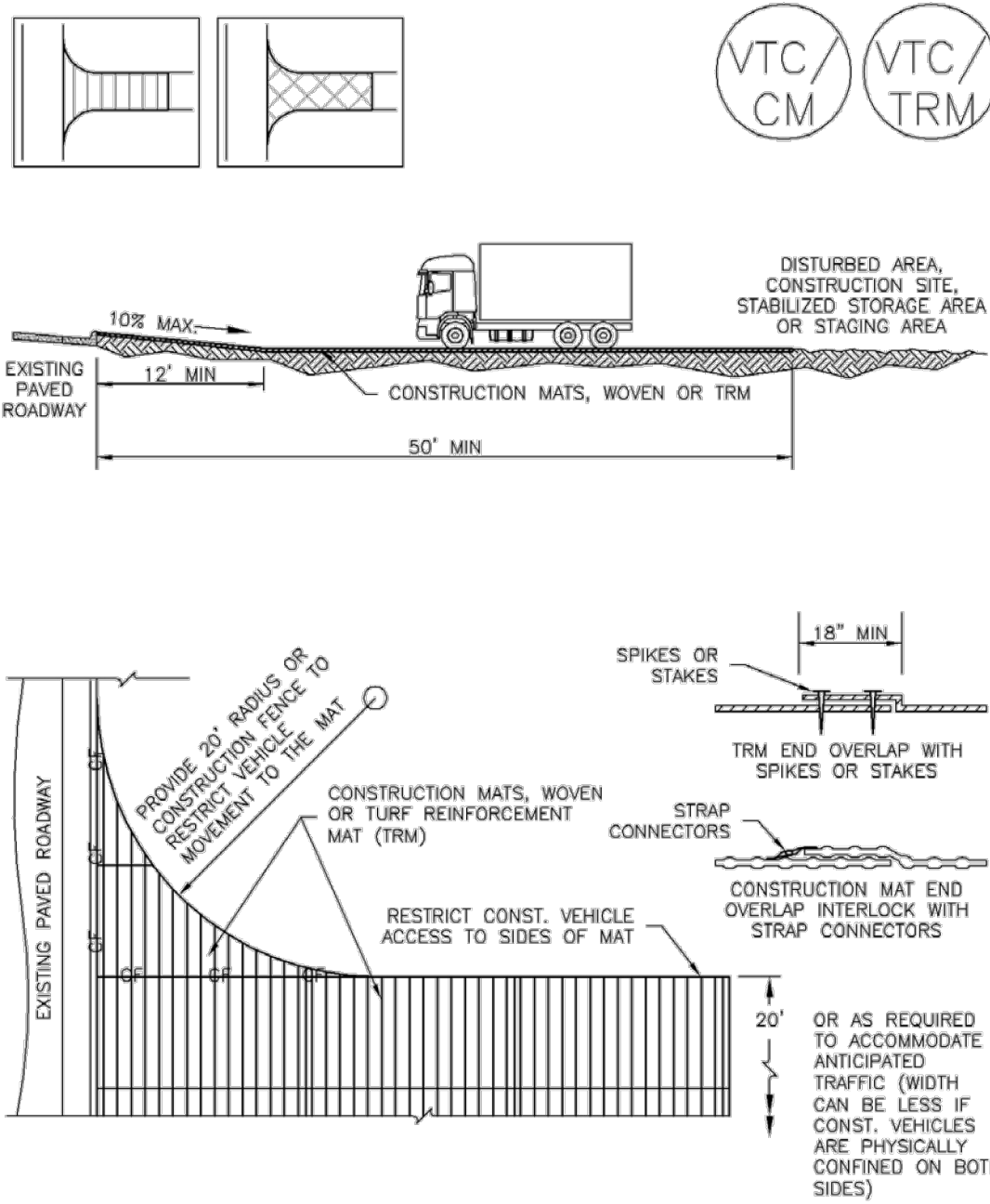
SM-4 Vehicle Tracking Control (VTC)



VTC-2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

VTC-4 Urban Drainage and Flood Control District November 2010  
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Vehicle Tracking Control (VTC) SM-4



VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

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SM-4 Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR  
-LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).  
-TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

VTC-6 Urban Drainage and Flood Control District November 2010  
Urban Storm Drainage Criteria Manual Volume 3

Stabilized Construction Roadway (SCR) SM-5

Description

A stabilized construction roadway is a temporary method to control sediment runoff, vehicle tracking, and dust from roads during construction activities.

Appropriate Uses

Use on high traffic construction roads to minimize dust and erosion.

Stabilized construction roadways are used instead of rough-cut street controls on roadways with frequent construction traffic.

Design and Installation

Stabilized construction roadways typically involve two key components: 1) stabilizing the road surface with an aggregate base course of 3-inch-diameter granular material and 2) stabilizing roadside ditches, if applicable. Early application of road base is generally suitable where a layer of coarse aggregate is specified for final road construction.

Maintenance and Removal

Apply additional gravel as necessary to ensure roadway integrity.

Inspect drainage ditches along the roadway for erosion and stabilize, as needed, through the use of check dams or rolled erosion control products.

Gravel may be removed once the road is ready to be paved. Prior to paving, the road should be inspected for grade changes and damage. Regrade and repair as necessary.

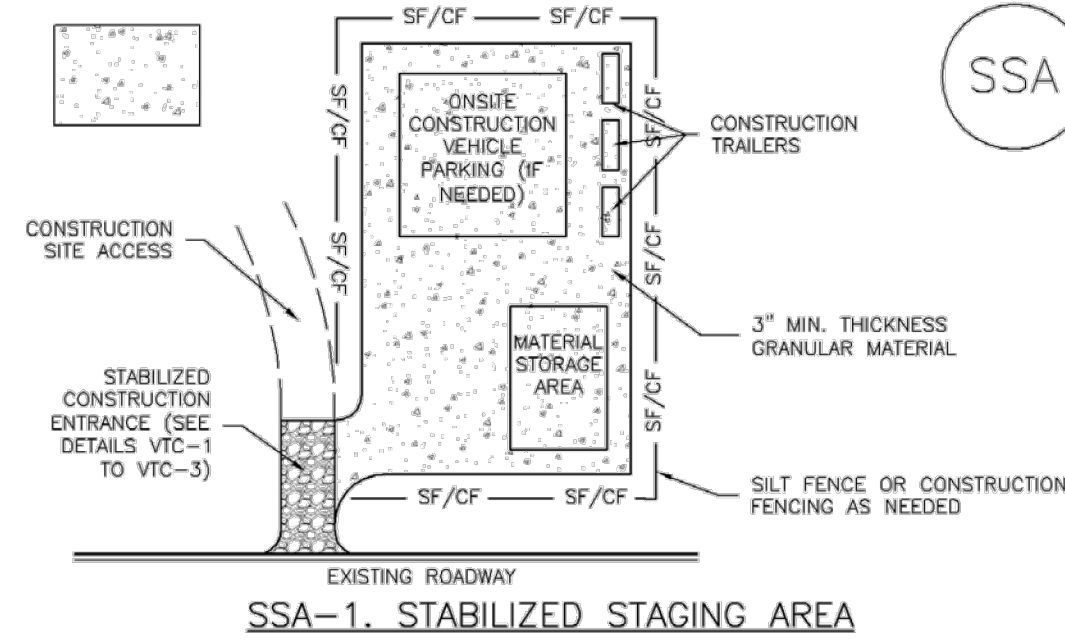


Photograph SCR-1. Stabilized construction roadway.

Stabilized Construction Roadway	
Functions	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material Management	Yes

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Urban Storm Drainage Criteria Manual Volume 3 SCR-1

Stabilized Staging Area (SSA) SM-6



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR  
-LOCATION OF STAGING AREA(S).  
-CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

November 2010 Urban Drainage and Flood Control District November 2010  
Urban Storm Drainage Criteria Manual Volume 3 SSA-3

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

SSA-4 Urban Drainage and Flood Control District November 2010  
Urban Storm Drainage Criteria Manual Volume 3

Street Sweeping and Vacuuming (SS) SM-7

Description

Street sweeping and vacuuming remove sediment that has been tracked onto roadways to reduce sediment transport into storm drain systems or a surface waterway.

Appropriate Uses

Use this practice at construction sites where vehicles may track sediment offsite onto paved roadways.

Design and Installation

Street sweeping or vacuuming should be conducted when there is noticeable sediment accumulation on roadways adjacent to the construction site. Typically, this will be concentrated at the entrance/exit to the construction site. Well-maintained stabilized construction entrances, vehicle tracking controls and tire wash facilities can help reduce the necessary frequency of street sweeping and vacuuming.

On smaller construction sites, street sweeping can be conducted manually using a shovel and broom. Never wash accumulated sediment on roadways into storm drains.

Maintenance and Removal

- Inspect paved roads around the perimeter of the construction site on a daily basis and more frequently, as needed. Remove accumulated sediment, as needed.
- Following street sweeping, check inlet protection that may have been displaced during street sweeping.
- Inspect area to be swept for materials that may be hazardous prior to beginning sweeping operations.



Photograph SS-1. A street sweeper removes sediment and potential pollutants along the curb line at a construction site. Photo courtesy of Tom Gore.

Street Sweeping/ Vacuuming	
Functions	
Erosion Control	No
Sediment Control	Yes
Site/Material Management	Yes

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Paving and Grinding Operations (PGO) SM-12

Description

Manage runoff from paving and grinding operations to reduce pollutants entering storm drainage systems and natural drainageways.

Appropriate Uses

Use runoff management practices during all paving and grinding operations such as surfacing, resurfacing, and saw cutting.

Design and Installation

There are a variety of management strategies that can be used to manage runoff from paving and grinding operations:

- Establish inlet protection for all inlets that could potentially receive runoff.
- Schedule paving operations when dry weather is forecasted.
- Keep spill kits onsite for equipment spills and keep drip pans onsite for stored equipment.
- Install perimeter controls when asphalt material is used on embankments or shoulders near waterways, drainages, or inlets.
- Do not wash any paved surface into receiving storm drain inlets or natural drainageways. Instead, loose material should be swept or vacuumed following paving and grinding operations.
- Store materials away from drainages or waterways.
- Recycle asphalt and pavement material when feasible. Material that cannot be recycled must be disposed of in accordance with applicable regulations.

See BMP Fact Sheets for Inlet Protection, Silt Fence and other perimeter controls selected for use during paving and grinding operations.

Maintenance and Removal

Perform maintenance and removal of inlet protection and perimeter controls in accordance with their respective fact sheets.

Promptly respond to spills in accordance with the spill prevention and control plan.

Paving and Grinding Operations	
Functions	
Erosion Control	No
Sediment Control	No
Site/Material Management	Yes



Photograph PGO-1. Paving operations on a Colorado highway. Photo courtesy of CDOT.

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#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	11/01/2024	MM
2	2ND SUBMITTAL	01/17/2025	MM

NOT FOR CONSTRUCTION

MAIN STREET OFF-STREET PARKING LOT  
TOWN OF ELIZABETH, COLORADO  
CONSTRUCTION DOCUMENTS  
DETAILS