

Map Symbol	Soil Name	Slope	Hydrologic Group
BeA	Bedington shaly silt loam	0-3%	B
BeB	Bedington shaly silt loam	3-8%	B
BkB	Berks channery silt loam	3-8%	B
BkC	Berks channery silt loam	8-15%	B
CmB	Conly silt loam	3-8%	C

STEEP SLOPE AREA	
EX LOT 1	5,114 S.F.
EX LOT 2	97,441 S.F.
EX LOT 3	10,052 S.F.
EX LOT 4	17,916 S.F.

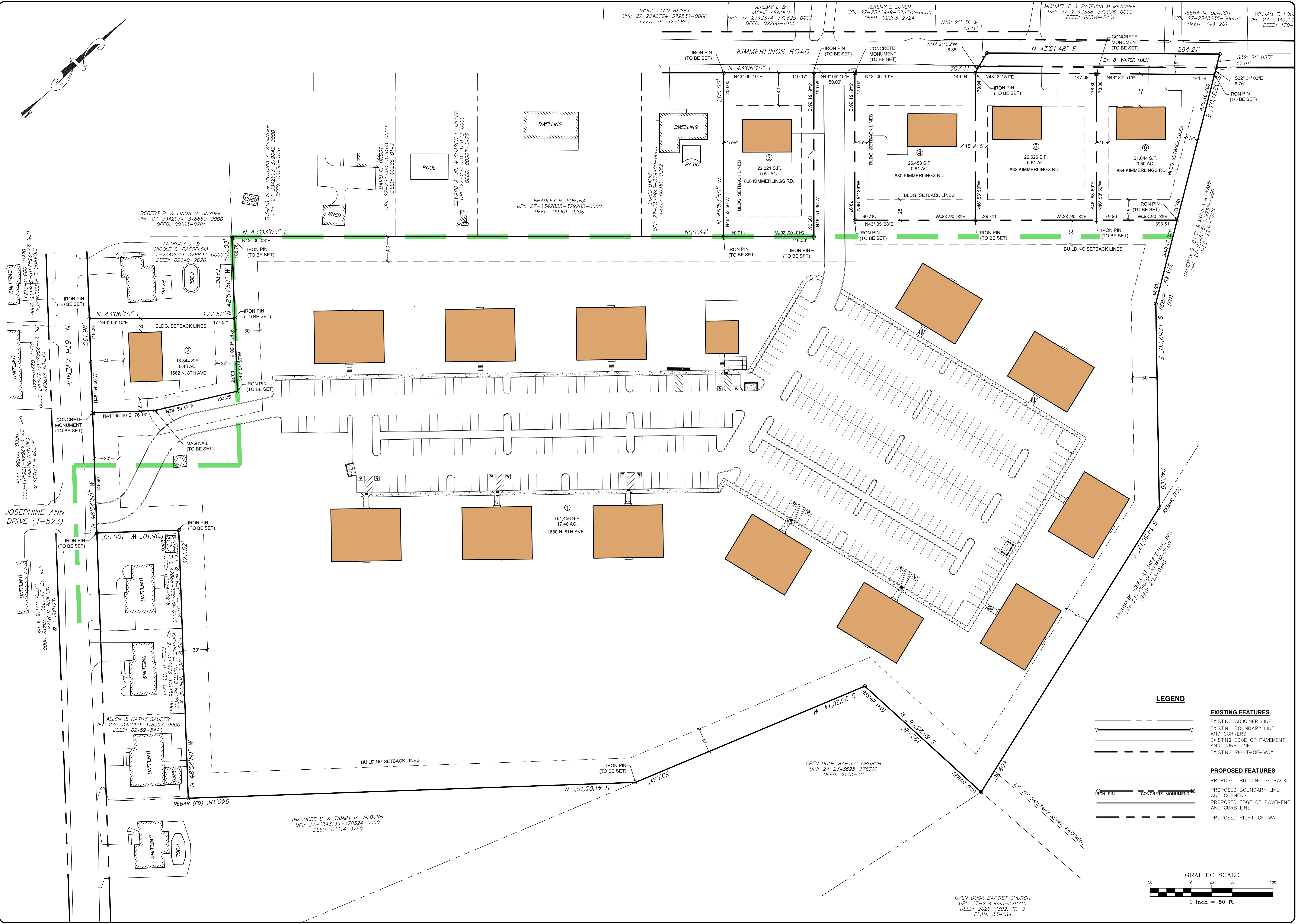
- LEGEND**
- EXISTING FEATURES
    - EXISTING ADJONER LINE AND CORNERS
    - EXISTING EDGE OF PAVEMENT AND CURB LINE
    - EXISTING RIGHT-OF-WAY
    - EXISTING FENCE
    - EXISTING SEWER
    - EXISTING STORMWATER
    - EXISTING WATERLINE
    - EXISTING GASLINE
    - EXISTING SIDEWALK/CONCRETE
    - EXISTING CONTOURS
    - EXISTING TREELINE
    - EXISTING TOWNSHIP BOUNDARY
    - LIMITS OF FIELD SURVEY
    - EXISTING SOILS
    - EXISTING UTILITY POLE
    - EXISTING LIGHT POLE
    - EXISTING DELINEATED WETLANDS
    - DEMO (TO BE REMOVED)
    - TREES (TO BE REMOVED)
    - 15%-25% SLOPES
    - 25%+ SLOPES

REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-3-23	5-8-23	CDS
PER LPD LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

**EXISTING CONDITIONS - DEMOLITION PLAN**  
**PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS**  
 For  
**BRIAR RIDGE COMMONS - APARTMENTS**  
 located in  
 NORTH LEBANON TOWNSHIP  
 Lebanon County, Pennsylvania

**ESI**  
 Steadbeck Engineering & Surveying Inc.  
 279 Lebanon, Pennsylvania 17042  
 Phone: (717) 272-7110  
 Fax: (717) 272-7348

FIELD CREW: MOD, JEC
BASE MAP: JEC
DRAWN: CDS
DESIGN: CDS
CHECKED: SAS
DATE: 3/1/23
SCALE: 1"=50'
PROJECT #135-19-001



REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-3-23	5-8-23	CDS
PER LPOD LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

**SUBDIVISION PLAN**  
 For  
**PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS**  
**BRIAR RIDGE COMMONS - APARTMENTS**  
 located in  
 NORTH LEBANON TOWNSHIP  
 Lebanon County, Pennsylvania

Robb, Smith & Ingham  
 Engineering & Surveying Inc.  
 279 Lebanon, Pennsylvania 17042  
 Phone: (717) 272-7110  
 Fax: (717) 272-7348

FIELD CREW:	MOD, JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	1"=50'
PROJECT #	135-19-001

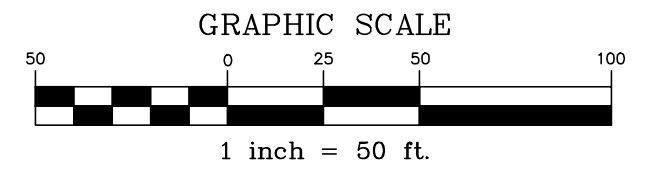
**LEGEND**

**EXISTING FEATURES**

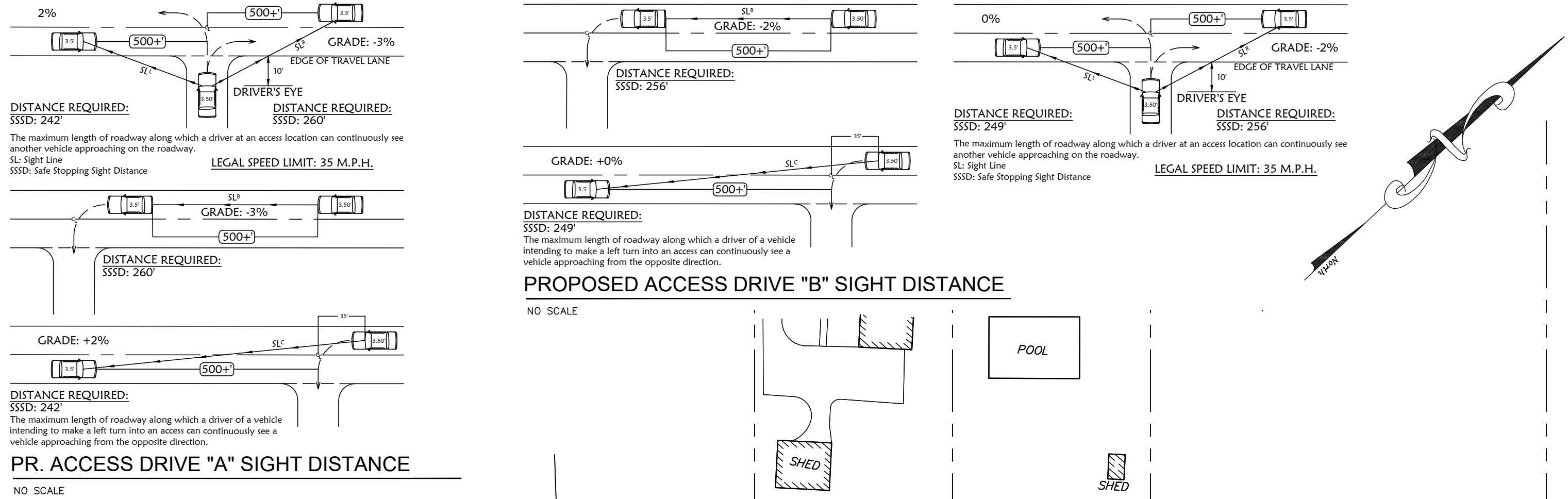
- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY

**PROPOSED FEATURES**

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY

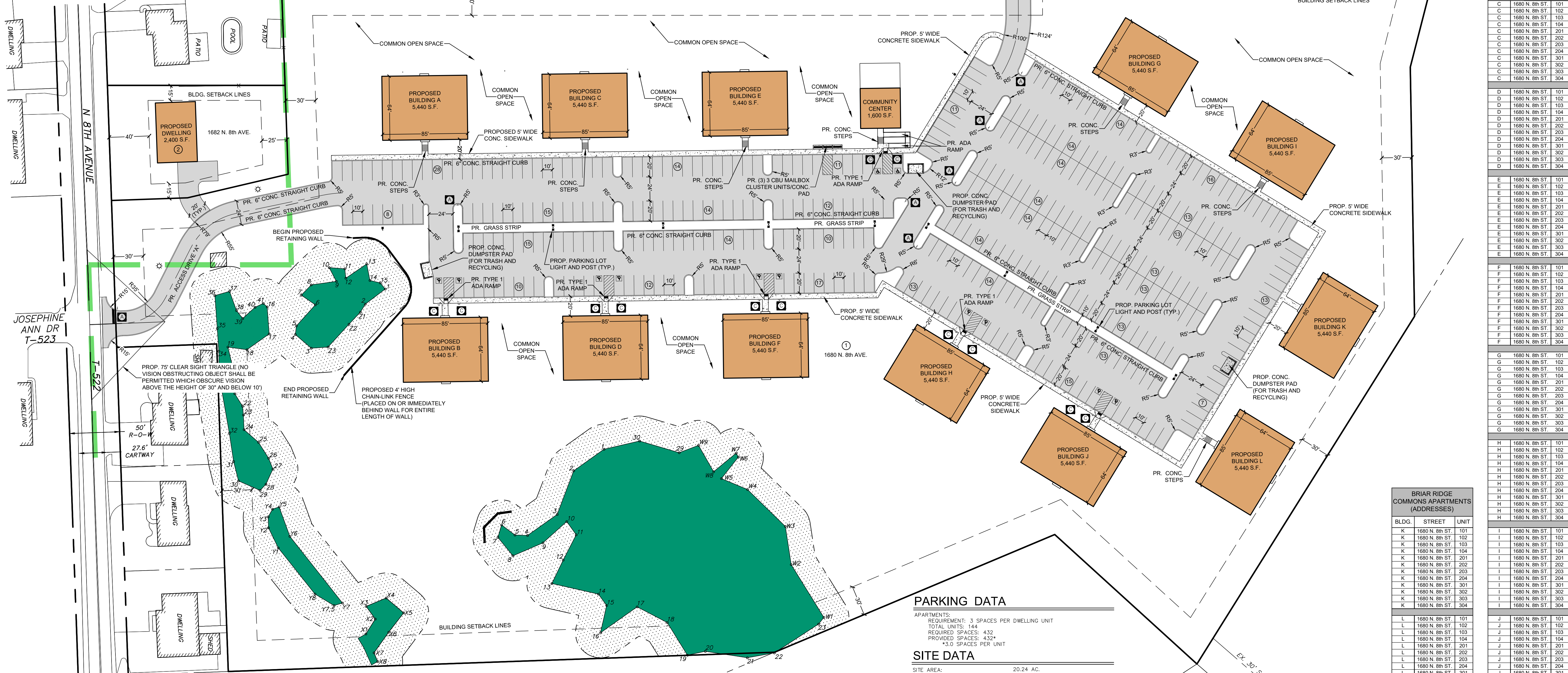


OPEN DOOR BAPTIST CHURCH  
 UPI: 27-2343695-378710  
 DEED: 2025-7392, TR. 3  
 PLAN: 33-189



**PR. ACCESS DRIVE "A" SIGHT DISTANCE**  
NO SCALE

**PROPOSED ACCESS DRIVE "B" SIGHT DISTANCE**  
NO SCALE



BLDG	STREET	UNIT
A	1680 N. 8th St.	101
A	1680 N. 8th St.	102
A	1680 N. 8th St.	103
A	1680 N. 8th St.	104
A	1680 N. 8th St.	201
A	1680 N. 8th St.	202
A	1680 N. 8th St.	203
A	1680 N. 8th St.	204
A	1680 N. 8th St.	301
A	1680 N. 8th St.	302
A	1680 N. 8th St.	303
A	1680 N. 8th St.	304

BLDG	STREET	UNIT
B	1680 N. 8th St.	101
B	1680 N. 8th St.	102
B	1680 N. 8th St.	103
B	1680 N. 8th St.	104
B	1680 N. 8th St.	201
B	1680 N. 8th St.	202
B	1680 N. 8th St.	203
B	1680 N. 8th St.	204
B	1680 N. 8th St.	301
B	1680 N. 8th St.	302
B	1680 N. 8th St.	303
B	1680 N. 8th St.	304

BLDG	STREET	UNIT
C	1680 N. 8th St.	101
C	1680 N. 8th St.	102
C	1680 N. 8th St.	103
C	1680 N. 8th St.	104
C	1680 N. 8th St.	201
C	1680 N. 8th St.	202
C	1680 N. 8th St.	203
C	1680 N. 8th St.	204
C	1680 N. 8th St.	301
C	1680 N. 8th St.	302
C	1680 N. 8th St.	303
C	1680 N. 8th St.	304

BLDG	STREET	UNIT
D	1680 N. 8th St.	101
D	1680 N. 8th St.	102
D	1680 N. 8th St.	103
D	1680 N. 8th St.	104
D	1680 N. 8th St.	201
D	1680 N. 8th St.	202
D	1680 N. 8th St.	203
D	1680 N. 8th St.	204
D	1680 N. 8th St.	301
D	1680 N. 8th St.	302
D	1680 N. 8th St.	303
D	1680 N. 8th St.	304

BLDG	STREET	UNIT
E	1680 N. 8th St.	101
E	1680 N. 8th St.	102
E	1680 N. 8th St.	103
E	1680 N. 8th St.	104
E	1680 N. 8th St.	201
E	1680 N. 8th St.	202
E	1680 N. 8th St.	203
E	1680 N. 8th St.	204
E	1680 N. 8th St.	301
E	1680 N. 8th St.	302
E	1680 N. 8th St.	303
E	1680 N. 8th St.	304

BLDG	STREET	UNIT
F	1680 N. 8th St.	101
F	1680 N. 8th St.	102
F	1680 N. 8th St.	103
F	1680 N. 8th St.	104
F	1680 N. 8th St.	201
F	1680 N. 8th St.	202
F	1680 N. 8th St.	203
F	1680 N. 8th St.	204
F	1680 N. 8th St.	301
F	1680 N. 8th St.	302
F	1680 N. 8th St.	303
F	1680 N. 8th St.	304

BLDG	STREET	UNIT
G	1680 N. 8th St.	101
G	1680 N. 8th St.	102
G	1680 N. 8th St.	103
G	1680 N. 8th St.	104
G	1680 N. 8th St.	201
G	1680 N. 8th St.	202
G	1680 N. 8th St.	203
G	1680 N. 8th St.	204
G	1680 N. 8th St.	301
G	1680 N. 8th St.	302
G	1680 N. 8th St.	303
G	1680 N. 8th St.	304

BLDG	STREET	UNIT
H	1680 N. 8th St.	101
H	1680 N. 8th St.	102
H	1680 N. 8th St.	103
H	1680 N. 8th St.	104
H	1680 N. 8th St.	201
H	1680 N. 8th St.	202
H	1680 N. 8th St.	203
H	1680 N. 8th St.	204
H	1680 N. 8th St.	301
H	1680 N. 8th St.	302
H	1680 N. 8th St.	303
H	1680 N. 8th St.	304

BLDG	STREET	UNIT
I	1680 N. 8th St.	101
I	1680 N. 8th St.	102
I	1680 N. 8th St.	103
I	1680 N. 8th St.	104
I	1680 N. 8th St.	201
I	1680 N. 8th St.	202
I	1680 N. 8th St.	203
I	1680 N. 8th St.	204
I	1680 N. 8th St.	301
I	1680 N. 8th St.	302
I	1680 N. 8th St.	303
I	1680 N. 8th St.	304

REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-3-23	5-8-23	CDS
PER LCPD LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

**LAYOUT PLAN**  
PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS  
FOR  
**BRIAR RIDGE COMMONS - APARTMENTS**  
NORTH LEBANON TOWNSHIP  
LEBANON COUNTY, PENNSYLVANIA

**RSI**  
Steinbeck Engineering & Surveying Inc.  
279 Lebanon, Pennsylvania 17042  
Phone: (717) 272-7110  
Fax: (717) 272-7348

FIELD CREW: MOD, JEC
BASE MAP: JEC
DRAWN: CDS
DESIGN: CDS
CHECKED: SAS
DATE: 3/1/23
SCALE: 1"=50'
PROJECT #135-19-001

**PARKING DATA**

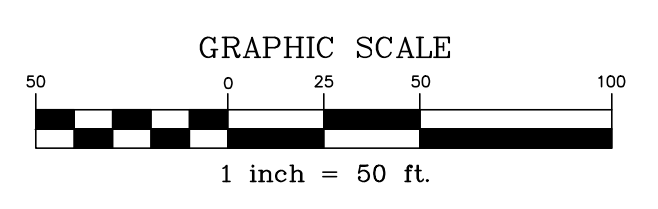
APARTMENTS: 144  
REQUIREMENT: 3 SPACES PER DWELLING UNIT  
TOTAL UNITS: 144  
REQUIRED SPACES: 432  
PROVIDED SPACES: 432  
+3.0 SPACES PER UNIT

**SITE DATA**

SITE AREA: 20.24 AC.  
SITE ZONING: R1 - LOW DENSITY RESIDENTIAL & R2 - HIGH DENSITY RESIDENTIAL & STORMWATER MANAGEMENT DISTRICT  
EXISTING USE: AGRICULTURAL  
PROPOSED USE: RESIDENTIAL  
SOURCE OF WATER: PUBLIC  
SOURCE OF SEWER: PUBLIC

**COMMON OPEN SPACE DATA**

COMMON OPEN SPACE AREA: 4.20 ACRES/24.30% (10% REQUIRED)  
-2.62 ACRES OF THE COMMON OPEN SPACE IS CONTIGUOUS.



**LEGEND**

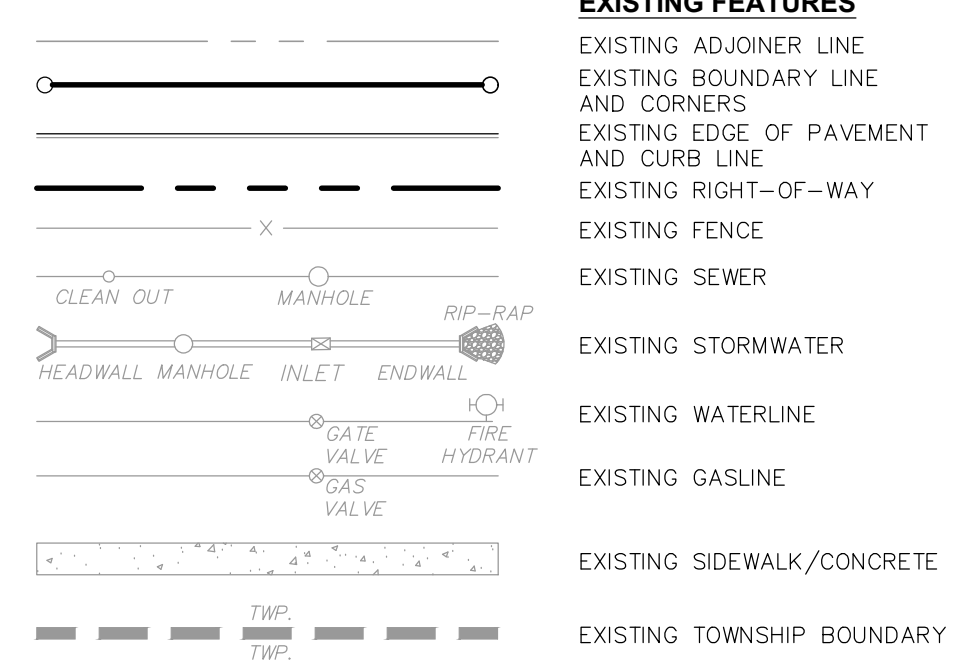
EXISTING FEATURES	PROPOSED FEATURES
EXISTING ADJOINER LINE	PROPOSED BUILDING SETBACK
EXISTING BOUNDARY LINE AND CORNERS	PROPOSED BOUNDARY LINE AND CORNERS
EXISTING EDGE OF PAVEMENT AND CURB LINE	PROPOSED EDGE OF PAVEMENT AND CURB LINE
EXISTING RIGHT-OF-WAY	PROPOSED RIGHT-OF-WAY
EXISTING FENCE	PROPOSED FENCE
EXISTING SIDEWALK/CONCRETE	PROPOSED CONCRETE/SIDEWALK
EXISTING TREELINE	PROPOSED TREELINE
EXISTING TOWNSHIP BOUNDARY	PROPOSED UTILITY POLE
LIMITS OF FIELD SURVEY	PROPOSED LIGHT POLE
EXISTING LIGHT POLE	

**SIGNAGE LEGEND**

SYMBOL	DESCRIPTION	SIZE	PA DOT DESIG.
⓪	STOP SIGN	30x30	R1-1
Ⓢ	HANDICAP SIGN	12X18	R7-8
Ⓣ	HANDICAP SIGN WITH VAN ACCESSIBLE SIGN	12X18 6X12	R7-8 R7-8B

NOTE: PROPOSED SIGNAGE SHALL BE OWNED BY THE APPLICANT.

**LEGEND**



**EXISTING FEATURES**

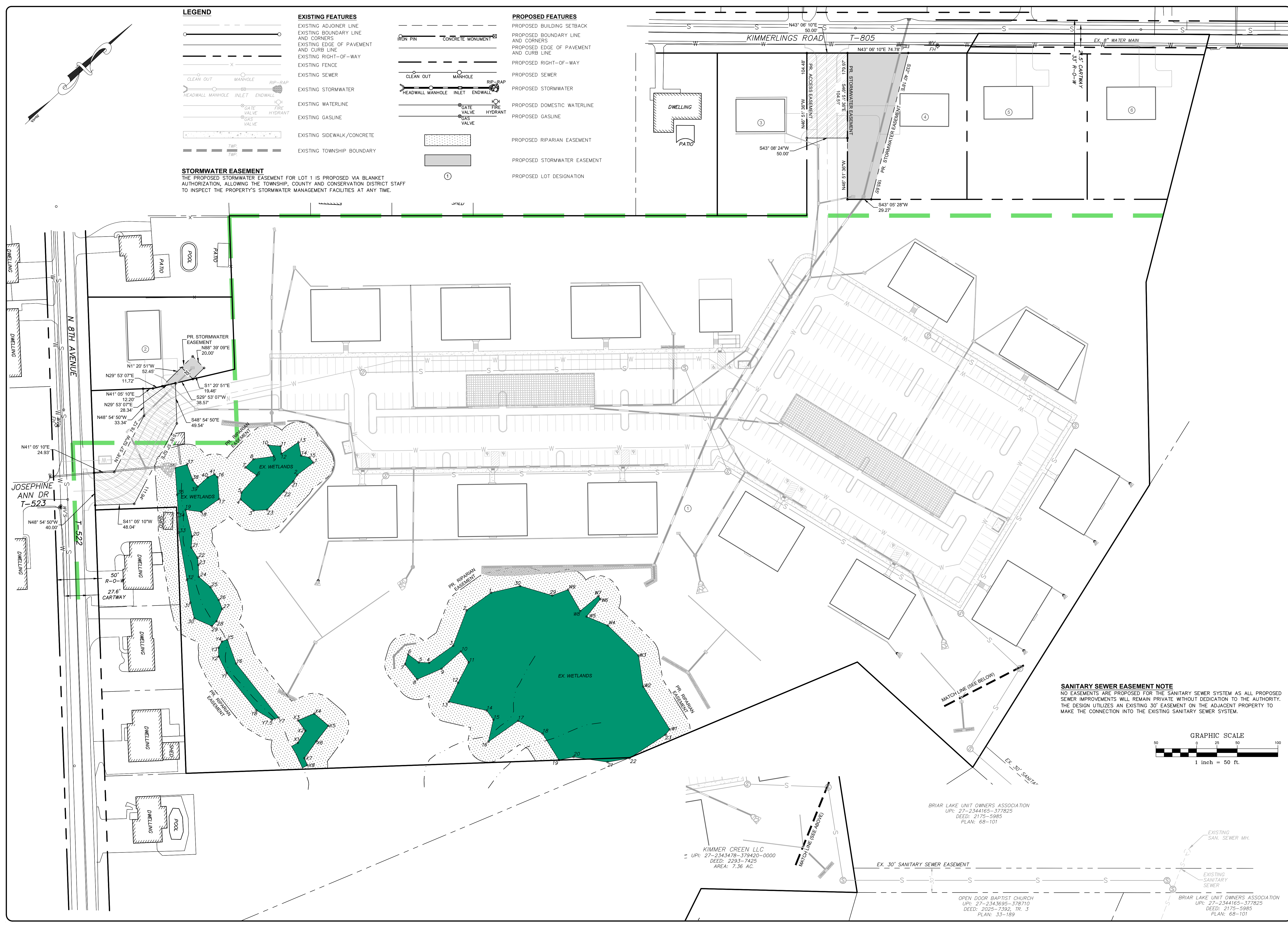
EXISTING ADJOINER LINE  
 EXISTING BOUNDARY LINE AND CORNERS  
 EXISTING EDGE OF PAVEMENT AND CURB LINE  
 EXISTING RIGHT-OF-WAY  
 EXISTING FENCE  
 EXISTING SEWER  
 EXISTING STORMWATER  
 EXISTING WATERLINE  
 EXISTING GASLINE  
 EXISTING SIDEWALK/CONCRETE  
 EXISTING TOWNSHIP BOUNDARY

**PROPOSED FEATURES**

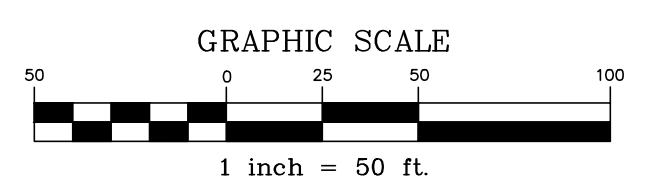
PROPOSED BUILDING SETBACK  
 PROPOSED BOUNDARY LINE AND CORNERS  
 PROPOSED EDGE OF PAVEMENT AND CURB LINE  
 PROPOSED RIGHT-OF-WAY  
 PROPOSED SEWER  
 PROPOSED STORMWATER  
 PROPOSED DOMESTIC WATERLINE  
 PROPOSED GASLINE  
 PROPOSED RIPARIAN EASEMENT  
 PROPOSED STORMWATER EASEMENT  
 PROPOSED LOT DESIGNATION

**STORMWATER EASEMENT**

THE PROPOSED STORMWATER EASEMENT FOR LOT 1 IS PROPOSED VIA BLANKET AUTHORIZATION, ALLOWING THE TOWNSHIP, COUNTY AND CONSERVATION DISTRICT STAFF TO INSPECT THE PROPERTY'S STORMWATER MANAGEMENT FACILITIES AT ANY TIME.



**SANITARY SEWER EASEMENT NOTE**  
 NO EASEMENTS ARE PROPOSED FOR THE SANITARY SEWER SYSTEM AS ALL PROPOSED SEWER IMPROVEMENTS WILL REMAIN PRIVATE WITHOUT DEDICATION TO THE AUTHORITY. THE DESIGN UTILIZES AN EXISTING 30' EASEMENT ON THE ADJACENT PROPERTY TO MAKE THE CONNECTION INTO THE EXISTING SANITARY SEWER SYSTEM.



REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-3-23	5-8-23	CDS
PER LCPO LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

**EASEMENT PLAN**  
 For  
**PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS**  
**BRIAR RIDGE COMMONS - APARTMENTS**  
 located in  
 NORTH LEBANON TOWNSHIP  
 LEBANON County, Pennsylvania

FIELD CREW:	MOD, JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	1"=50'
PROJECT #	135-19-001

**PCSM LEGEND**

- ENGINEERED SOILS WITH ERNST SEEDS
- RETENTION BASIN FLOOR MIX - LOW MAINTENANCE AND PLUG PLANTING
- INFILTRATION TEST PIT
- EMERGENCY SPILL-WAY LINING N.A.G. P300 OR EQUAL

Map Symbol	Soil Name	Slope	Hydrologic Group
BeA	Bedington shaly silt loam	0-3%	B
BeB	Bedington shaly silt loam	3-8%	B
BkB	Berks channery silt loam	3-8%	B
BkC	Berks channery silt loam	8-15%	B
Cmb	Comly silt loam	3-8%	C

BMP DIMENSIONS / CAPACITY				
BMP	AVERAGE WIDTH (FT)	AVERAGE LENGTH (FT)	INFILTRATION OR MRC CAPTURE VOLUME (C.F.)	TOTAL STORAGE VOLUME (C.F.)
MRC BASIN 1	78	154	4,401	45,552
MRC BASIN 2	64	135	4,784	25,629
MRC BASIN 3	65	87	3,157	16,182
SUBSURFACE MRC BED 1	37.5	156	4,352	14,742
SUBSURFACE INF. BED 2	39	240	8,939	13,408

- NOTES:
- CONTRACTORS AND PROPERTY OWNERS SHALL NOT STORE CONSTRUCTION MATERIALS OR LOCATE TRASH RECEPTACLES (I.E. DUMPSTERS) ON THE PAVED CARTWAY OF STREETS.
  - ALL MUD FROM CONSTRUCTION ACTIVITIES THAT IS TRACKED ONTO STREETS SHALL BE CLEANED BY THE RESPONSIBLE CONTRACTOR OR PROPERTY OWNER AT THE END OF EACH WORKDAY.
  - STORMWATER INLETS OR DRAINAGE PIPES WHICH BECOME FILLED WITH MUD OR DEBRIS FROM CONSTRUCTION ACTIVITIES SHALL BE CLEANED BY THE RESPONSIBLE CONTRACTOR OR PROPERTY OWNER.
  - THE PROPOSED DETENTION BASIN IS UNDERLAIN BY LIMESTONE.
  - ALL INVERTS AS LISTED ON THE STORMWATER STRUCTURES SHALL BE CONSIDERED THE BOTTOM ELEVATION, UNLESS A SPECIFIC SUMP (BOTTOM) ELEVATION IS LISTED ON THIS SHEET.
  - CATCH BASIN MARKINGS SHALL BE PROVIDED AT ALL INLETS. MARKINGS SHALL STATE "NO DUMPING INTO STORM DRAIN".



DATE	BY
5-8-23	CDS
5-12-23	CDS
5-12-23	CDS
6-28-23	CDS
8-4-23	CDS

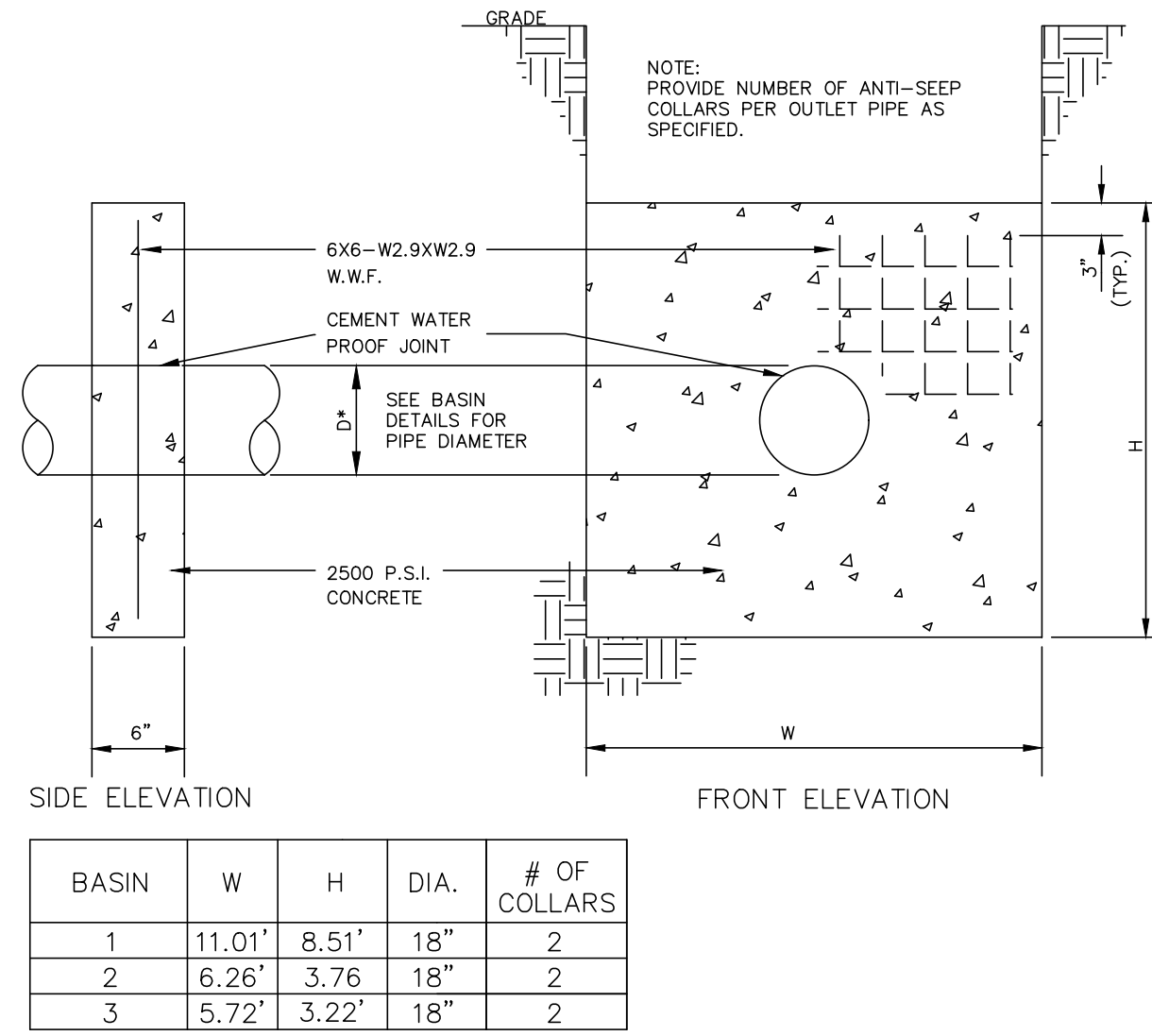
REVISION	LETTER	DATE	DESCRIPTION
1	A	4-3-23	PER ARRO COMMENT
2	B	4-4-23	PER LPOD LETTER
3	C	3-31-23	PER COLA COMMENTS
4	D	6-6-23	PER ARRO COMMENT
5	E	7-13-23	PER ARRO COMMENT

**POST CONSTRUCTION STORMWATER MANAGEMENT PLAN**  
 PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS  
 Briar Ridge Commons - APARTMENTS  
 NORTH LEBANON TOWNSHIP  
 Lebanon County, Pennsylvania

FIELD CREW:	MOD, JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	1"=50'
PROJECT #	135-19-001

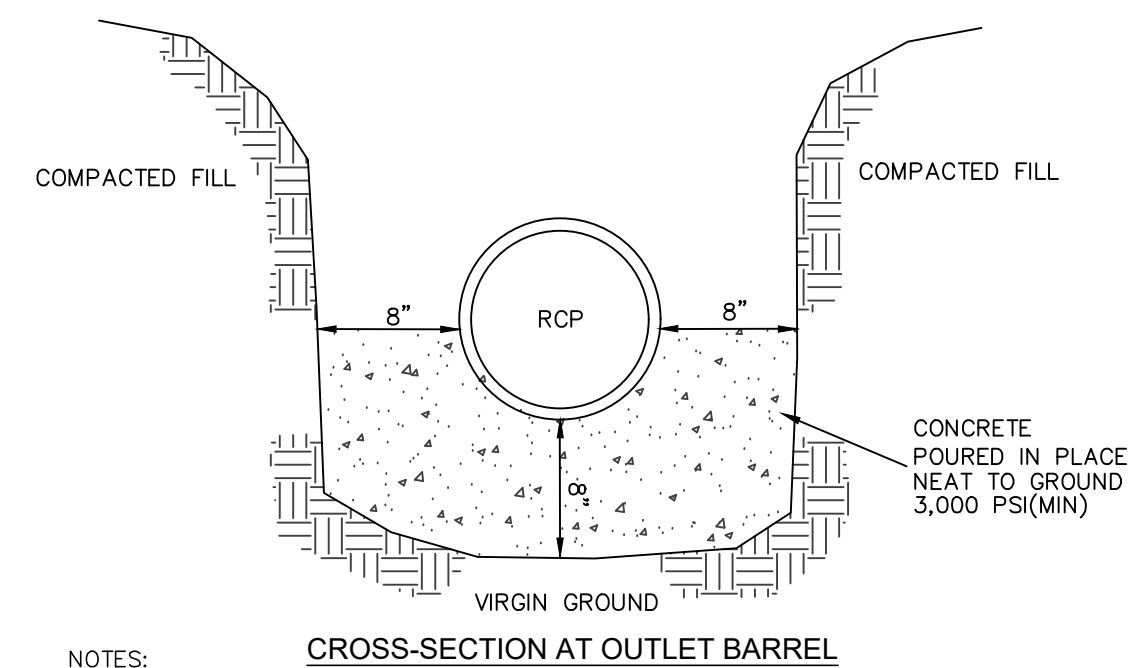






**CONCRETE ANTI-SEEP COLLAR**

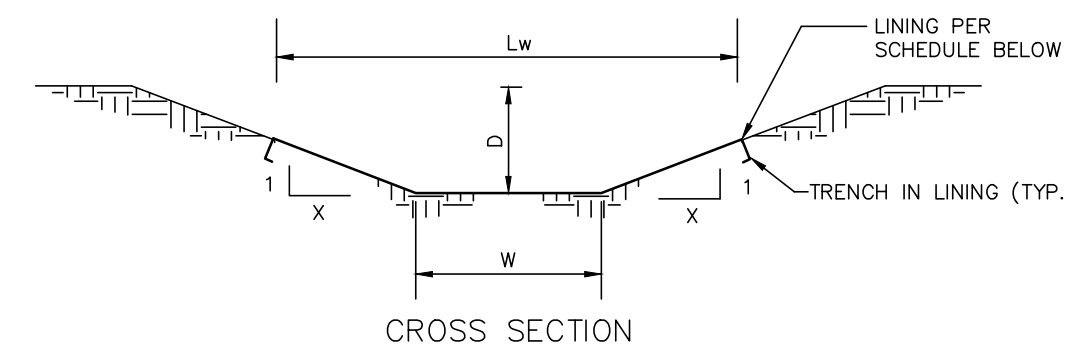
NO SCALE



- NOTES:**
- A CONCRETE CRADLE MAY BE USED IN CONJUNCTION WITH ANTI-SEEP COLLARS AND/OR FILTER DIAPHRAGM.
  - ANTI-SEEP COLLAR NUMBER, SIZE AND SPACING SHALL BE AS SHOWN ELSEWHERE IN PLAN.
  - THE CONCRETE CRADLE SHALL RUN ALONG THE ENTIRE LENGTH OF THE OUTLET PIPE.

**CONCRETE CRADLE DETAIL**

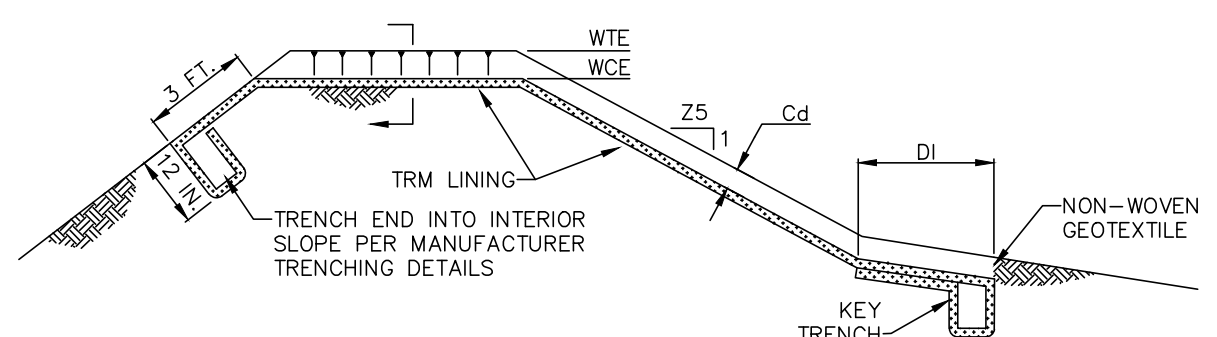
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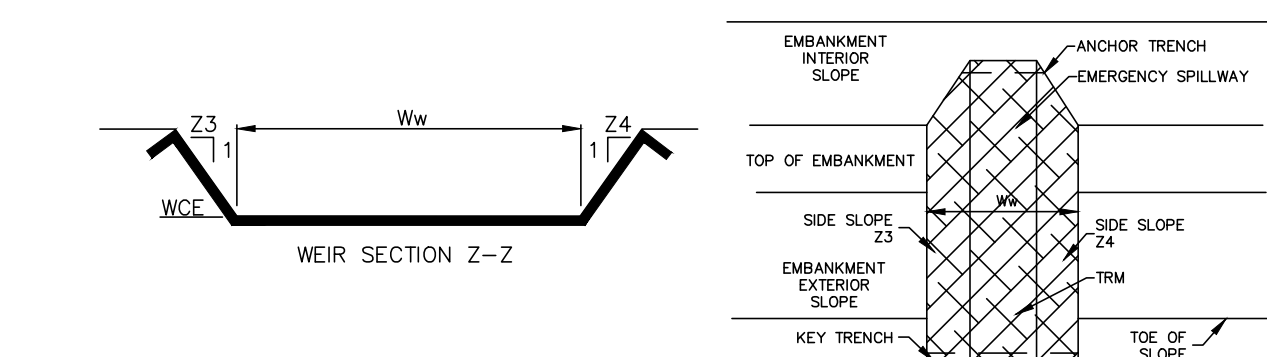
SWALE NO	WIDTH (W)	DEPTH (D)	SIDE SLOPE(X)	SLOPE %	LINING WIDTH (Lw)	LINING	TEMPORARY LINING	STAPLE PATTERN
1	2'	1.25'	3	1.2%	9.5'	GRASS	N.A.G. S-75	D
2	2'	1"	3	1.2%	8'	GRASS	N.A.G. S-75	D
3	2'	1'	3	7%	8'	GRASS	N.A.G. S200	E
4	2'	1'	3	5%	8'	GRASS	N.A.G. S200	E

**STORMWATER SWALE DETAIL**

NO SCALE

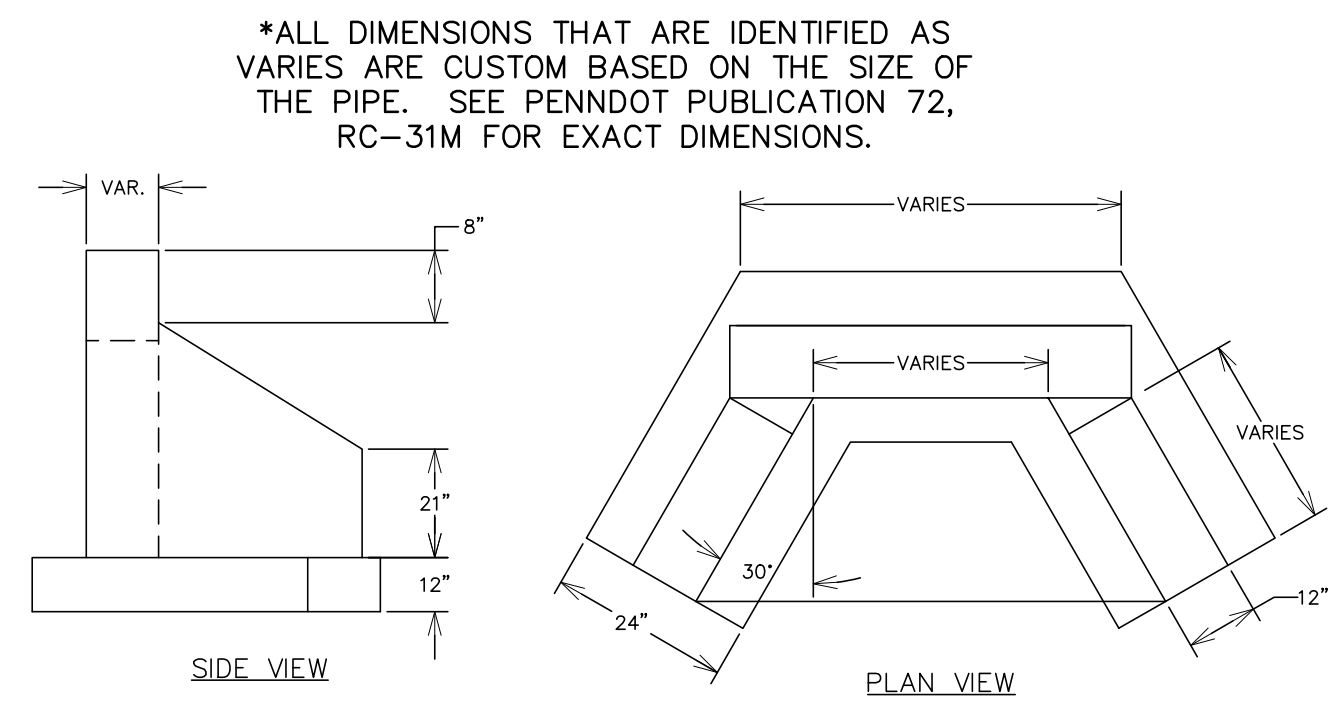


BASIN NO.	WEIR		LINING	CHANNEL	DISSIPATOR	RIPRAP THICK. (R-)	RIPRAP ORI. (N)						
	23 (FT)	24 (FT)											
1	5	5	606.25	605.00	100	P300	E	3	1.25	7	N/A	N/A	N/A
2	5	5	607.75	606.50	100	P300	E	3	1.25	7	N/A	N/A	N/A
3	5	5	614.25	613.00	50	P300	E	3	1.25	7	N/A	N/A	N/A



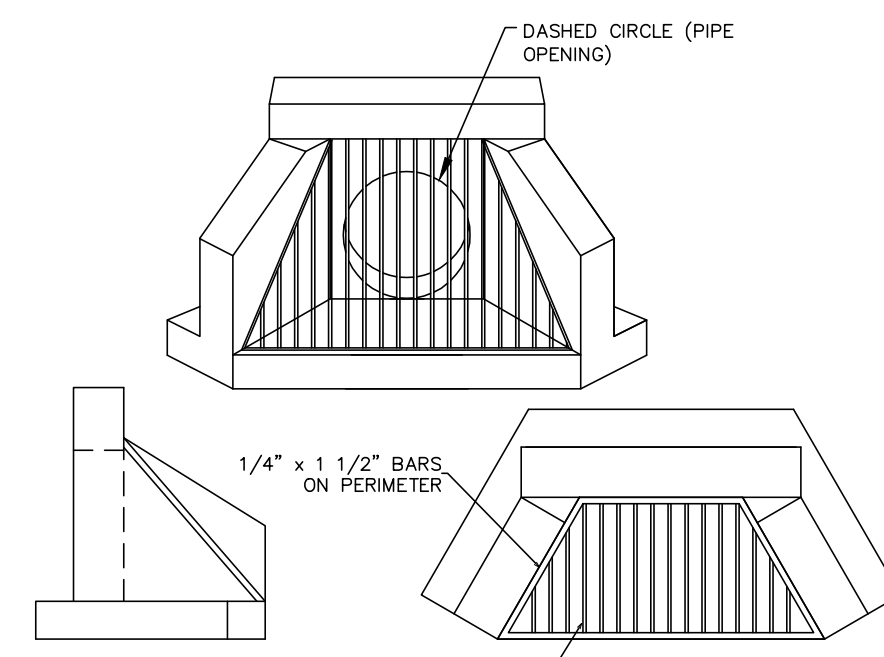
**BASIN EMERGENCY SPILLWAY DETAIL**

NO SCALE



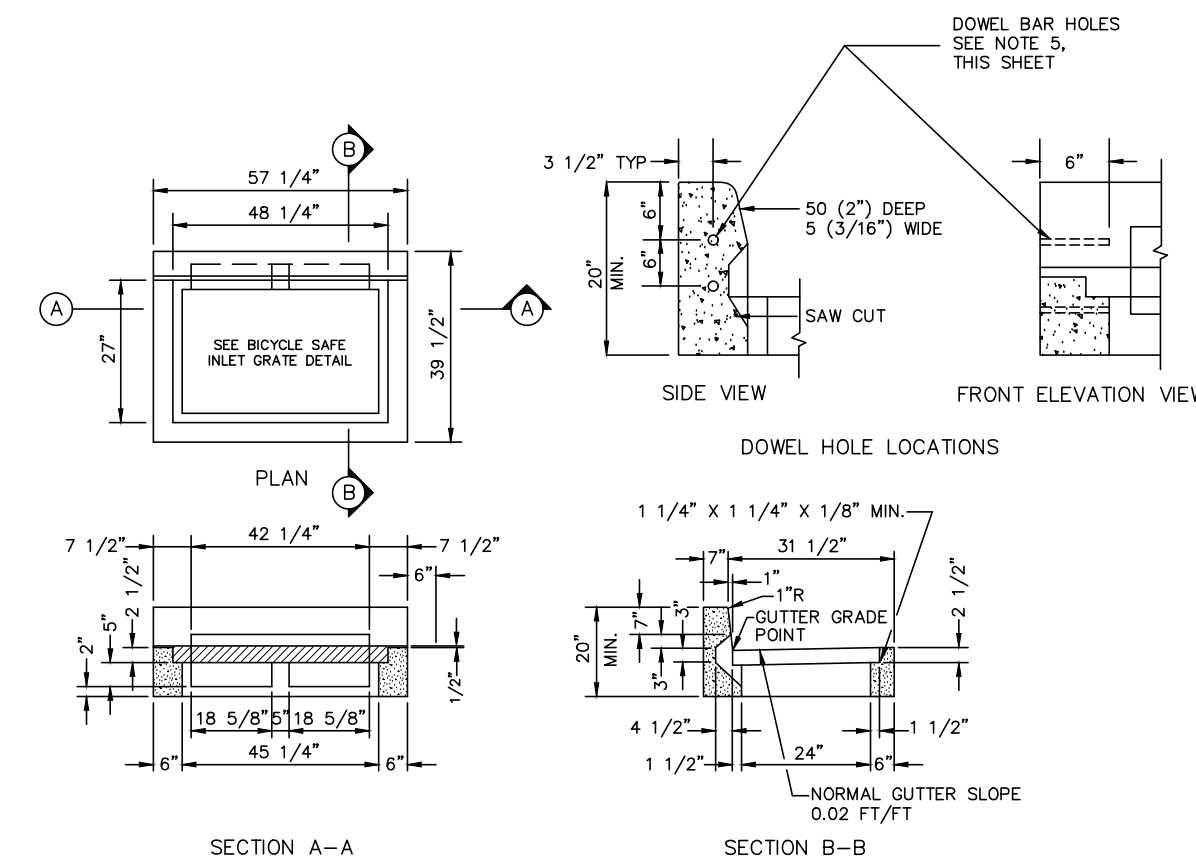
**TYPE DW ENDWALL DETAIL**

NO SCALE



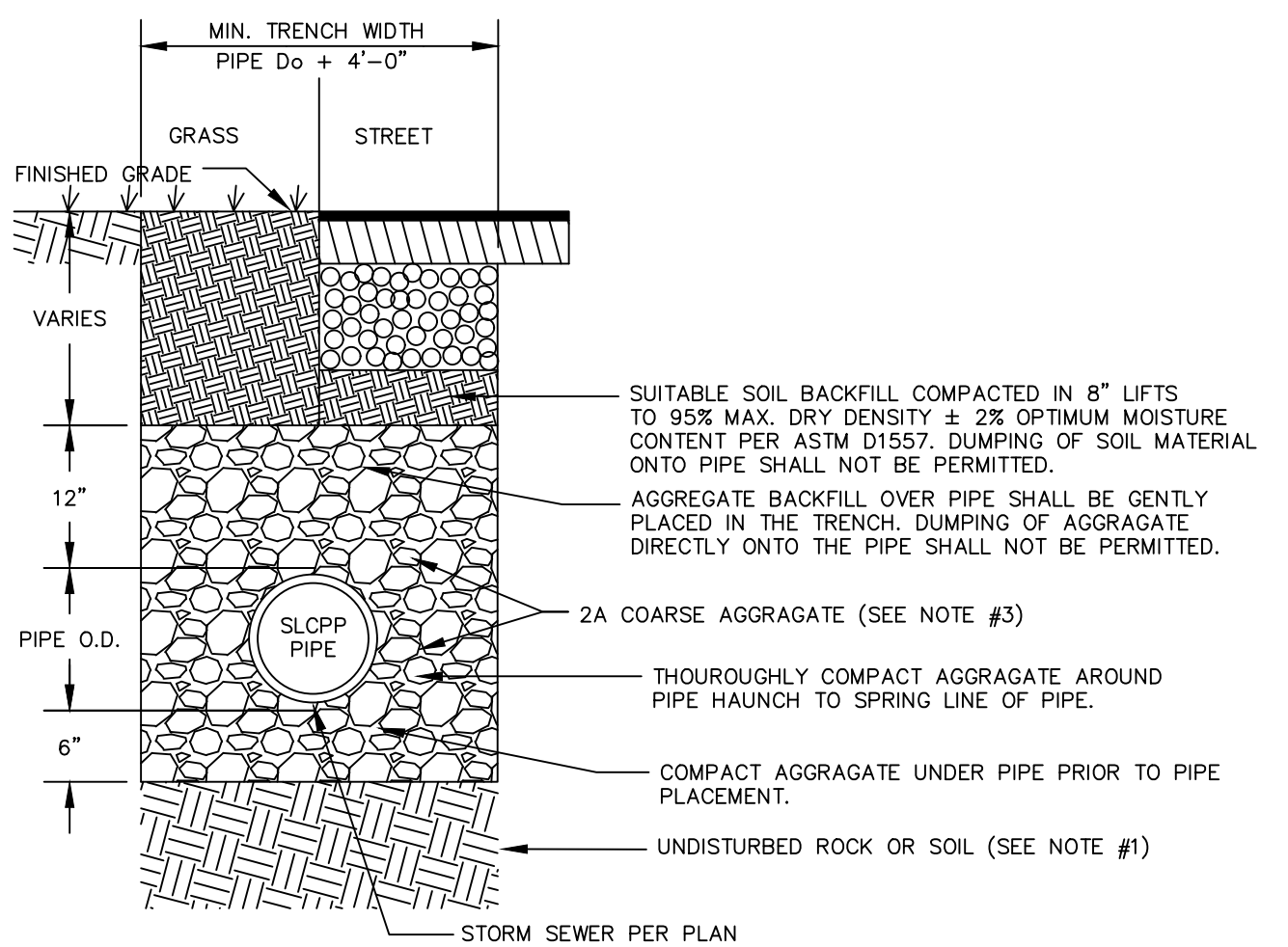
**TYPE DW ENDWALL WITH TRASH RACK DETAIL**

NO SCALE



**PENNDOT TYPE "C" INLET TOP**

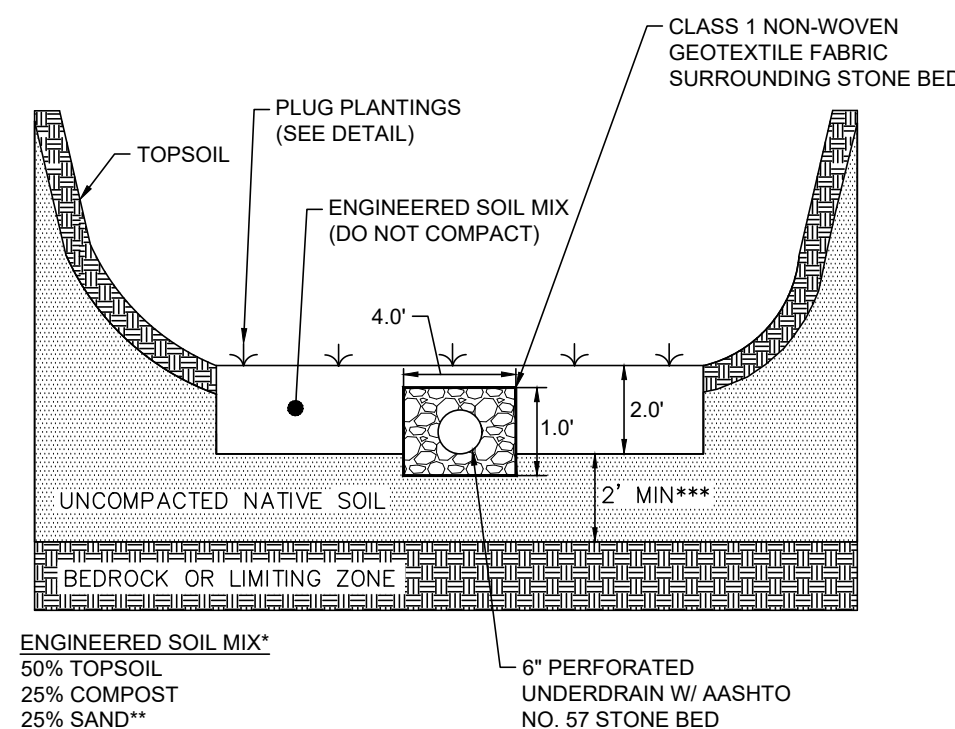
NO SCALE



- NOTE:**
- USE #2A MODIFIED AGGREGATE COMPACTED IN 4 INCH LIFTS AS NECESSARY TO FILL ANY EXCAVATED UNSUITABLE MATERIALS.
  - ALL PIPE INSTALLATIONS SHALL HAVE STRAIGHT ALIGNMENTS BETWEEN DRAINAGE STRUCTURES.
  - USE NO. 2A STONE FOR OUTLET PIPES IN DETENTION BASIN EMBANKMENTS.
  - ALL TRENCHING SHALL CONFORM TO THE CURRENT PENNDOT RC-30M DRAWINGS.
  - DETAIL NOT TO BE USED FOR RCP BASIN OUTLET PIPES AS STONE BACKFILL IS NOT PERMITTED WITHIN THE EMBANKMENT.

**TYPICAL TRENCH DETAIL FOR SLCPP INSTALLATION**

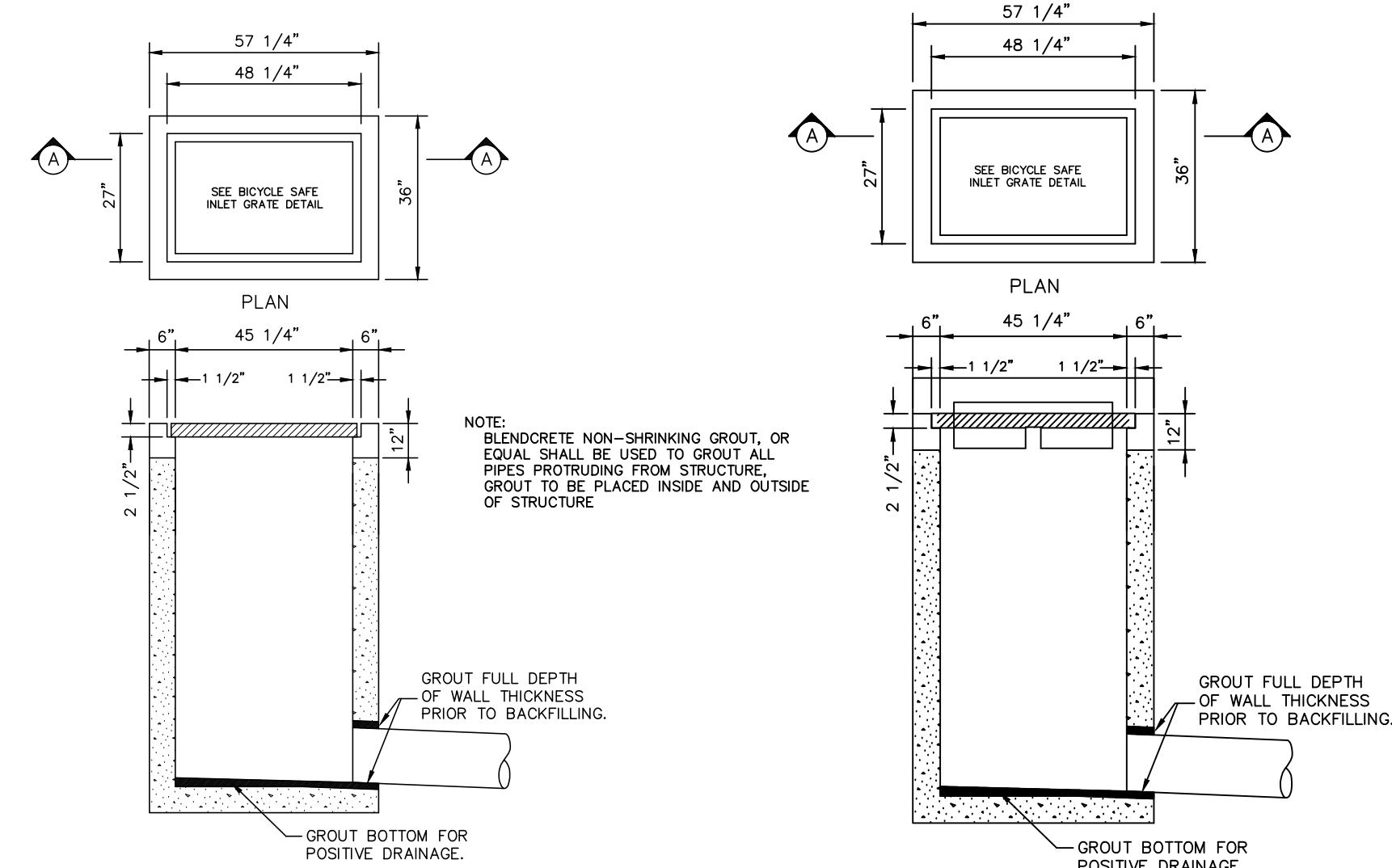
NO SCALE



- NOTE:**
- CONCRETE TOP UNITS WHICH SEAT THE GRATE DIRECTLY WITHIN THE UNIT SHALL UTILIZE 1-1/4" X 1-1/4" ANGLES EMBEDDED IN THE CONCRETE AS A BEARING AREA FOR THE GRATE.
  - THIS STANDARD DEPICTS THE SHAPE AND DIMENSIONS REQUIRED FOR UNIFORMITY AND COMPATIBILITY. IT IS NOT INTENDED TO SHOW THE DETAILS REQUIRED FOR MANUFACTURING AND HANDLING. ONLY THOSE ITEMS WHICH ARE SUPPLIED BY AN APPROVED MANUFACTURER AS LISTED IN PA BULLETIN NO. 15 WILL BE PERMITTED.
  - WHENEVER AN INLET IS REQUIRED WITHIN A MOUNTABLE CURB SECTION, A TYPE M INLET WILL BE LOCATED ADJACENT TO THE BACK EDGE OF THE CURB AND WILL BE FLUSH WITH THE PAVEMENT SURFACE.
  - THE SELECTION OF COMPONENTS TO ACHIEVE A SPECIFIED INLET TYPE IS THE CONTRACTOR'S RESPONSIBILITY.
  - PIPES SHALL BE LOCATED AS REQUIRED.
  - ALL INLETS OVER FOUR (4) FEET IN DEPTH SHALL BE PROVIDED WITH STEPS FOR ACCESSIBILITY.
  - GRADE ADJUSTMENT RINGS MAY BE OF MASONRY OR PRECAST CONCRETE CONSTRUCTION, AS APPROVED.
  - INLET BOX SHALL BE PRECAST CONCRETE.
  - REFER TO PA DOT BUREAU OF DESIGN STANDARDS RC-46M.
  - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PA DOT PUBLICATION 408, SECTION 605 & STANDARDS FOR ROADWAY CONSTRUCTION, RC-46M. CONTRACTOR SHALL VERIFY INLET BOX SIZING BASED ON PIPE SIZES AND ALIGNMENT PRIOR TO ORDERING PRECAST STRUCTURES.
  - ALL DRAINAGE STRUCTURES SHALL HAVE POURED-IN-PLACE CONCRETE CHANNEL BOTTOM, UNLESS OTHERWISE NOTED.
  - ALL STORMWATER INLET BOXES, CONCRETE TOP UNITS, AND INLET GRATES AND FRAMES SHALL CONFORM TO CURRENT PENNDOT RC-46M STANDARDS.
  - ALL INLETS SHALL BE CONSTRUCTED WITH CONCRETE FLOW CHANNELS CAST-IN-PLACE IN THE BOTTOM OF EACH INLET, EXCEPT THE LAST TWO INLETS BEFORE A STORM SEWER OUTFALL SHALL BE CONSTRUCTED WITH A MINIMUM 12" SUMP TO CATCH DEBRIS. INLET SUMPS SHALL HAVE WEEPHOLES.

**TYPICAL MRC BASIN BOTTOM CROSS SECTION DETAIL**

NO SCALE



**TYPE M INLET DETAIL (RC-46M)**

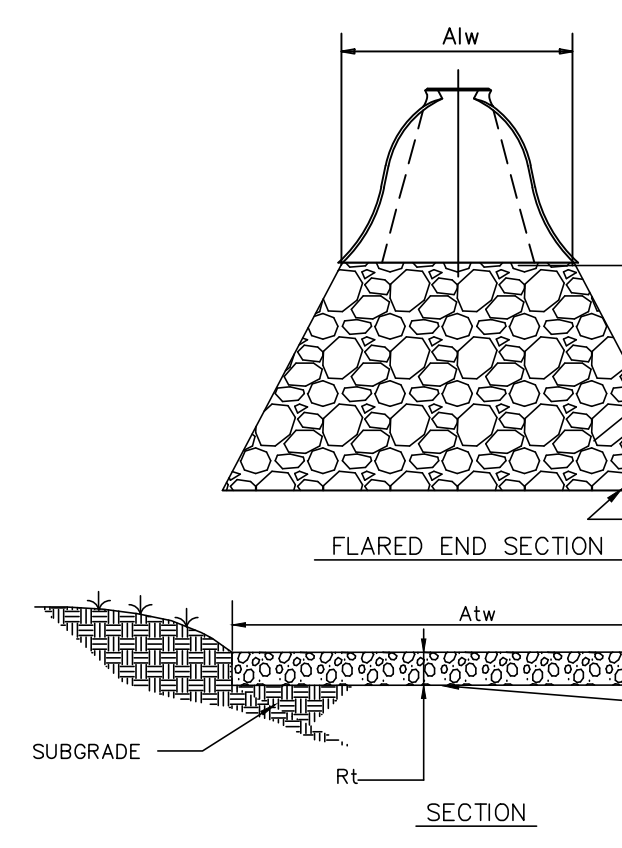
NO SCALE

**TYPE C INLET DETAIL (RC-46M)**

NO SCALE

**INLET NOTES:**

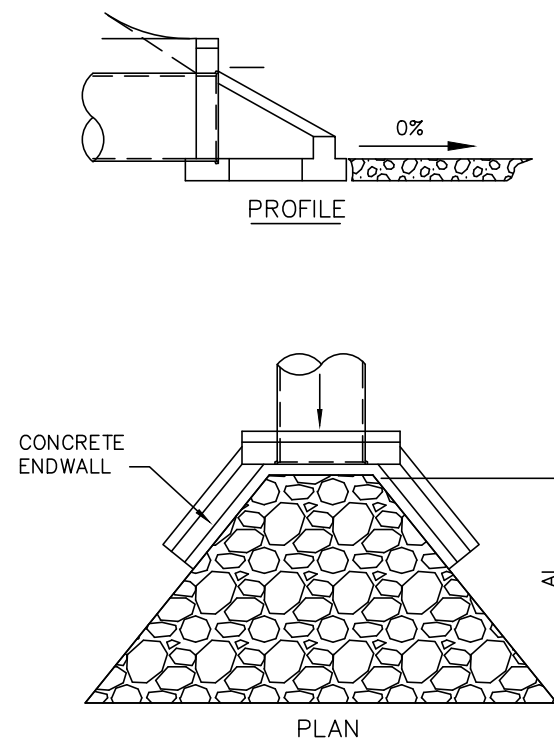
- CONCRETE TOP UNITS WHICH SEAT THE GRATE DIRECTLY WITHIN THE UNIT SHALL UTILIZE 1-1/4" X 1-1/4" ANGLES EMBEDDED IN THE CONCRETE AS A BEARING AREA FOR THE GRATE.
- THIS STANDARD DEPICTS THE SHAPE AND DIMENSIONS REQUIRED FOR UNIFORMITY AND COMPATIBILITY. IT IS NOT INTENDED TO SHOW THE DETAILS REQUIRED FOR MANUFACTURING AND HANDLING. ONLY THOSE ITEMS WHICH ARE SUPPLIED BY AN APPROVED MANUFACTURER AS LISTED IN PA BULLETIN NO. 15 WILL BE PERMITTED.
- WHENEVER AN INLET IS REQUIRED WITHIN A MOUNTABLE CURB SECTION, A TYPE M INLET WILL BE LOCATED ADJACENT TO THE BACK EDGE OF THE CURB AND WILL BE FLUSH WITH THE PAVEMENT SURFACE.
- THE SELECTION OF COMPONENTS TO ACHIEVE A SPECIFIED INLET TYPE IS THE CONTRACTOR'S RESPONSIBILITY.
- PIPES SHALL BE LOCATED AS REQUIRED.
- ALL INLETS OVER FOUR (4) FEET IN DEPTH SHALL BE PROVIDED WITH STEPS FOR ACCESSIBILITY.
- GRADE ADJUSTMENT RINGS MAY BE OF MASONRY OR PRECAST CONCRETE CONSTRUCTION, AS APPROVED.
- INLET BOX SHALL BE PRECAST CONCRETE.
- REFER TO PA DOT BUREAU OF DESIGN STANDARDS RC-46M.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PA DOT PUBLICATION 408, SECTION 605 & STANDARDS FOR ROADWAY CONSTRUCTION, RC-46M. CONTRACTOR SHALL VERIFY INLET BOX SIZING BASED ON PIPE SIZES AND ALIGNMENT PRIOR TO ORDERING PRECAST STRUCTURES.
- ALL DRAINAGE STRUCTURES SHALL HAVE POURED-IN-PLACE CONCRETE CHANNEL BOTTOM, UNLESS OTHERWISE NOTED.
- ALL STORMWATER INLET BOXES, CONCRETE TOP UNITS, AND INLET GRATES AND FRAMES SHALL CONFORM TO CURRENT PENNDOT RC-46M STANDARDS.
- ALL INLETS SHALL BE CONSTRUCTED WITH CONCRETE FLOW CHANNELS CAST-IN-PLACE IN THE BOTTOM OF EACH INLET, EXCEPT THE LAST TWO INLETS BEFORE A STORM SEWER OUTFALL SHALL BE CONSTRUCTED WITH A MINIMUM 12" SUMP TO CATCH DEBRIS. INLET SUMPS SHALL HAVE WEEPHOLES.



**FLARED END SECTION/ENDWALL RIP RAP DETAIL**

NO SCALE

PIPE NO.	PIPE DIA. (In)	RIPRAP SIZE	R1 (In)	A1 (ft)	Atw (ft)	Atw (ft)
EW-34	18	R-4	18	10	5	15
EW-3	18	R-4	18	8	5	8
EW-43	18	R-4	18	8	5	8
EX. CULVERT	18	R-4	18	16	5	21
ROOF LEADER FES (TYP.)	6-12	R-3	9	6	3	9



DATE	BY
5-8-23	CDS
5-12-23	CDS
5-12-23	CDS
6-28-23	CDS
8-4-23	CDS

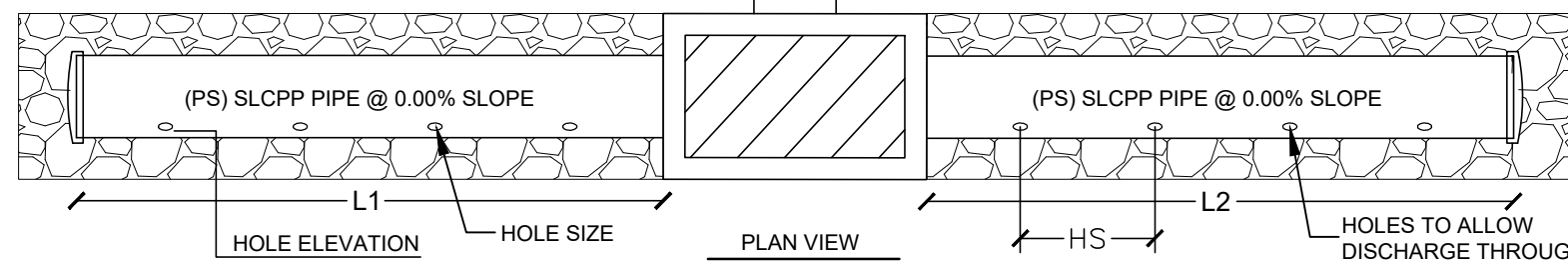
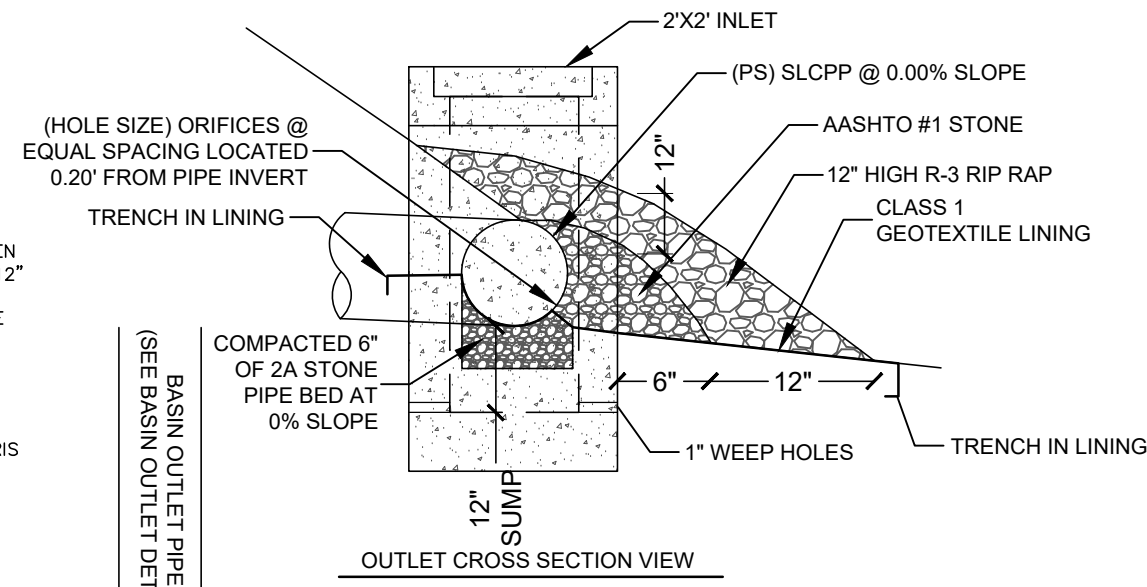
POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS  
 PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS  
 Briar Ridge Commons - Apartments  
 North Lebanon Township  
 Lebanon County, Pennsylvania

**MSI**  
 Steadbeck Engineering & Surveying Inc.  
 279 Lebanon, Pennsylvania 17042  
 Phone: (717) 272-7110  
 Fax: (717) 272-7348

FIELD CREW:	MOD, JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	1"=50'
PROJECT #	135-19-001

**NOTES:**

- LEVEL SPREADER PIPE SHALL BE INSTALLED FLAT WITH ALL HOLES IN THE PIPE INSTALLED AT THE SAME ELEVATION TO ALLOW EVEN DISTRIBUTION OF STORM WATER DISCHARGE.
- PROVIDE AASHTO #1 AROUND PIPE HOLES TO ALLOW FOR EVEN DISTRIBUTION OF STORM DISCHARGE. STONE SHALL EXTEND 12" BEYOND FRONT FACE OF STORM INLET.
- PROVIDE AN ADDITIONAL 12" (TAPERED TO 24" AT DISCHARGE ELEVATION) OF R-3 RIPRAP TO PROTECT THE AASHTO #1 STONE AND THE STORM PIPE.
- 6" OF COMPACTED 2A STONE SHALL BE PROVIDED BENEATH THE LEVEL SPREADER PIPE TO PROVIDE AN EVEN FLAT SURFACE FOR THE PIPE TO SIT ON.
- INLET SHALL BE SUMPED 12" TO ALLOW COLLECTION OF DEBRIS TO PREVENT CLOGGING OF LEVEL SPREADER PIPE. INLET SHALL BE MONITORED AND CLEANED AT LEAST TWICE PER YEAR.



ID	PIPE SIZE (PS)	HOLE SIZE	HOLE ELEVATION	HOLE SPACING (HS)	# OF HOLES	L1	L2	TOTAL PIPE LENGTH (L1+L2)
LS-1	15"	1.5"	590.45	0.402'	50	10'	10'	20'
LS-4B	15"	1.0"	602.45	0.457'	188	35'	50'	85'
LS-5B	15"	1.5"	609.70	0.572'	35	10'	10'	20'
LS-5S	18"	1.5"	611.70	0.289'	259	60'	15'	75'
LS-50	24"	1.5"	604.20	0.247'	930	210'	20'	230'

**LEVEL SPREADER DETAIL**

NO SCALE

ALL INLETS DENOTED BELOW SHALL BE INSTALLED WITH A FLEXSTORM PURE FILTER OR APPROVED EQUIVALENT.

**INLETS**

I-18, I-19, I-20, I-21 (OS-21), I-22, I-23, I-24, I-28 (OS-28), I-29, I-30, I-31, I-32, I-33, I-46

**INSTALLATION:**

- INSTALL PCSM WATER QUALITY FILTERS ONLY AFTER THE TRIBUTARY AREA IS STABLE.
- REMOVE THE GRATE FROM THE CASTING OR CONCRETE DRAINAGE STRUCTURE.
- CLEAN THE LEDGE (LIP) OF THE CASTING FRAME OR DRAINAGE STRUCTURE TO ENSURE IT IS FREE OF STONE AND DIRT.
- DROP IN THE FLEXSTORM INLET FILTER THROUGH THE CLEAR OPENING AND BE SURE THE SUSPENSION HANGERS REST FIRMLY ON THE INSIDE LEDGE (LIP) OF THE CASTING.
- REPLACE THE GRATE AND CONFIRM IT IS ELEVATED NO MORE THAN 1/8", WHICH IS THE THICKNESS OF THE STEEL HANGERS.

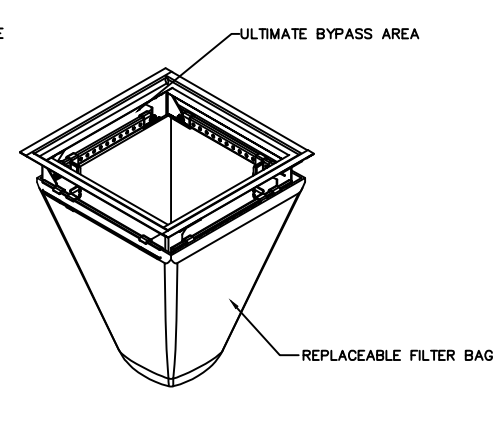
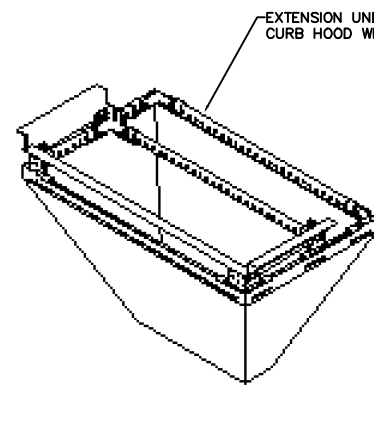
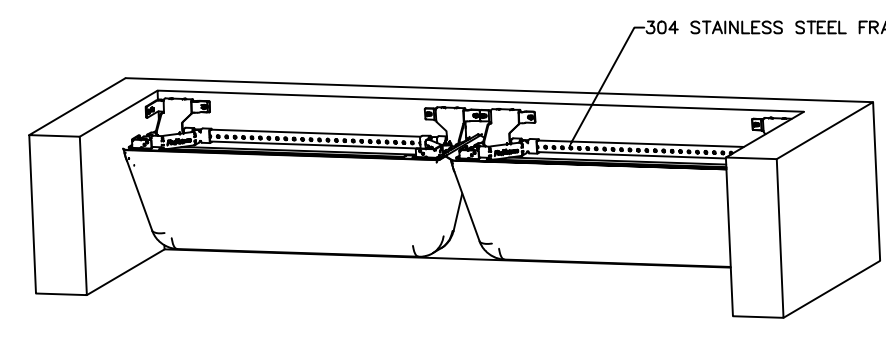
**MAINTENANCE:**

- EMPTY THE SEDIMENT BAG IF MORE THAN HALF FILLED WITH SEDIMENT AND DEBRIS, OR AS DIRECTED BY THE ENGINEER.
- REMOVE THE GRATE, ENGAGE THE LIFTING BARS OR HANDLES WITH THE FLEXSTORM REMOVAL TOOL, AND LIFT FROM THE DRAINAGE STRUCTURE.
- DISPOSE OF THE SEDIMENT OR DEBRIS AS DIRECTED BY THE ENGINEER OR MAINTENANCE CONTRACT IN ACCORDANCE WITH EPA GUIDELINES.
- AS AN ALTERNATIVE, AN INDUSTRIAL VACUUM MAY BE USED TO COLLECT THE ACCUMULATED SEDIMENT.
- REMOVE ANY CAKED-ON SILT FROM THE SEDIMENT BAG AND REVERSE FLUSH THE BAG WITH MEDIUM SPRAY FOR OPTIMAL FILTRATION.
- REPLACE THE BAG IF TORN OR PUNCTURED TO 1/2" DIAMETER OR GREATER ON THE LOWER HALF OF THE BAG.
- DISPOSE OF ALL OIL CONTAMINATED PRODUCTS IN ACCORDANCE WITH EPA GUIDELINES.
- REMOVE THE BAG BY LOOSENING OR CUTTING OFF THE CLAMPING BAND.
- TAKE THE NEW SEDIMENT BAG, WHICH IS EQUIPPED WITH A STAINLESS-STEEL WORM DRIVE CLAMPING BAND, AND USE A SCREW DRIVER TO TIGHTEN THE BAG AROUND THE FRAME CHANNEL.
- ENSURE THE BAG IS SECURE AND THAT THERE IS NO SLACK AROUND THE PERIMETER OF THE BAND.
- WRITTEN REPORTS DOCUMENTING ALL INSPECTIONS, REPAIRS, AND MAINTENANCE ACTIVITIES SHALL BE MAINTAINED ON SITE BY THE PROPERTY OWNER AT ALL TIMES.

**SPECIFICATIONS:**

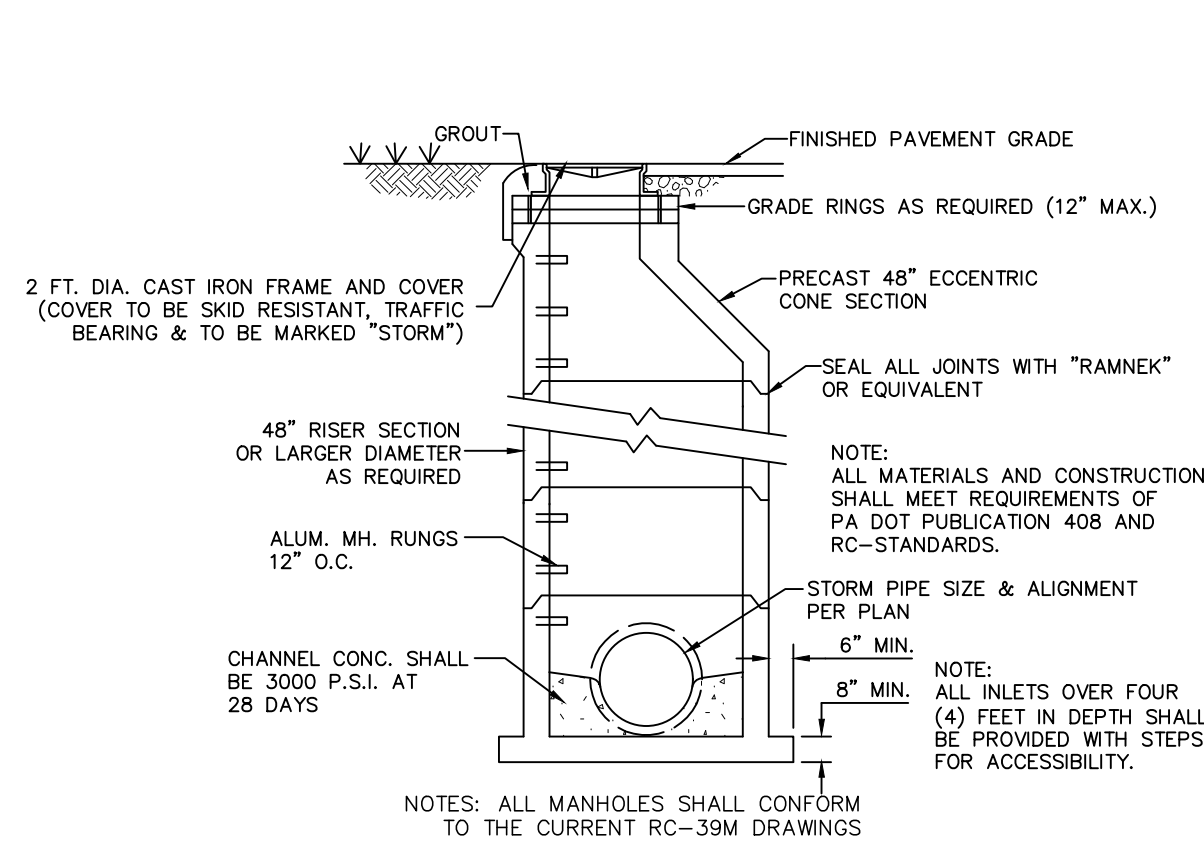
- ALL FRAMING SHALL BE CONSTRUCTED OF 304 STAINLESS STEEL FOR 25 YEAR SERVICE LIFE RATING.
- REPLACEABLE GEOTEXTILE FILTER BAG SHALL BE ATTACHED TO THE FRAME WITH A STAINLESS STEEL LOCKING BAND.
- TOTAL BYPASS CAPACITY: BYPASS CAPACITY WILL VARY WITH EACH SIZE DRAINAGE STRUCTURE. FLEXSTORM DESIGNS FRAMING BYPASS TO MEET OR EXCEED THE DESIGN FLOW OF THE PARTICULAR DRAINAGE STRUCTURE.
- UPON ORDERING CONFIRMATION OF THE DOT CALL OUT, PRECAST OR CASTING MAKE AND MODEL, OR DETAILED DIMENSIONAL FORMS MUST BE PROVIDED TO CONFIGURE AND ASSEMBLE YOUR CUSTOMIZED FLEXSTORM INLET FILTER. PART NUMBER ALONE IS NOT SUFFICIENT.

For Open Throat Curb Inlets - Mounted to Wall Beneath Curb Opening	For Rectangular/Square Openings with Grates			Minimum Bypass Flow Rates (CFS) Based on Nominal Frame Size with minimum 2" bypass flow gap.
Curb Opening Size	Flexstorm Frame P/N	Flexstorm Frame P/N	Flexstorm Frame P/N	2.4
Up to 4" curb openings (1 Filter)	62HDMW1	62HDMW1	62HDMW1	3.5
Between 4" and 8" curb openings (2 Filters)	62HDMW2	62HDMW2	62HDMW2	5.0
Between 8" and 12" curb openings (3 Filters)	62HDMW3	62HDMW3	62HDMW3	7.2
Between 12" and 18" curb openings (4 Filters)	62HDMW4	62HDMW4	62HDMW4	



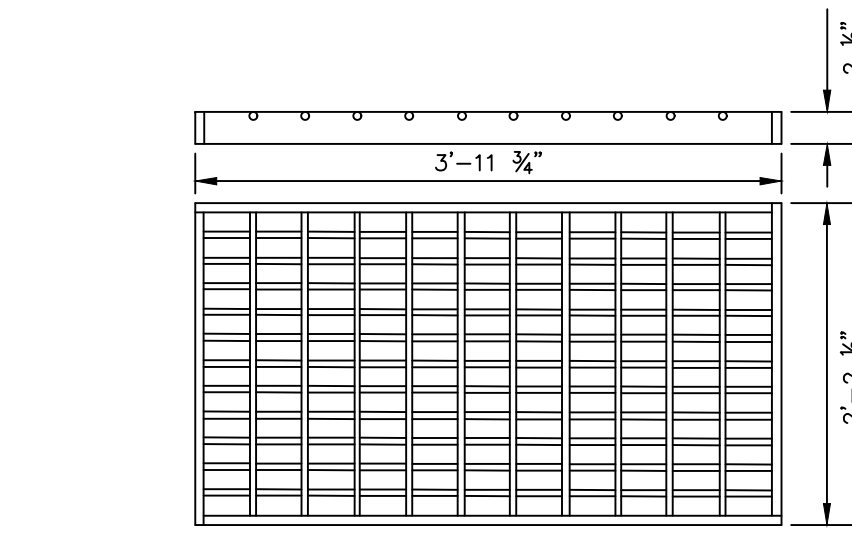
**FLEXSTORM FILTER BASKET DETAIL**

NO SCALE



**STORMWATER MANHOLE CROSS SECTION**

NO SCALE



- NOTES: ALL INLET GRATES SHALL CONFORM TO THE CURRENT PENNDOT RC-45M DRAWINGS
- GRATES SHOWN FIT 24"x45 1/4" PRECAST TOP UNITS AND TYPES M & C STRUCTURAL STEEL FRAMES AND CONFORM TO PENN D.O.T. BUREAU OF HIGHWAY DESIGN "STANDARDS FOR ROADWAY CONSTRUCTION" RC-45M.
  - GRATES FOR 24"x72" PRECAST TOP UNITS AND STRUCTURAL STEEL FRAMES ARE ALSO AVAILABLE.
  - ALL GRATES WILL SAFELY WITHSTAND HS-25 HIGHWAY LOADING.
  - STEEL SHALL BE COMESTIC AND SHALL CONFORM TO ASTM A36; WELDING SHALL BE DONE BY CERTIFIED WELDERS; GRATES RECEIVE (1) SHOP COAT OF BLACK ASPHALT PAINT.

**STRUCTURAL STEEL GRATE-BICYCLE SAFE**

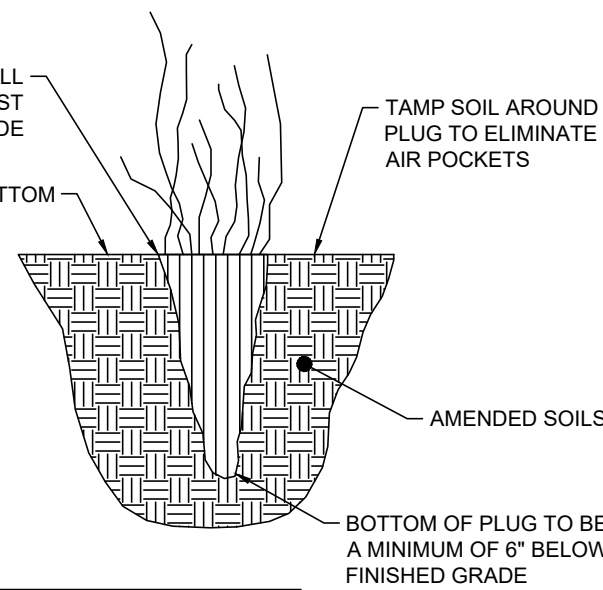
NO SCALE

- NOTES:
- PLUGS SHALL BE INSTALLED IN A RANDOM PATTERN AT 5' SPACING WITHIN THE BASIN BOTTOM.
  - A MINIMUM OF ONE (1) WOODY AND ONE (1) HERBACEOUS SPECIES MUST BE USED WITH QUANTITIES BEING ROUGHLY THE SAME BETWEEN ANY SPECIES SELECTED.
  - AN ALTERNATIVE SPECIES FROM THOSE LISTED BELOW MAY BE UTILIZED WITH APPROVAL FROM THE ENGINEER AND LOCAL CONSERVATION DISTRICT.

TYPE	LATIN NAME	COMMON NAME
HERBACEOUS	ASCLEPLAS INCARNATA	SWAMP MILKWEED
HERBACEOUS	CALTHA PALUSTRIS	MARSH MARIGOLD
WOODY	RHODODENDRON VISCOSUM	SWAMP AZALEA
WOODY	ROSA PALUSTRIS	SWAMP ROSE

**PLUG PLANTING DETAIL**

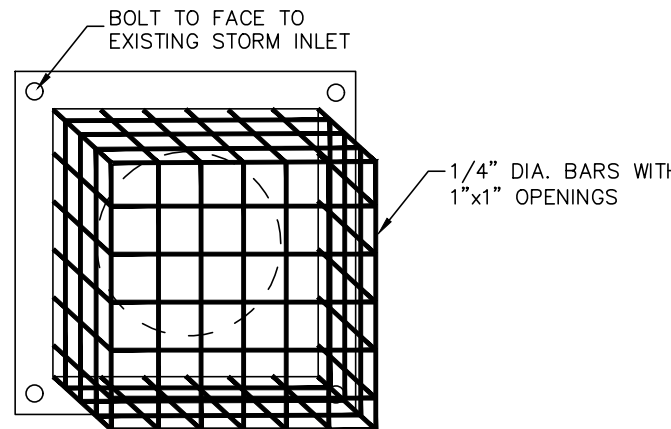
NO SCALE



TYPE	LATIN NAME	COMMON NAME
HERBACEOUS	ASCLEPLAS INCARNATA	SWAMP MILKWEED
HERBACEOUS	CALTHA PALUSTRIS	MARSH MARIGOLD
WOODY	RHODODENDRON VISCOSUM	SWAMP AZALEA
WOODY	ROSA PALUSTRIS	SWAMP ROSE

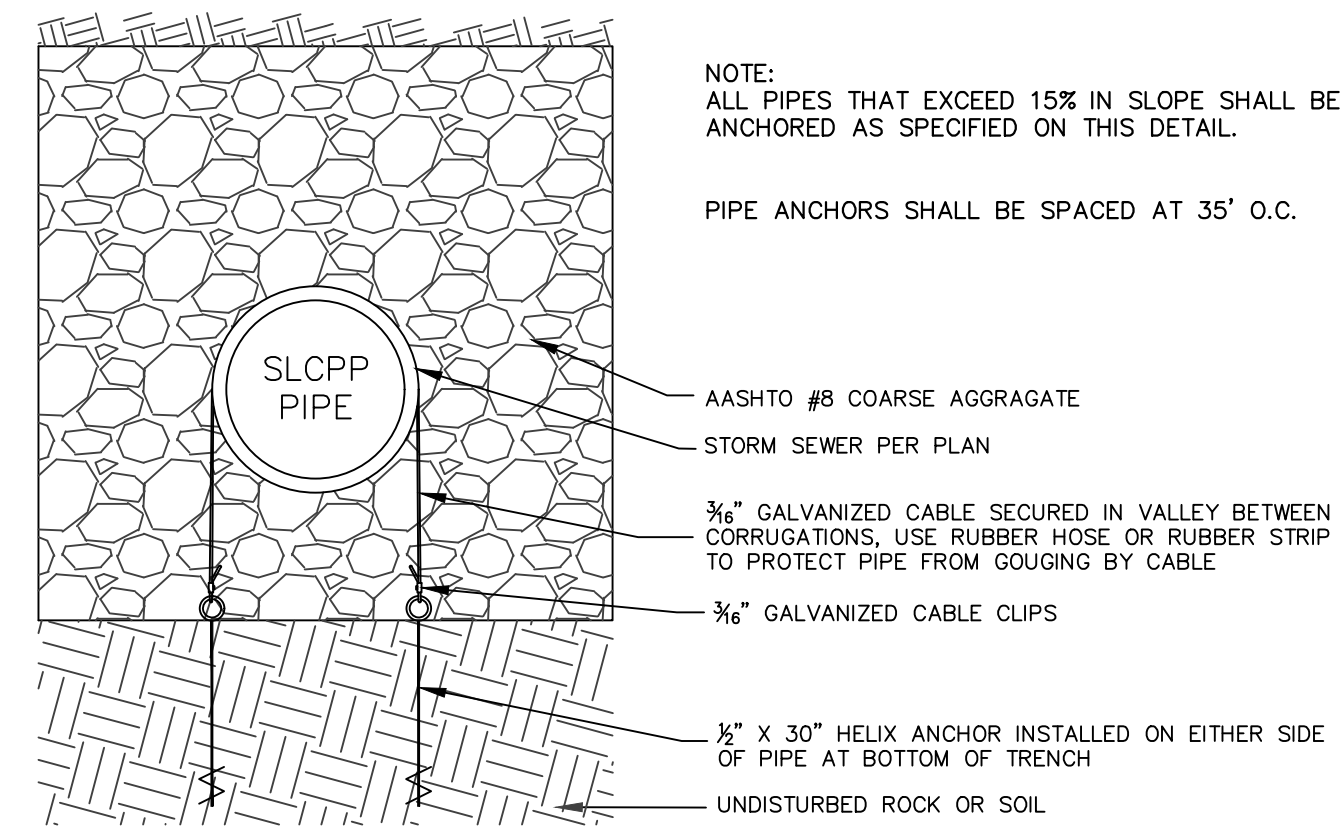
**PLUG PLANTING DETAIL**

NO SCALE



**STORM INLET TRASH RACK DETAIL**

NO SCALE

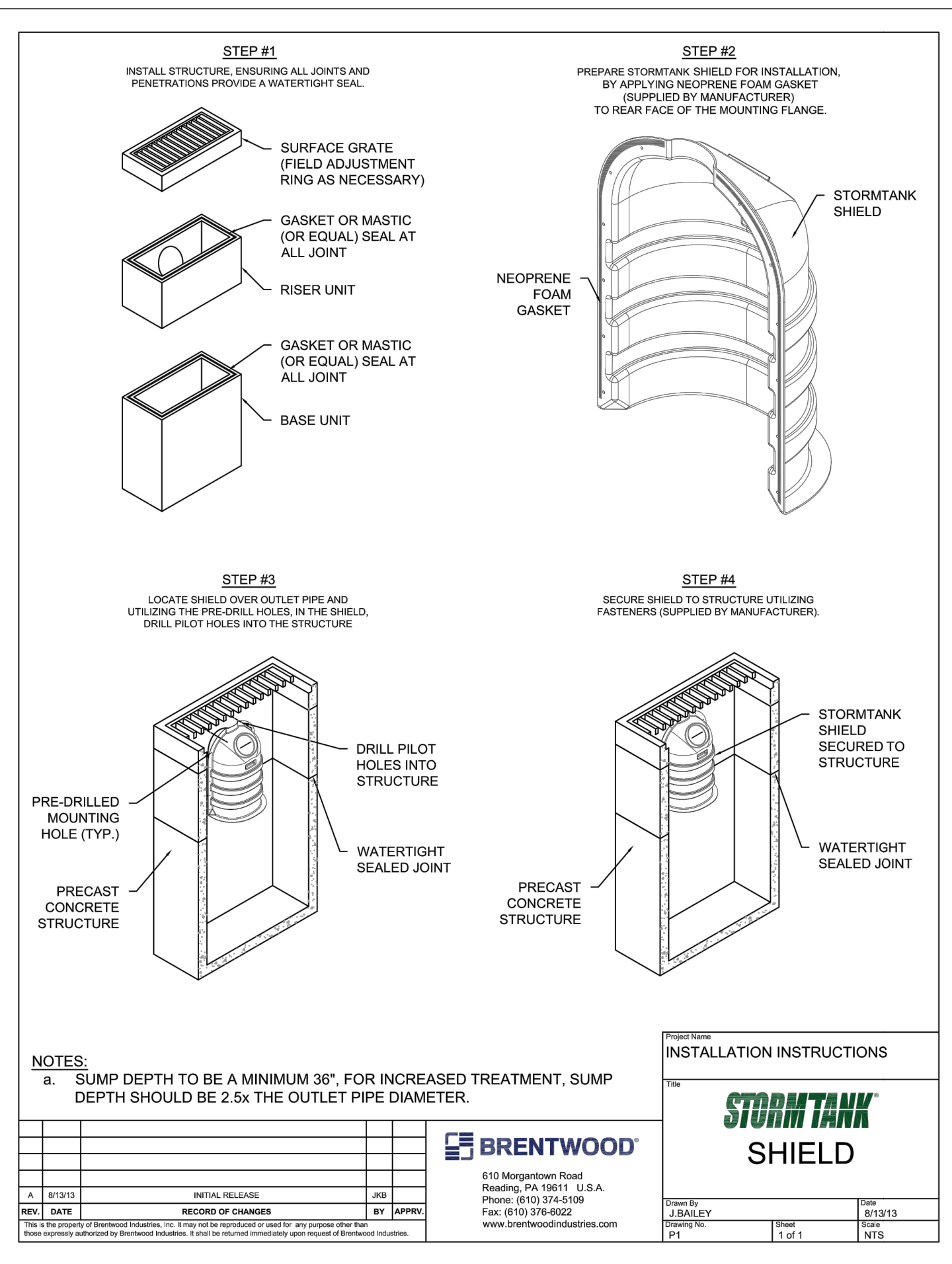


**TYPICAL STEEP SLOPE PIPE ANCHOR ASSEMBLY**

NO SCALE

**BRENTWOOD STORMTANK SHIELD INVENTORY SUMMARY**

STRUCTURE	OUTLET PIPE DIA. (IN.)	SUMP (IN.)	PRODUCT NAME
I-18	15	36	STKS-18
I-20	15	36	STKS-18
I-29	15	36	STKS-18
I-30	15	36	STKS-18
I-31	15	36	STKS-18
I-32	15	36	STKS-18
I-46	15	36	STKS-18

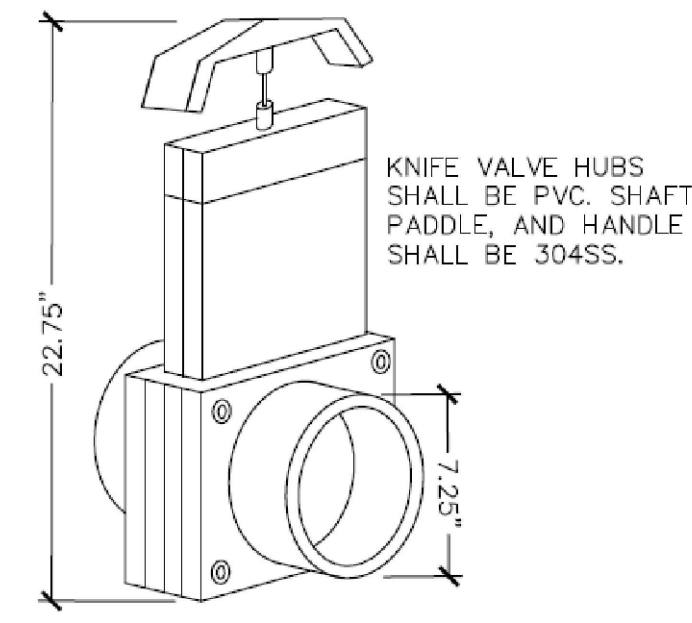


**INSTALLATION INSTRUCTIONS**

**STORMTANK SHIELD**

610 Morgantown Road  
Reading, PA 19611 U.S.A.  
Phone: (610) 378-6100  
Fax: (610) 378-6022  
www.brentwoodinc.com

REV: 01/31/13  
DATE: 01/31/13  
BY: J.BALEY  
APP: NTS  
1 of 1



PVC KNIFE VALVE SHALL BE MANUFACTURED BY THE FOLLOWING:

- VALTEGRA PRODUCTS, LLC  
MISSION HILLS, CALIFORNIA  
PHONE: 818-868-1671  
FAX: 818-361-5399

OR APPROVED EQUAL

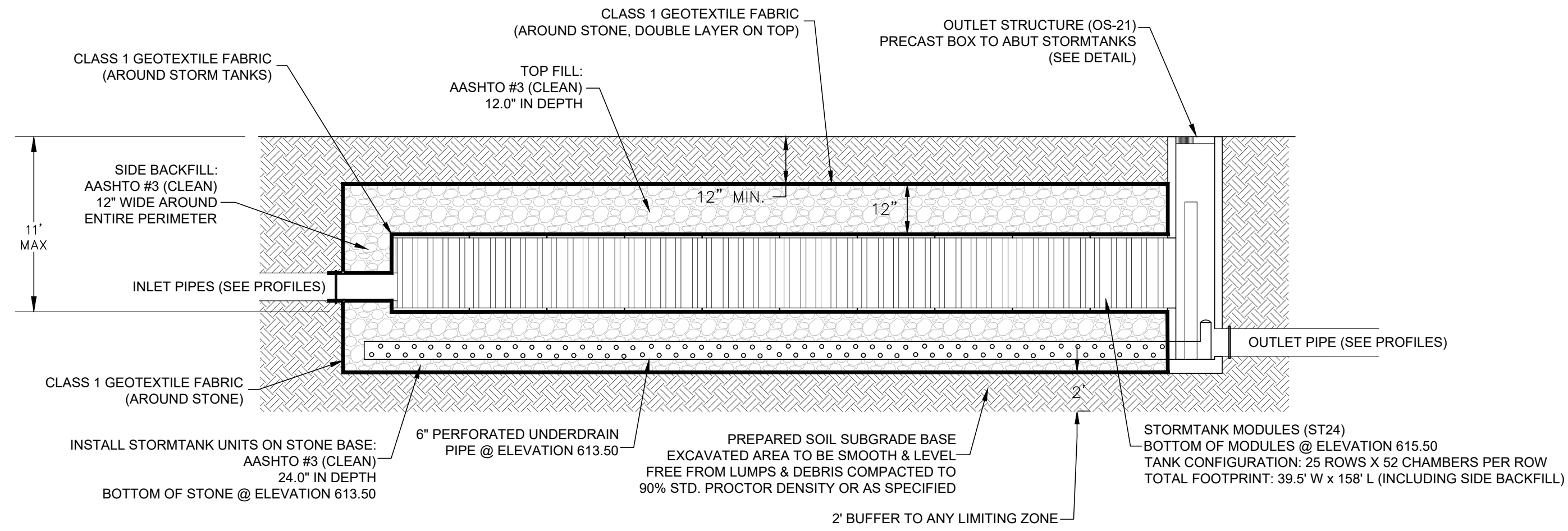
**6" PVC KNIFE VALVE DETAIL**

NO SCALE

POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS  
PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS  
FOR  
BRIAR RIDGE COMMONS - APARTMENTS  
located in  
NORTH LEBANON TOWNSHIP  
LEBANON County, Pennsylvania

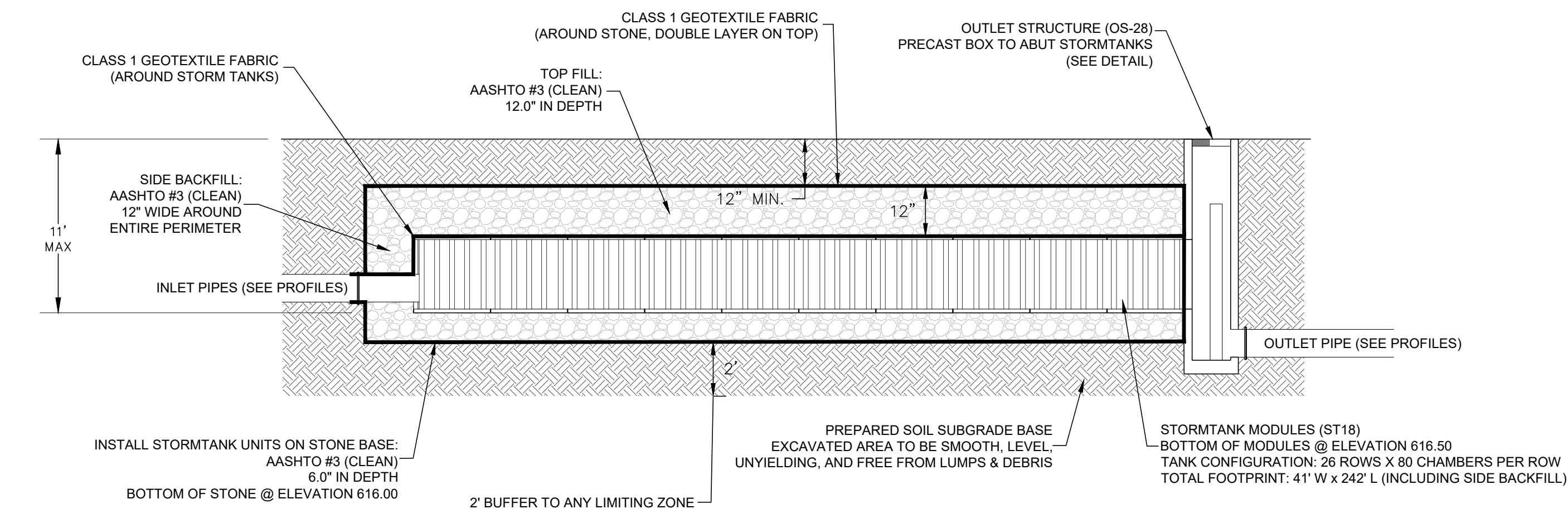
**MSI**  
Steakbuck Engineering & Surveying Inc.  
279 Lebanon, Pennsylvania 17042  
Phone: (717) 272-7110  
Fax: (717) 272-7348

FIELD CREW:	MOD, JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	1"=50'
PROJECT #	135-19-001



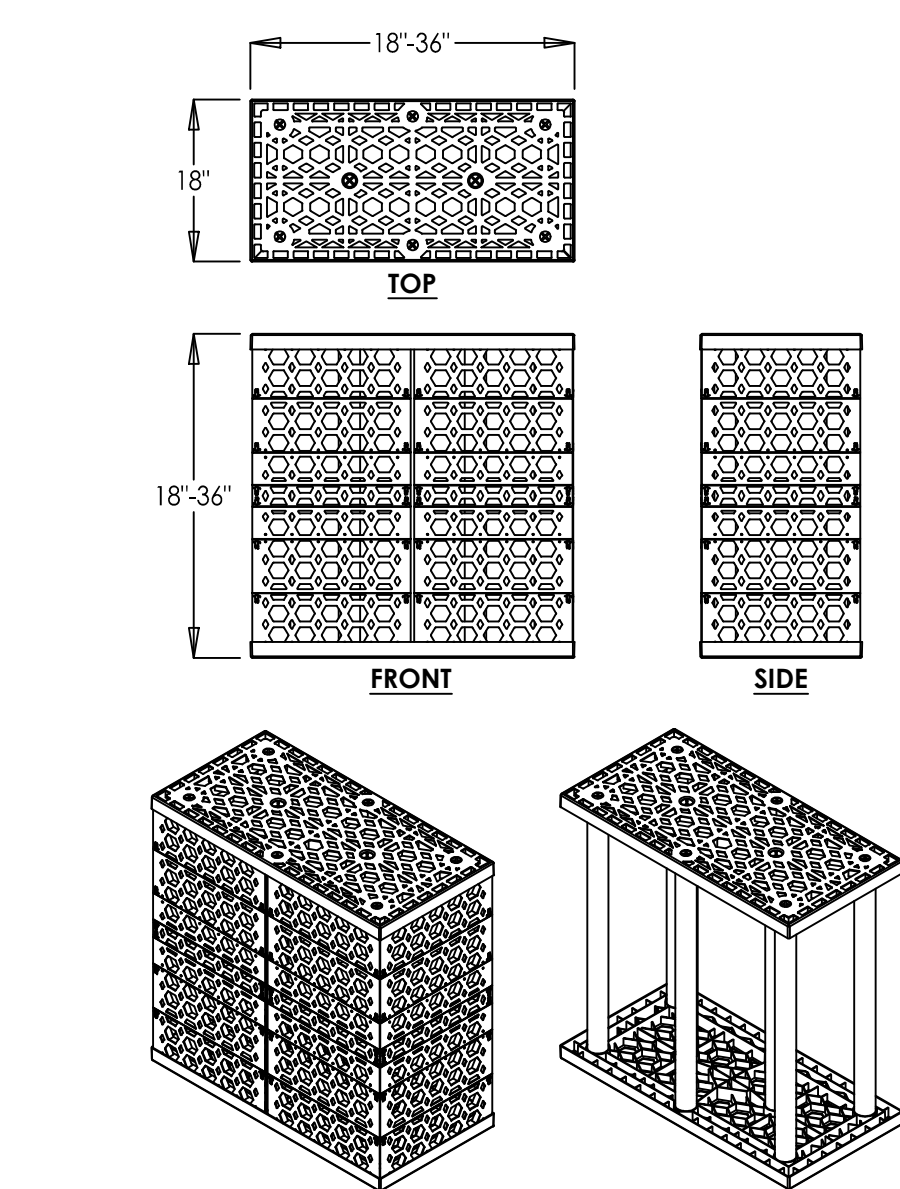
**STORM WATER - STORM TANK CROSS SECTION DETAIL - BMP NO. 4 MRC SUBSURFACE BED 1**

NO SCALE



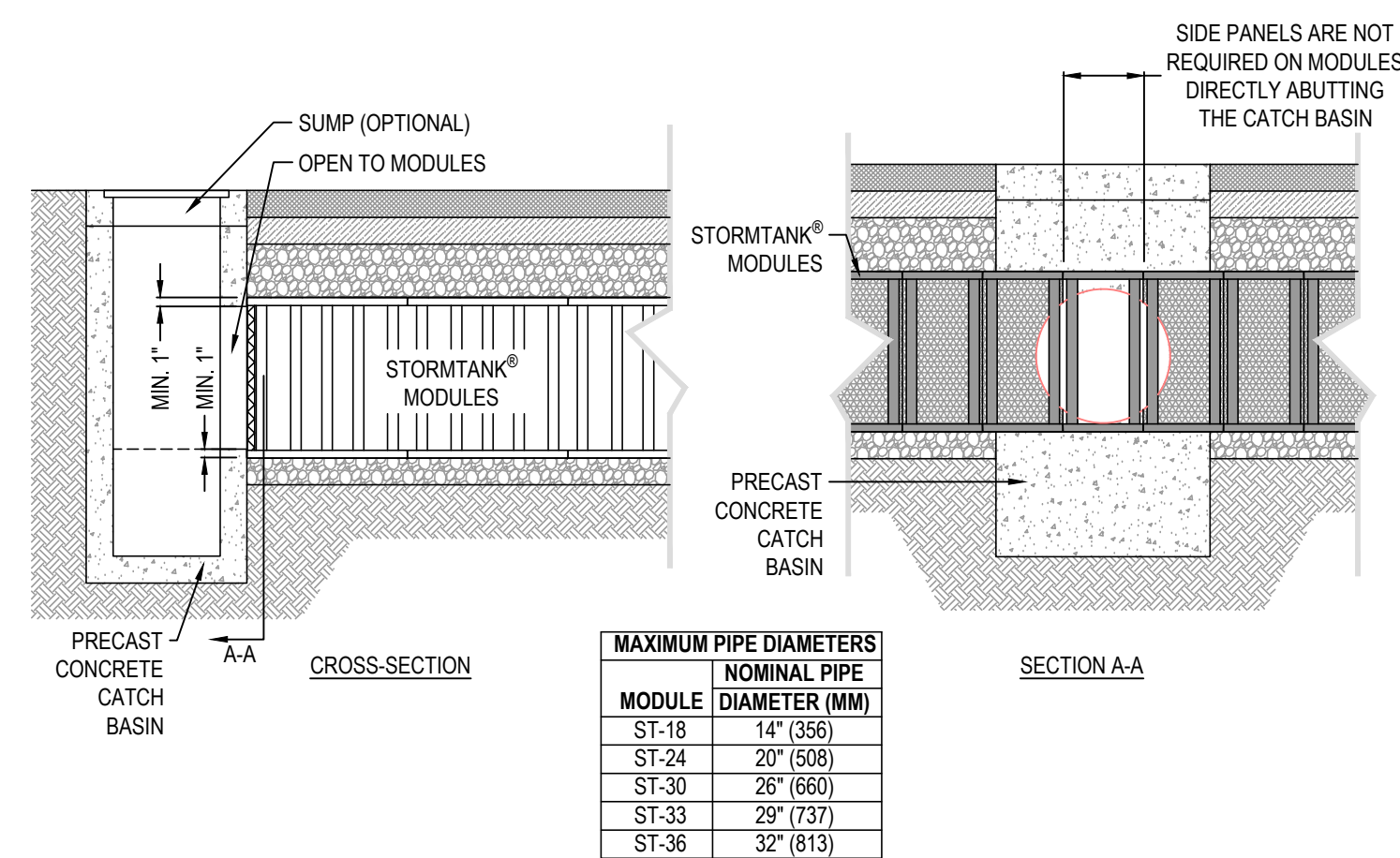
**STORM WATER - STORM TANK CROSS SECTION DETAIL - BMP NO. 5 SUBSURFACE INFILTRATION BED 2**

NO SCALE



**TYPICAL STORM TANK MODULE DETAIL**

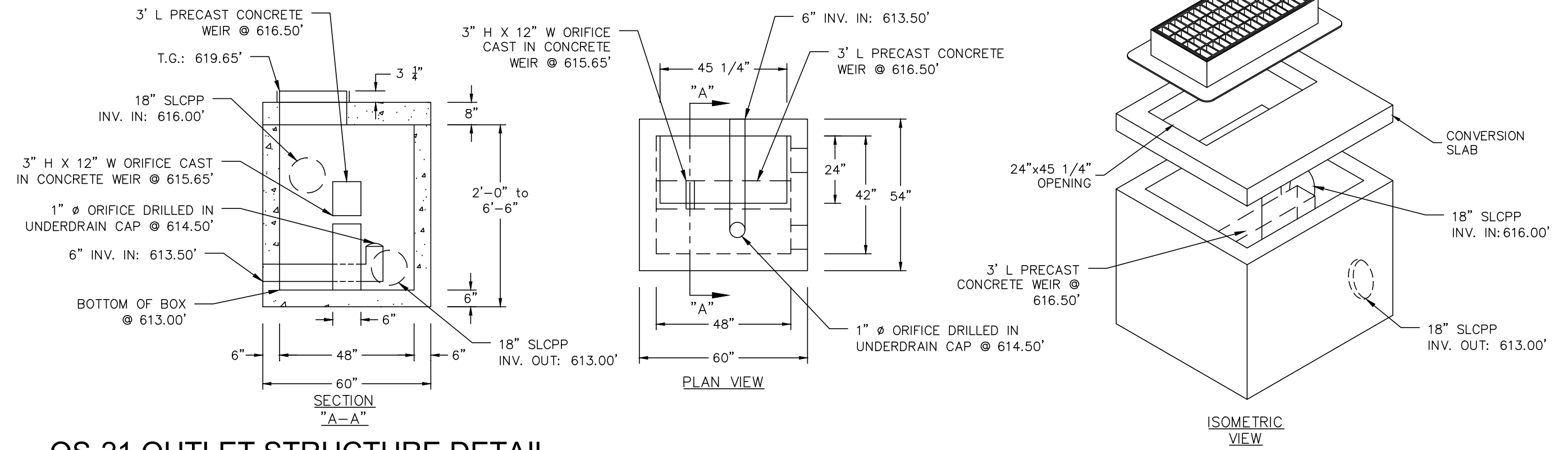
NO SCALE



- NOTES:**
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
  2. DO NOT SCALE DRAWING.
  3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
  4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
  5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT [www.CADdetails.com/info](http://www.CADdetails.com/info) AND ENTER REFERENCE NUMBER 4907-001.

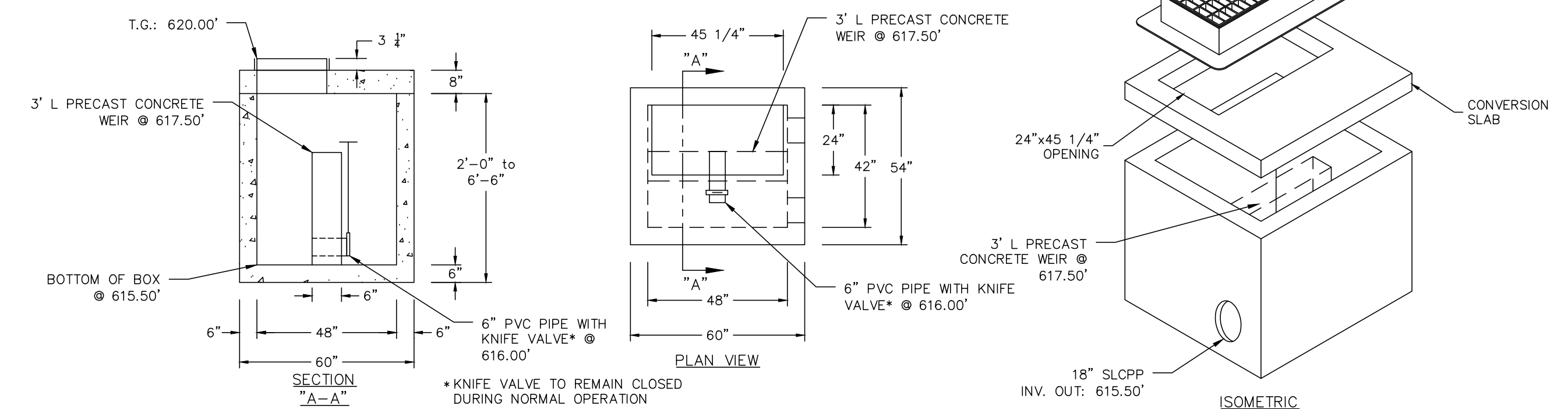


**STORMTANK MODULE CATCH BASIN ABUTMENT DETAIL**



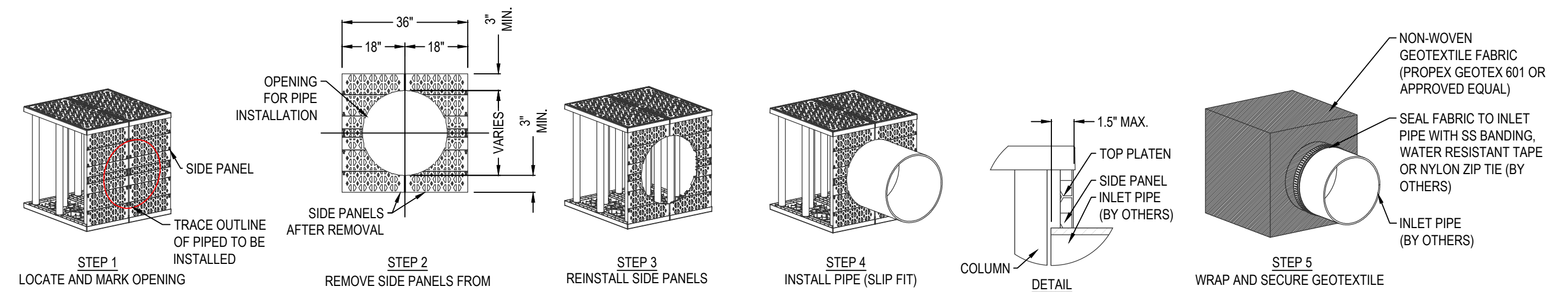
**OS-21 OUTLET STRUCTURE DETAIL**

NO SCALE

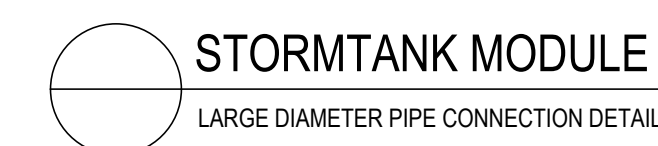


**OS-28 OUTLET STRUCTURE DETAIL**

NO SCALE



- NOTES:**
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
  2. DO NOT SCALE DRAWING.
  3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
  4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
  5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT [www.CADdetails.com/info](http://www.CADdetails.com/info) AND ENTER REFERENCE NUMBER 4907-006.



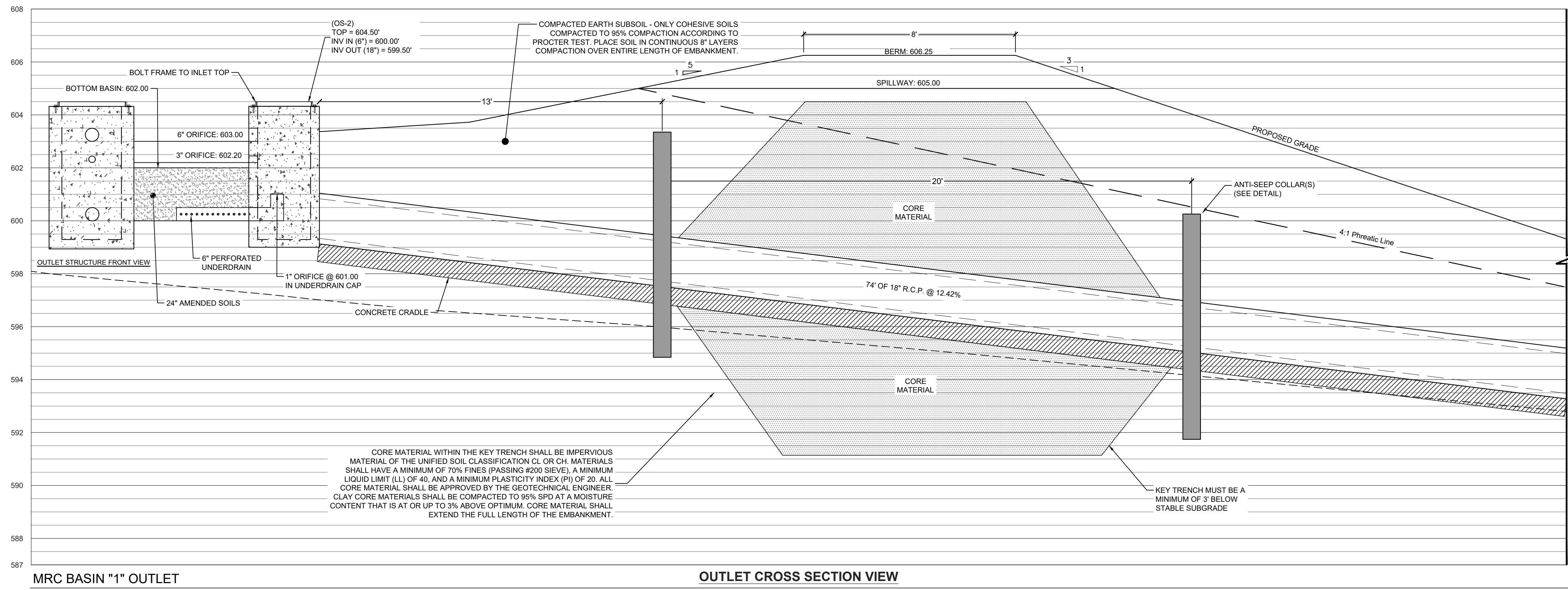
**STORMTANK MODULE LARGE DIAMETER PIPE CONNECTION DETAIL**

REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-3-23	4-3-23	CDS
PER LCPD LETTER DATED 4-4-23	4-4-23	CDS
PER COLA COMMENTS DATED 3-31-23	3-31-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-6-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	7-13-23	CDS
PER ARRO COMMENT LETTER DATED 8-4-23	8-4-23	CDS

**POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS**  
**PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS**  
 For  
**BRIAR RIDGE COMMONS - APARTMENTS**  
 located in  
 NORTH LEBANON TOWNSHIP  
 LEBANON County, Pennsylvania



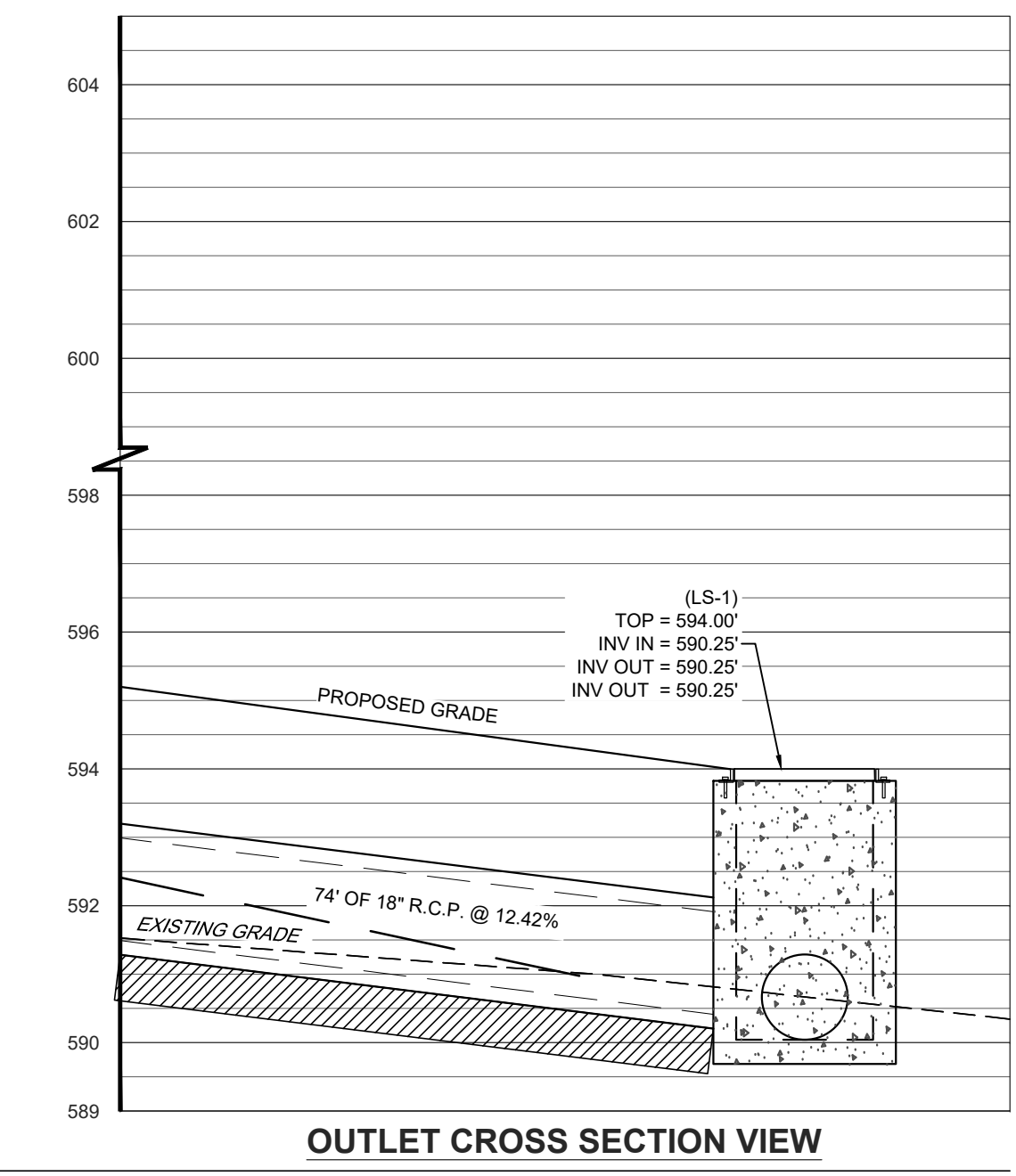
FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	1"=50'
PROJECT #	135-19-001



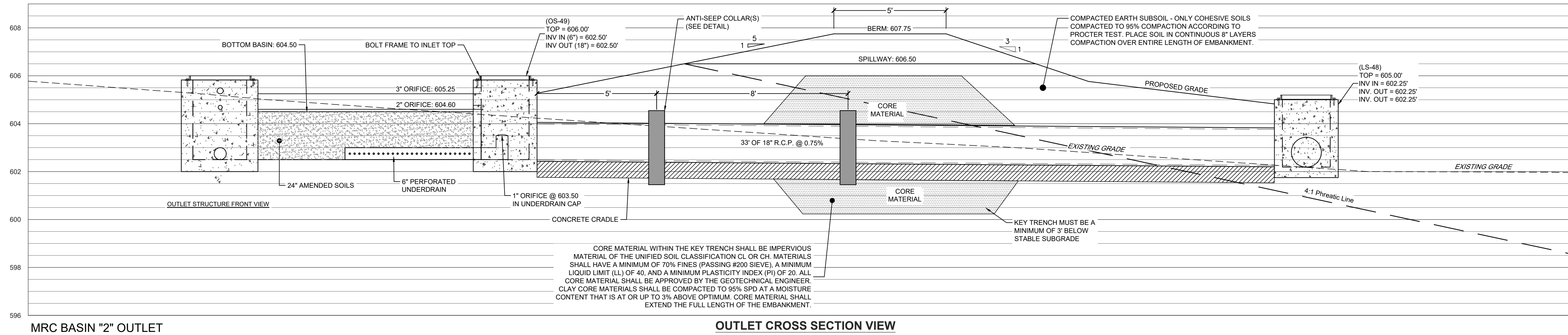
MRC BASIN "1" OUTLET

SCALE: 1" = 2.5'

OUTLET CROSS SECTION VIEW



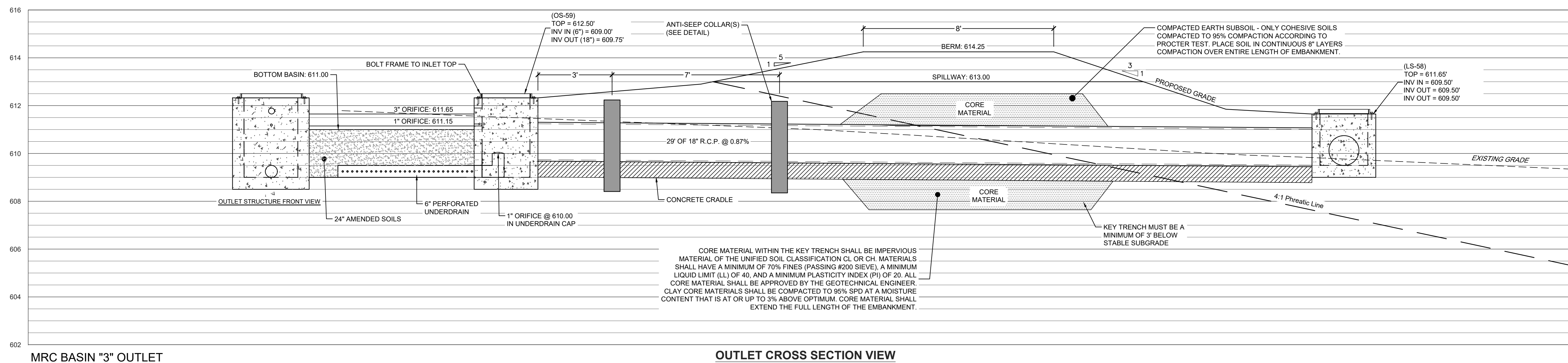
OUTLET CROSS SECTION VIEW



MRC BASIN "2" OUTLET

SCALE: 1" = 2.5'

OUTLET CROSS SECTION VIEW



MRC BASIN "3" OUTLET

SCALE: 1" = 2.5'

OUTLET CROSS SECTION VIEW

REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-3-23	4-3-23	CDS
PER LCPD LETTER DATED 4-4-23	4-4-23	CDS
PER COLA COMMENTS DATED 5-12-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-6-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	7-13-23	CDS
PER ARRO COMMENT LETTER DATED 8-4-23	8-4-23	CDS

POST CONSTRUCTION STORMWATER MANAGEMENT BASIN OUTLET DETAILS

PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS

BRIAR RIDGE COMMONS - APARTMENTS

North Lebanon Township  
Lebanon County, Pennsylvania

FIELD CREW:	MOD, JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	AS NOTED
PROJECT #	135-19-001



**LEGEND**

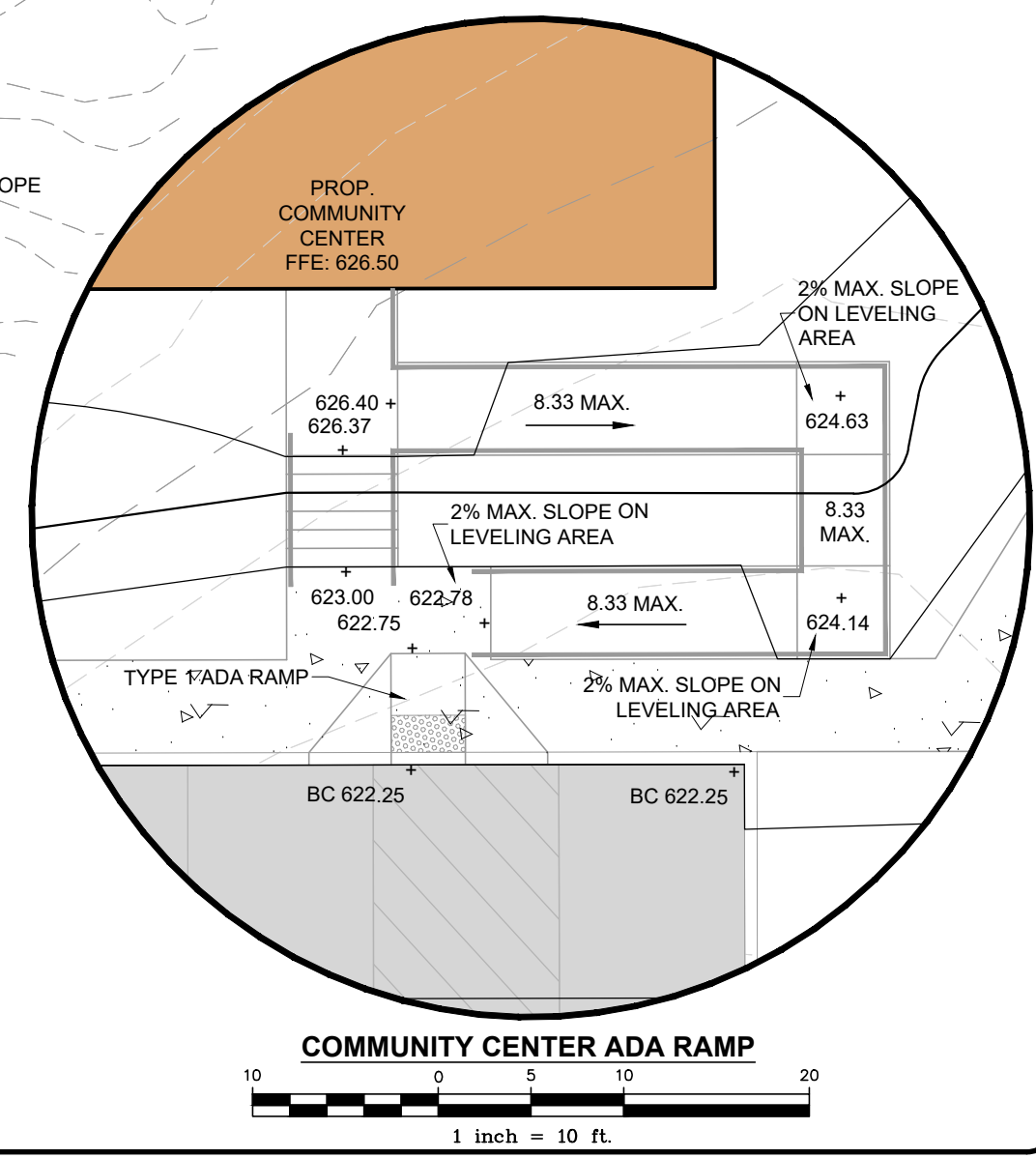
EXISTING FEATURES		PROPOSED FEATURES	
	EXISTING ADJOINER LINE		PROPOSED BUILDING SETBACK
	EXISTING BOUNDARY LINE AND CORNERS		PROPOSED BOUNDARY LINE AND CORNERS
	EXISTING EDGE OF PAVEMENT AND CURB LINE		PROPOSED EDGE OF PAVEMENT AND CURB LINE
	EXISTING RIGHT-OF-WAY		PROPOSED RIGHT-OF-WAY
	EXISTING FENCE		PROPOSED FENCE
	EXISTING SEWER		PROPOSED SEWER
	EXISTING STORMWATER		PROPOSED STORMWATER
	EXISTING WATERLINE		PROPOSED DOMESTIC WATERLINE
	EXISTING GASLINE		PROPOSED GASLINE
	EXISTING SIDEWALK/CONCRETE		PROPOSED CONCRETE/SIDEWALK
	EXISTING TOWNSHIP BOUNDARY		

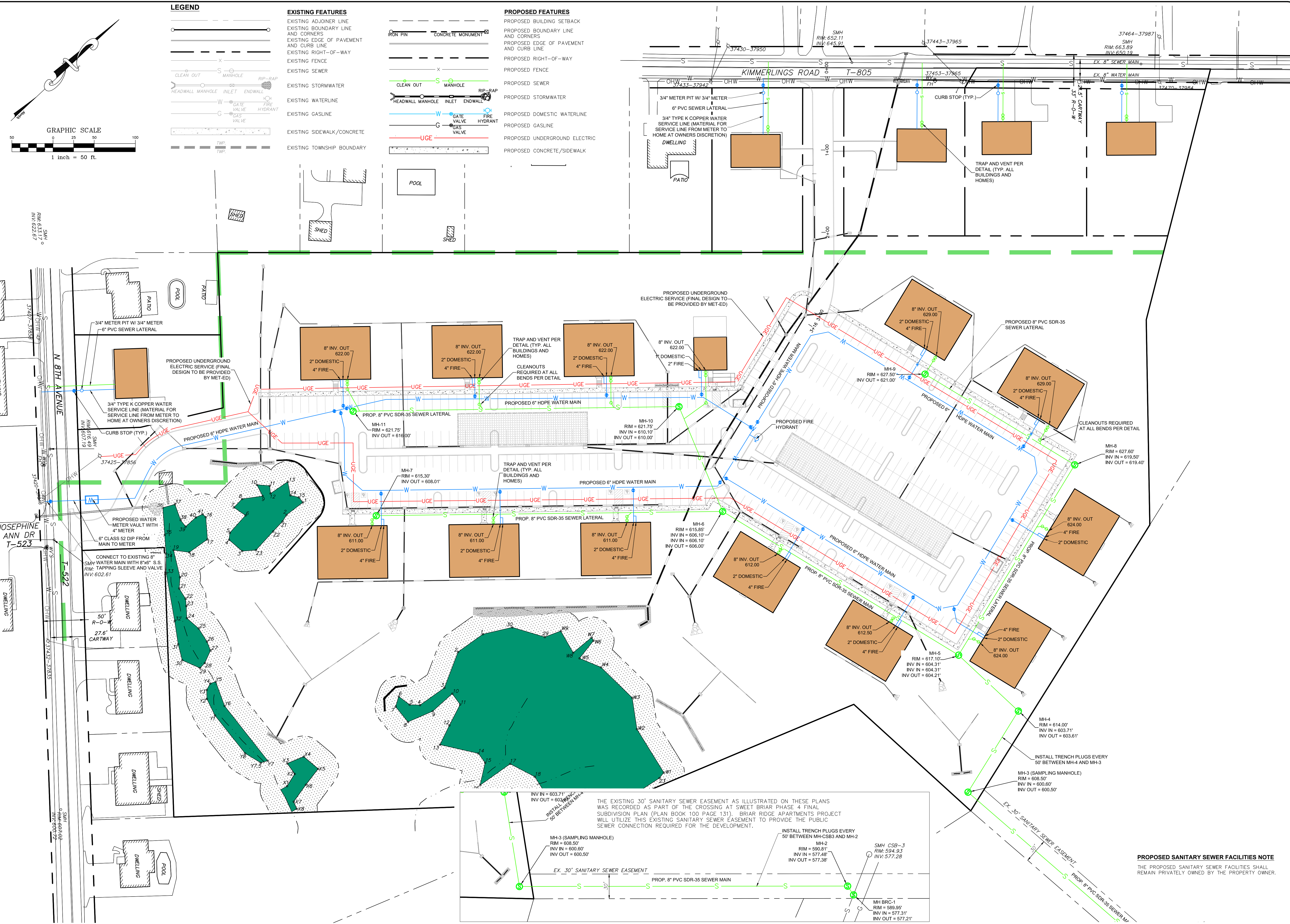
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PER LPOD LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

**GRADING PLAN**  
 For  
**PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS**  
**BRIAR RIDGE COMMONS - APARTMENTS**  
 located in  
 NORTH LEBANON TOWNSHIP  
 Lebanon County, Pennsylvania

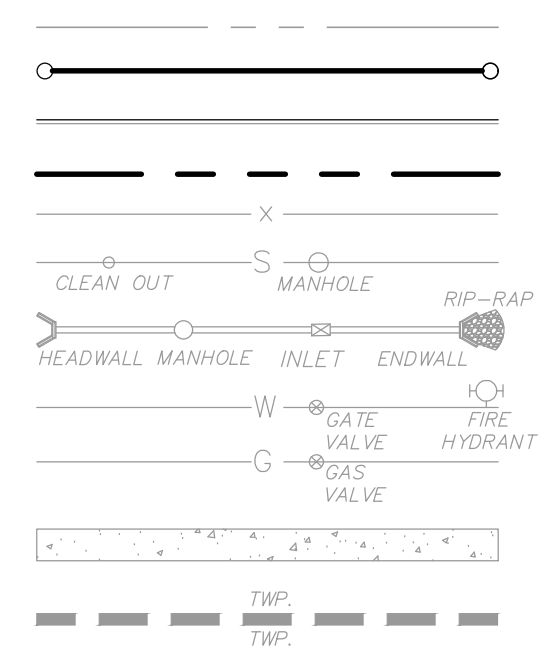
**ISI**  
 Steadbeck Engineering & Surveying Inc.  
 279 Lebanon, Pennsylvania 17042  
 Phone: (717) 272-7110  
 Fax: (717) 272-7348

FIELD CREW: MOD, JEC
BASE MAP: JEC
DRAWN: CDS
DESIGN: CDS
CHECKED: SAS
DATE: 3/1/23
SCALE: 1"=50'
PROJECT #135-19-001

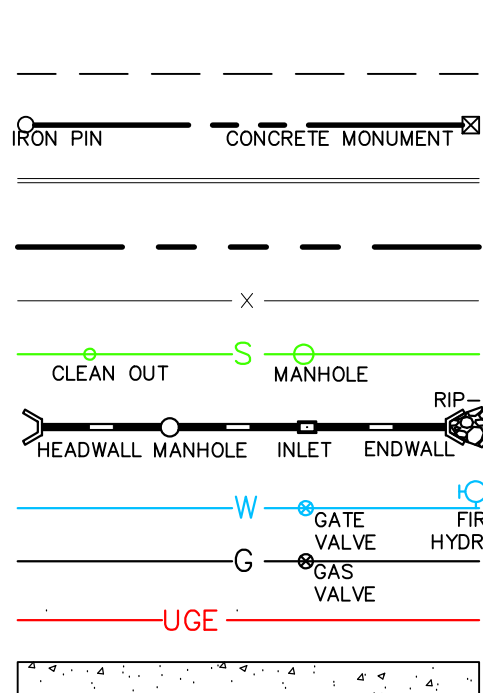




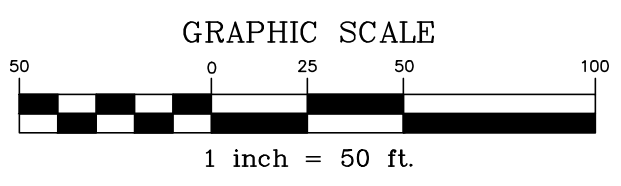
**LEGEND**



**EXISTING FEATURES**  
 EXISTING ADJOINER LINE  
 EXISTING BOUNDARY LINE AND CORNERS  
 EXISTING EDGE OF PAVEMENT AND CURB LINE  
 EXISTING RIGHT-OF-WAY  
 EXISTING FENCE  
 EXISTING SEWER  
 EXISTING STORMWATER  
 EXISTING WATERLINE  
 EXISTING GASLINE  
 EXISTING SIDEWALK/CONCRETE  
 EXISTING TOWNSHIP BOUNDARY



**PROPOSED FEATURES**  
 PROPOSED BUILDING SETBACK  
 PROPOSED BOUNDARY LINE AND CORNERS  
 PROPOSED EDGE OF PAVEMENT AND CURB LINE  
 PROPOSED RIGHT-OF-WAY  
 PROPOSED FENCE  
 PROPOSED SEWER  
 PROPOSED STORMWATER  
 PROPOSED DOMESTIC WATERLINE  
 PROPOSED GASLINE  
 PROPOSED UNDERGROUND ELECTRIC  
 PROPOSED CONCRETE/SIDEWALK



REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-3-23	5-8-23	CDS
PER LCPD LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

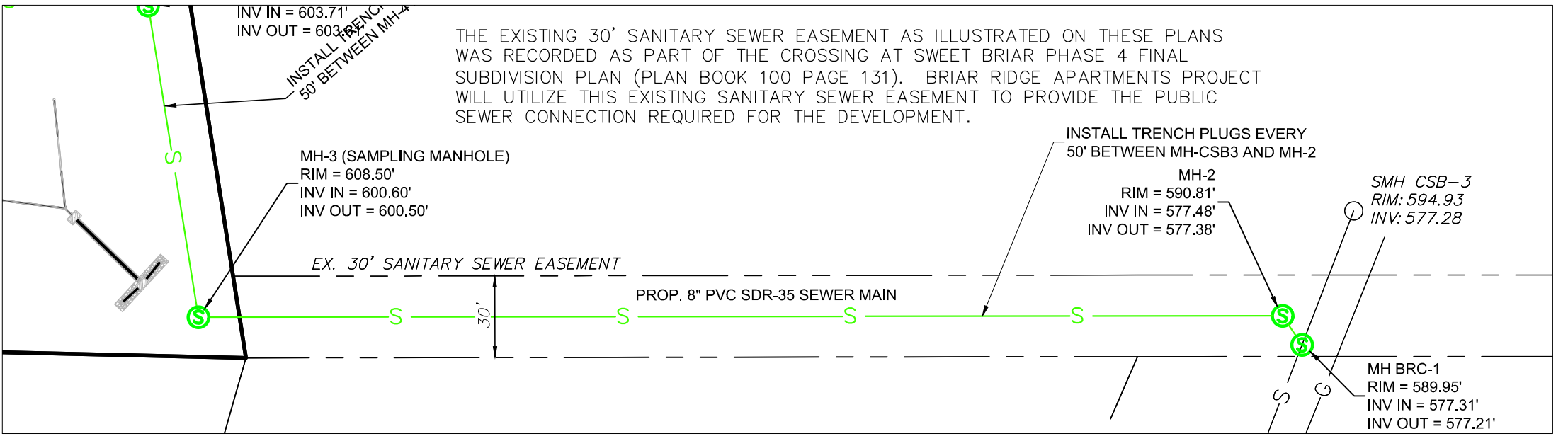
**UTILITY PLAN**  
 PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS  
 For  
**BRIAR RIDGE COMMONS - APARTMENTS**  
 located in  
 NORTH LEBANON TOWNSHIP  
 Lebanon County, Pennsylvania

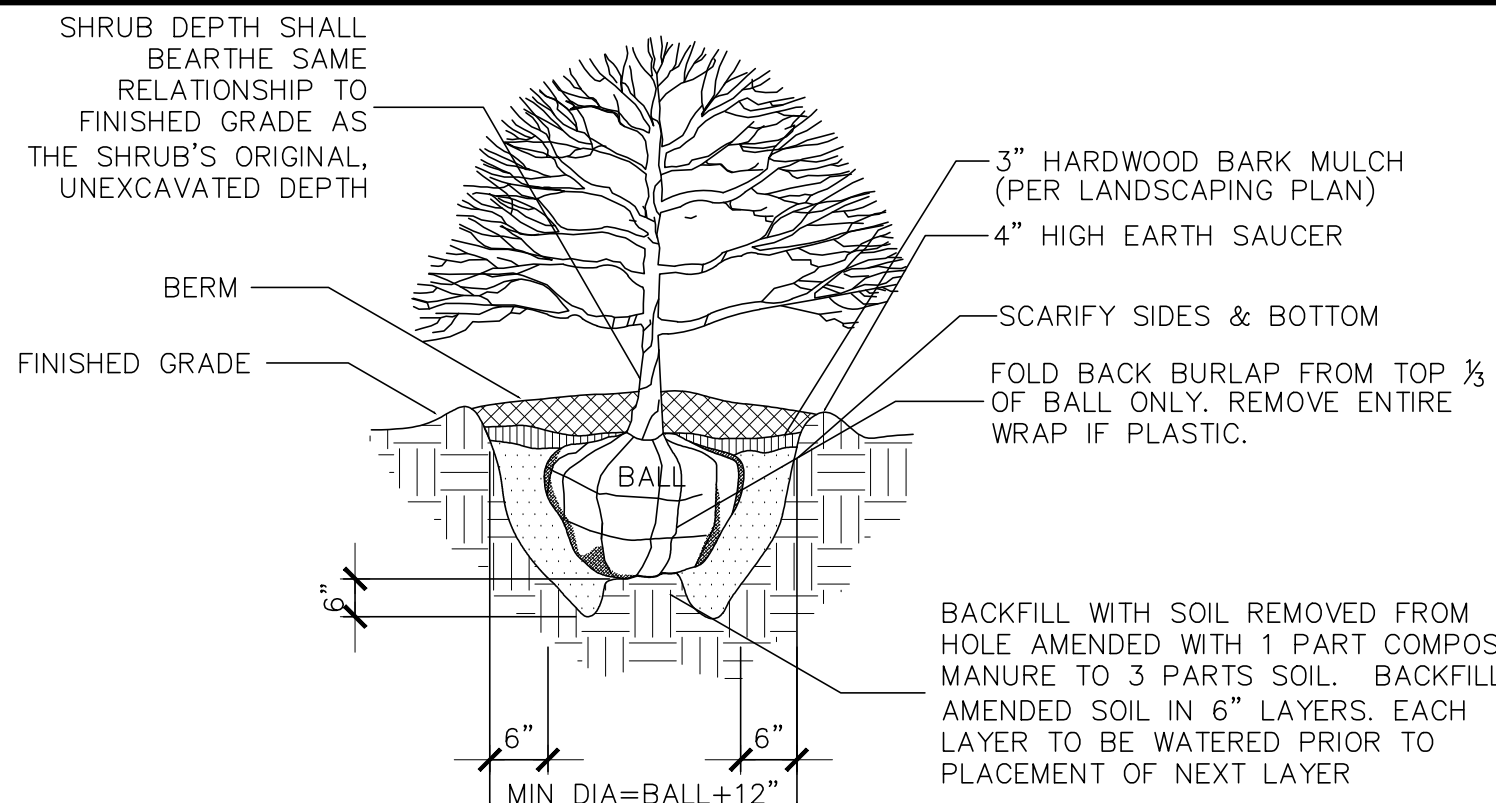
**ISI**  
 Steadbeck Engineering & Surveying Inc.  
 279 Lebanon, Pennsylvania 17042  
 Phone: (717) 272-7110  
 Fax: (717) 272-7348

FIELD CREW: MOD,JEC
BASE MAP: JEC
DRAWN: CDS
DESIGN: CDS
CHECKED: SAS
DATE: 3/1/23
SCALE: 1"=50'
PROJECT #135-19-001

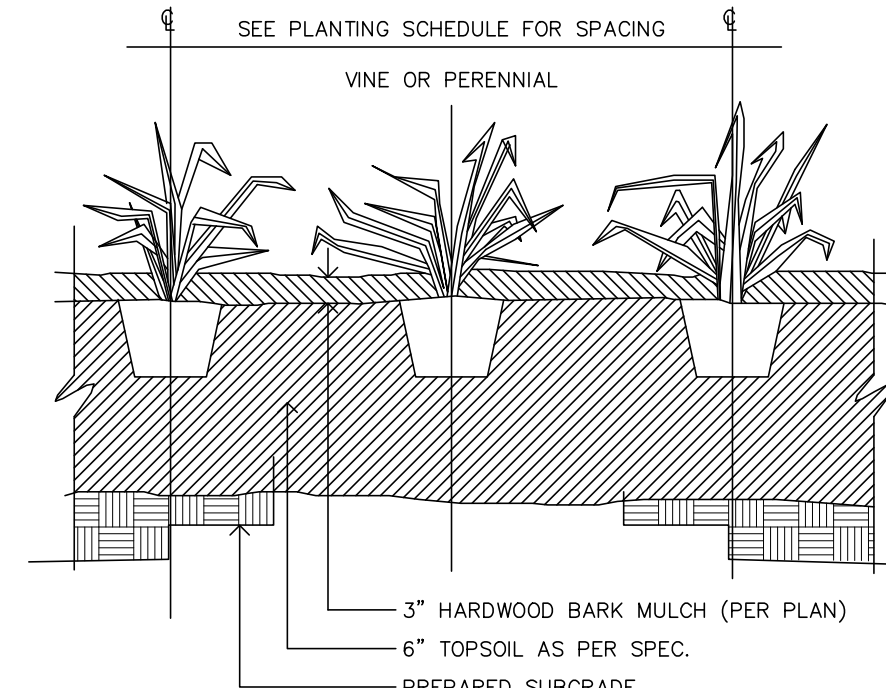
**PROPOSED SANITARY SEWER FACILITIES NOTE**  
 THE PROPOSED SANITARY SEWER FACILITIES SHALL REMAIN PRIVATELY OWNED BY THE PROPERTY OWNER.

THE EXISTING 30' SANITARY SEWER EASEMENT AS ILLUSTRATED ON THESE PLANS WAS RECORDED AS PART OF THE CROSSING AT SWEET BRIAR PHASE 4 FINAL SUBDIVISION PLAN (PLAN BOOK 100 PAGE 131). BRIAR RIDGE APARTMENTS PROJECT WILL UTILIZE THIS EXISTING SANITARY SEWER EASEMENT TO PROVIDE THE PUBLIC SEWER CONNECTION REQUIRED FOR THE DEVELOPMENT.

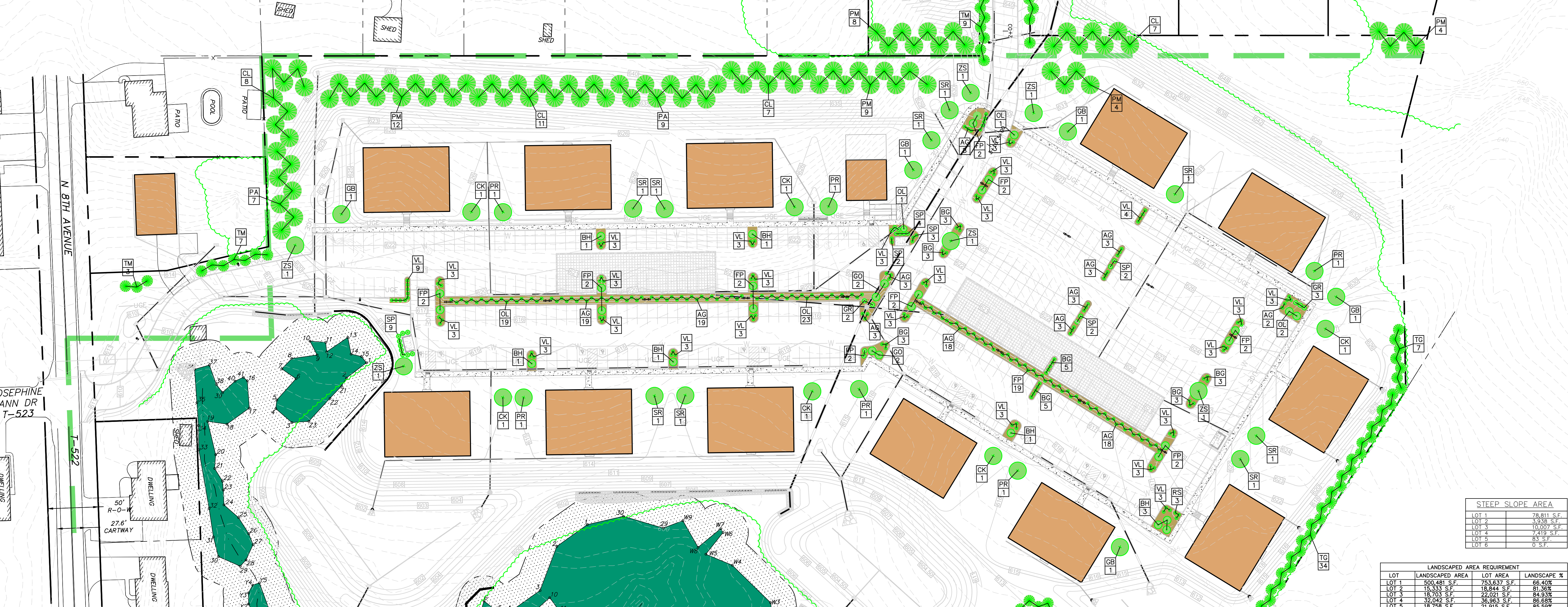




SHRUB PLANTING DETAIL  
NO SCALE



GROUND COVER PLANTING DETAIL  
NO SCALE



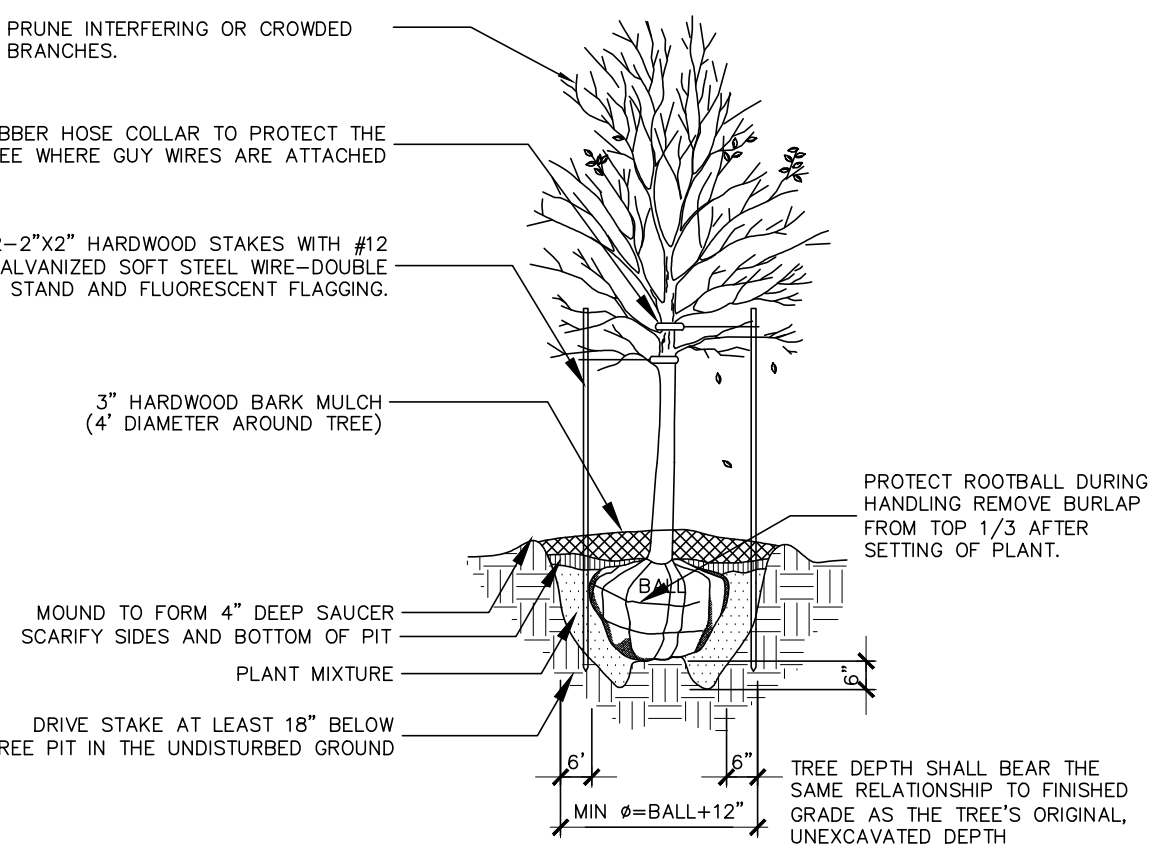
STEEP SLOPE AREA

LOT 1	78,811 S.F.
LOT 2	3,938 S.F.
LOT 3	10,000 S.F.
LOT 4	2,419 S.F.
LOT 5	83 S.F.
LOT 6	0 S.F.

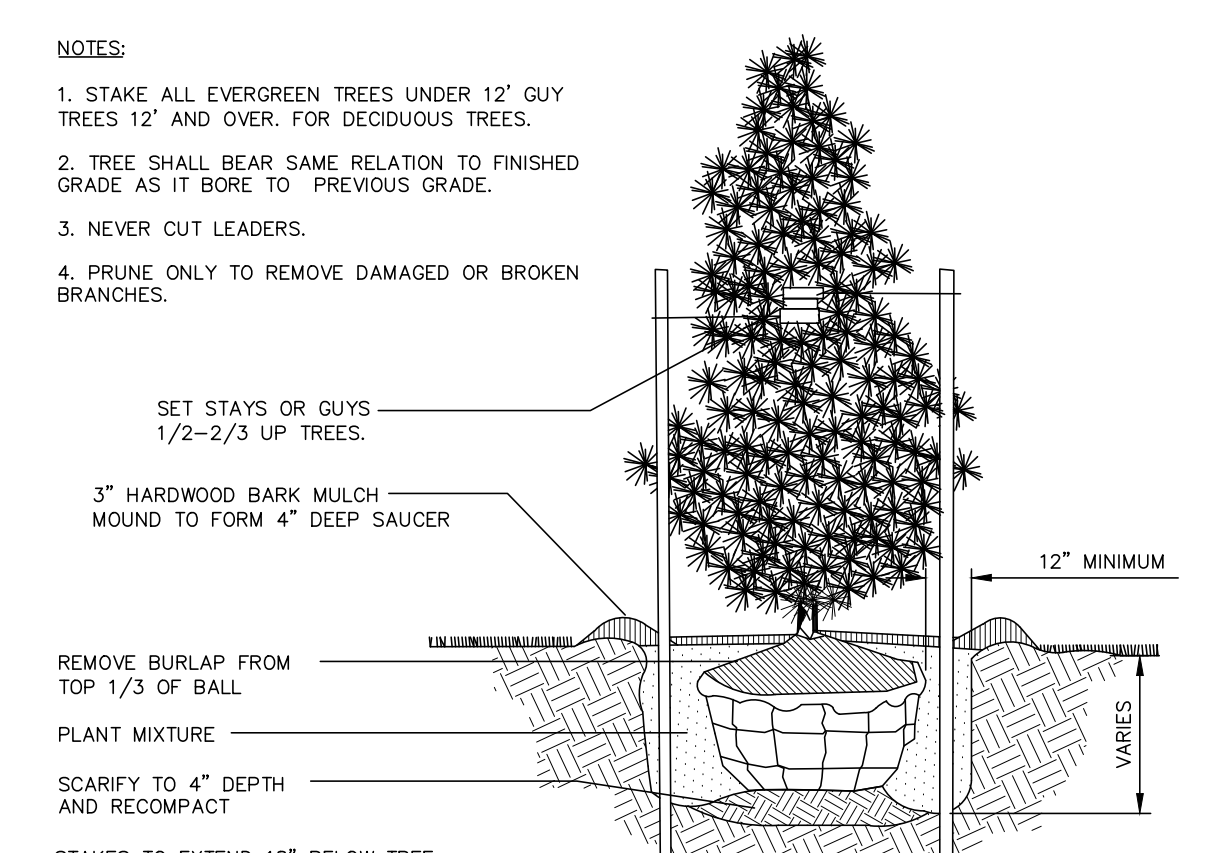
LANDSCAPED AREA REQUIREMENT

LOT	LANDSCAPED AREA	LOT AREA	LANDSCAPE %
LOT 1	500,481 S.F.	753,637 S.F.	66.40%
LOT 2	15,353 S.F.	18,844 S.F.	81.36%
LOT 3	18,103 S.F.	22,021 S.F.	84.93%
LOT 4	32,042 S.F.	36,963 S.F.	86.68%
LOT 5	18,758 S.F.	21,915 S.F.	85.59%
LOT 6	19,956 S.F.	23,464 S.F.	84.65%

- LANDSCAPE NOTES**
- PLANTED TREES SHALL BE MULCHED AND WATERED DURING THE FIRST GROWING SEASON. DEAD AND DYING TREES SHALL BE REPLACED.
  - TREES PLANTED WITHIN FIVE (5) FEET OF A SIDEWALK SHALL HAVE A PLASTIC OR GEOTEXTILE ROOT BARRIER, A MINIMUM ONE (1) FOOT DEEP BY TEN (10) FEET LONG, PLACED ALONG THE SIDEWALK EDGE CLOSEST TO THE TREE.
  - AT LEAST 15% OF THE TOTAL LOT AREA SHALL BE LANDSCAPED.
  - ALL REQUIRED PLANTINGS SHALL BE MAINTAINED IN A GOOD CONDITION TO PRESENT A HEALTHY, NEAT AND ORDERLY APPEARANCE. SUCH PLANTINGS SHALL BE KEPT FREE FROM REFUSE AND DEBRIS. PLANTS DAMAGED BY INSECTS, DISEASE, VEHICULAR TRAFFIC, ACTS OF NATURE OR VANDALISM SHALL BE REPLACED BY THE NEXT PLANTING PERIOD.
  - REQUIRED PLANTINGS SHALL NOT BE REMOVED EXCEPT TO FACILITATE THE PLANTING OF ACCEPTABLE REPLACEMENT PLANTS. PROPERTY IMPROVEMENTS SHALL BE PROTECTED AT ALL TIMES BY SUCH ENVIRONMENTAL PLANTINGS AND EXTENSIVE TRIMMING OR PRUNING OF THE PLANTINGS TO REDUCE OR ELIMINATE THE PROTECTION SHALL NOT BE PERMITTED.
  - IF ANY OF THE SCREEN PLANTINGS DIE OR ARE CUT DOWN, REPLACEMENT OF SCREEN PLANTINGS SHALL BE REQUIRED AND SHALL BE OF COMPARABLE SIZE AND TYPE.



DECIDUOUS TREE PLANTING DETAIL  
NO SCALE



EVERGREEN TREE PLANTING DETAIL  
NO SCALE

KEY	QTY	SIZE	BOTANICAL NAME	COMMON NAME
GB	5	2' CAL	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD MAIDENHAIR TREE
SR	9	2' CAL	SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK JAPANESE TREE
CK	6	2' CAL	CORNUS KOUSA 'SATOMI'	SATOMI KOUSA DOGWOOD
PR	6	2' CAL	PRUNUS 'AUTUMNALIS'	AUTUMN FLOWERING CHERRY
ZS	6	2' CAL	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA
CL	25	6-7'	CUPRESSOCYPRIS LEYLANDII	LEYLAND CYPRISS
PA	25	6-7'	PICEA MORIKA	SEBASTIAN SPRUCE
PM	16	6-7'	PICEA ABIES	NORWAY SPRUCE
TM	35	4-5'	THUJA X 'MONROE'	TINY TOWER GREEN GIANT ARBORVITAE
TG	69	4-5'	THUJA STANDISH X PULICATA 'GREEN GIANT'	GREEN GIANT WESTERN ARBORVITAE
BH	5'	3 GAL	ILEX CRENATA 'BEEHIVE'	BEEHIVE JAPANESE HOLLY
SP	17'	3 GAL	ILEX CRENATA 'SKY PENCIL'	SKY PENCIL JAPANESE HOLLY
FP	37'	3 GAL	NANDINA DOMESTICA 'FIREPOWER'	FIREPOWER NANDINA
GO	5'	3 GAL	OSMANTHUS HETEROPHYLLUS 'GOSHIKI'	GOSHIKI OSMANTHUS
OL	46'	18-24"	PRUNUS LAURO-CERASUS 'OTTO LUYKEN'	OTTO LUYKEN ENGLISH LAUREL
AG	102'	1 GAL	ACORUS GRAMINEUS 'OGON'	GOLDEN VAREGATED SWEET FLAG
VL	82'	1 GAL	LIRIOPE MUSCARI VAREGATA	LIRIOPE VAREGATED
BG	25'	1 GAL	GERANUM X CANTABRIGIENSE 'BOKOVO'	BOKOVO CRANESBILL
RS	6'	1 GAL	ECHINACEA RUBY STAR	SUNNY DAYS RUBY CONEFLOWER
GR	5'	1 GAL	RUDEBECKIA X FULGIDA 'AMERICAN GOLD RUSH'	AMERICAN GOLD RUSH BLACK-EYED SUSAN

\* SUBSTITUTIONS ACCEPTABLE PENDING APPROVAL BY OWNER

REVISION

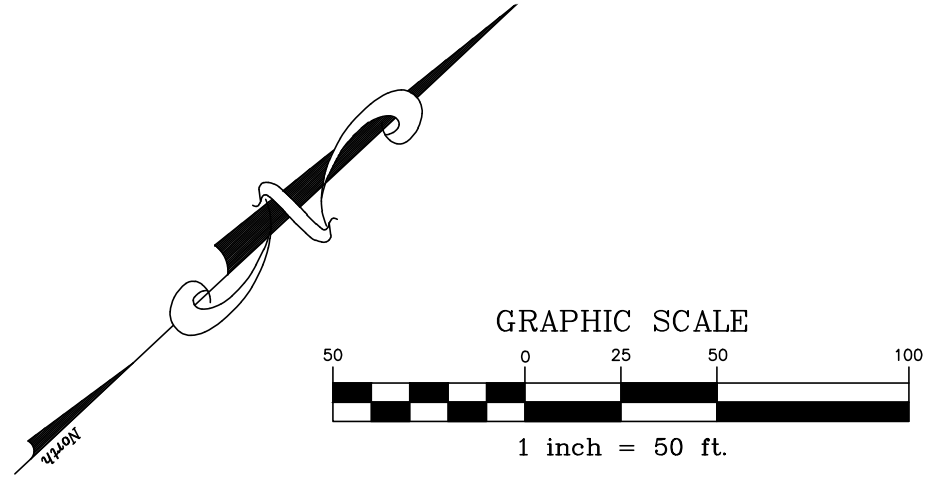
DATE	BY
5-8-23	CDS
5-12-23	CDS
5-12-23	CDS
6-28-23	CDS
8-4-23	CDS

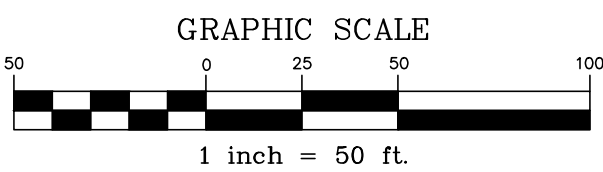
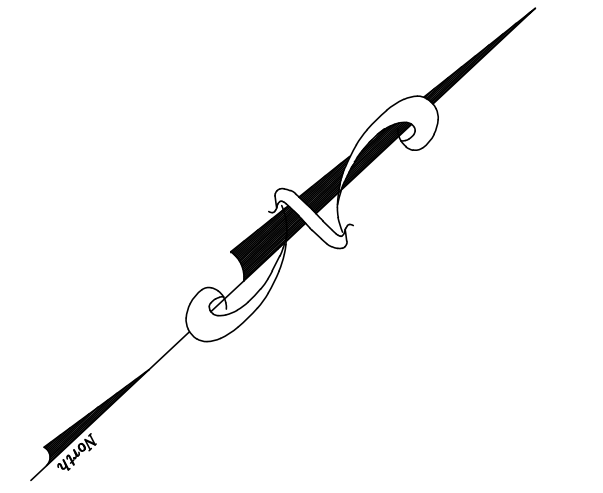
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PER LCPD LETTER DATED 4-4-23  
PER COLA COMMENTS DATED 3-31-23  
PER ARRO COMMENT LETTER DATED 6-6-23  
PER ARRO COMMENT LETTER DATED 7-13-23

LANDSCAPING PLAN  
PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS  
FOR  
BRIAR RIDGE COMMONS - APARTMENTS  
NORTH LEBANON TOWNSHIP  
LEBANON COUNTY, PENNSYLVANIA

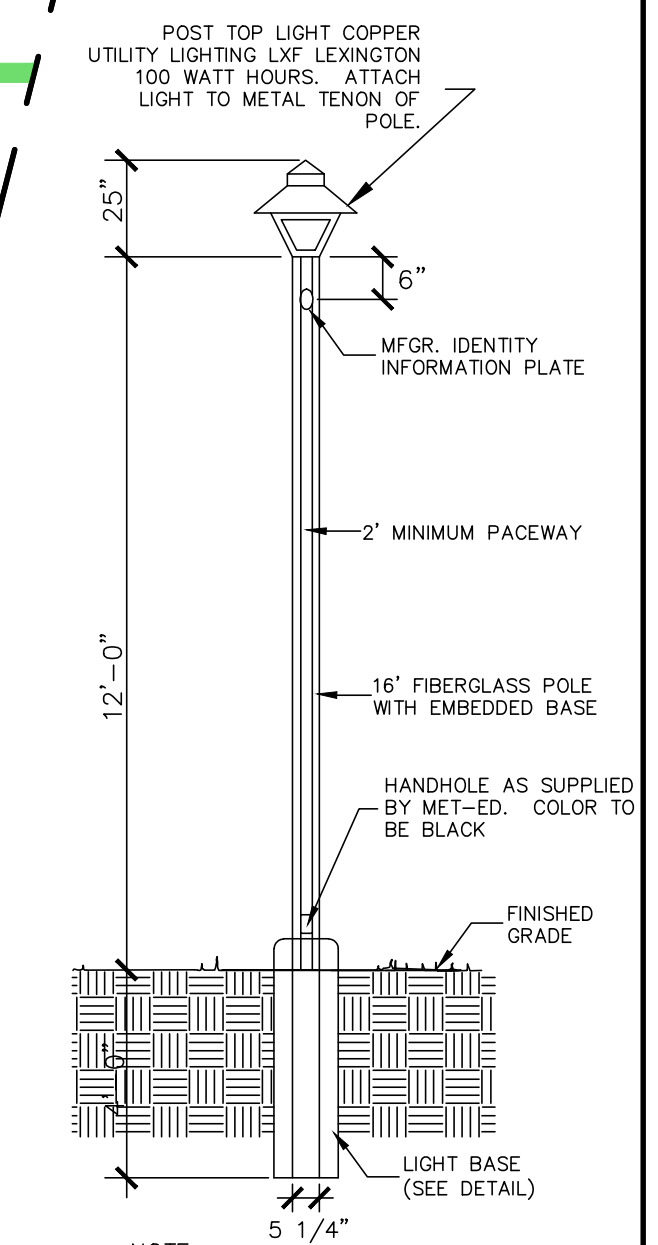
**ISI**  
Steinbeck Engineering & Surveying Inc.  
279 Lebanon, Pennsylvania 17042  
Phone: (717) 272-7110  
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FIELD CREW: MOD, JEC  
BASE MAP: JEC  
DRAWN: CDS  
DESIGN: CDS  
CHECKED: SAS  
DATE: 3/1/23  
SCALE: 1"=50'  
PROJECT #135-19-001



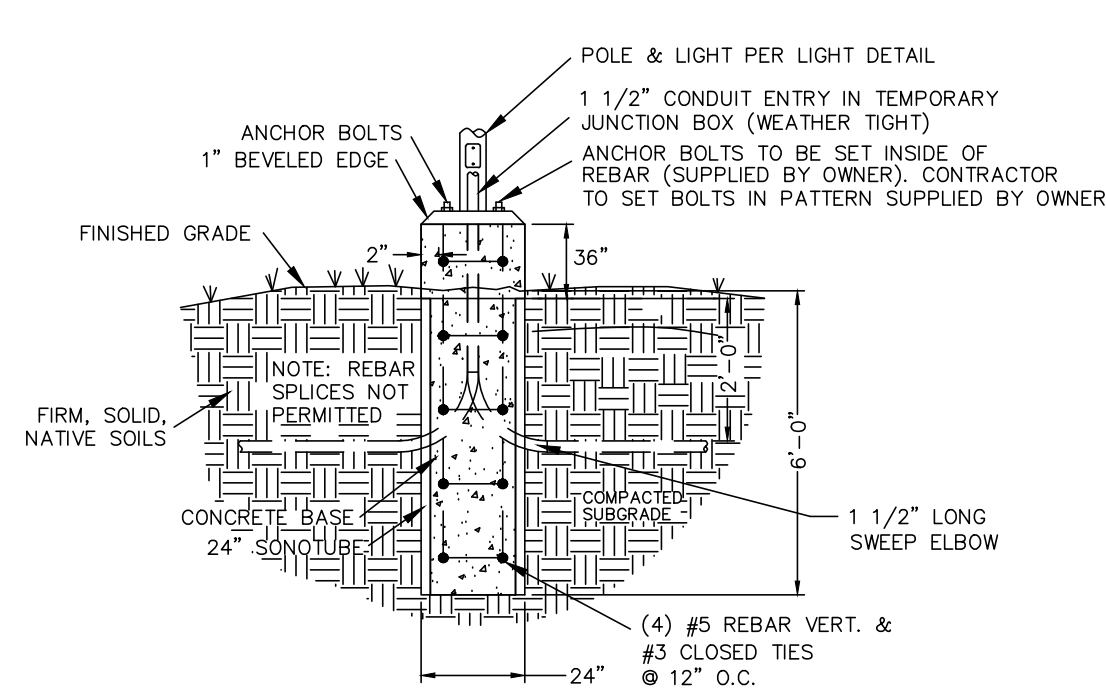


LEGEND	
<b>EXISTING FEATURES</b>	<b>PROPOSED FEATURES</b>
EXISTING ADJOINER LINE	PROPOSED BUILDING SETBACK
EXISTING BOUNDARY LINE AND CORNERS	PROPOSED BOUNDARY LINE AND CORNERS
EXISTING EDGE OF PAVEMENT AND CURB LINE	PROPOSED EDGE OF PAVEMENT AND CURB LINE
EXISTING RIGHT-OF-WAY	PROPOSED RIGHT-OF-WAY
EXISTING FENCE	PROPOSED FENCE
EXISTING SEWER	PROPOSED SEWER
EXISTING STORMWATER	PROPOSED STORMWATER
EXISTING WATERLINE	PROPOSED DOMESTIC WATERLINE
EXISTING GASLINE	PROPOSED GASLINE
EXISTING SIDEWALK/CONCRETE	PROPOSED CONCRETE/SIDEWALK
EXISTING TOWNSHIP BOUNDARY	
CLEAN OUT	IRON PIN
MANHOLE	CONCRETE MONUMENT
HEADWALL	
MANHOLE INLET	
ENDWALL	
RIP-RAP	
GATE VALVE	
FIRE HYDRANT	
GAS VALVE	

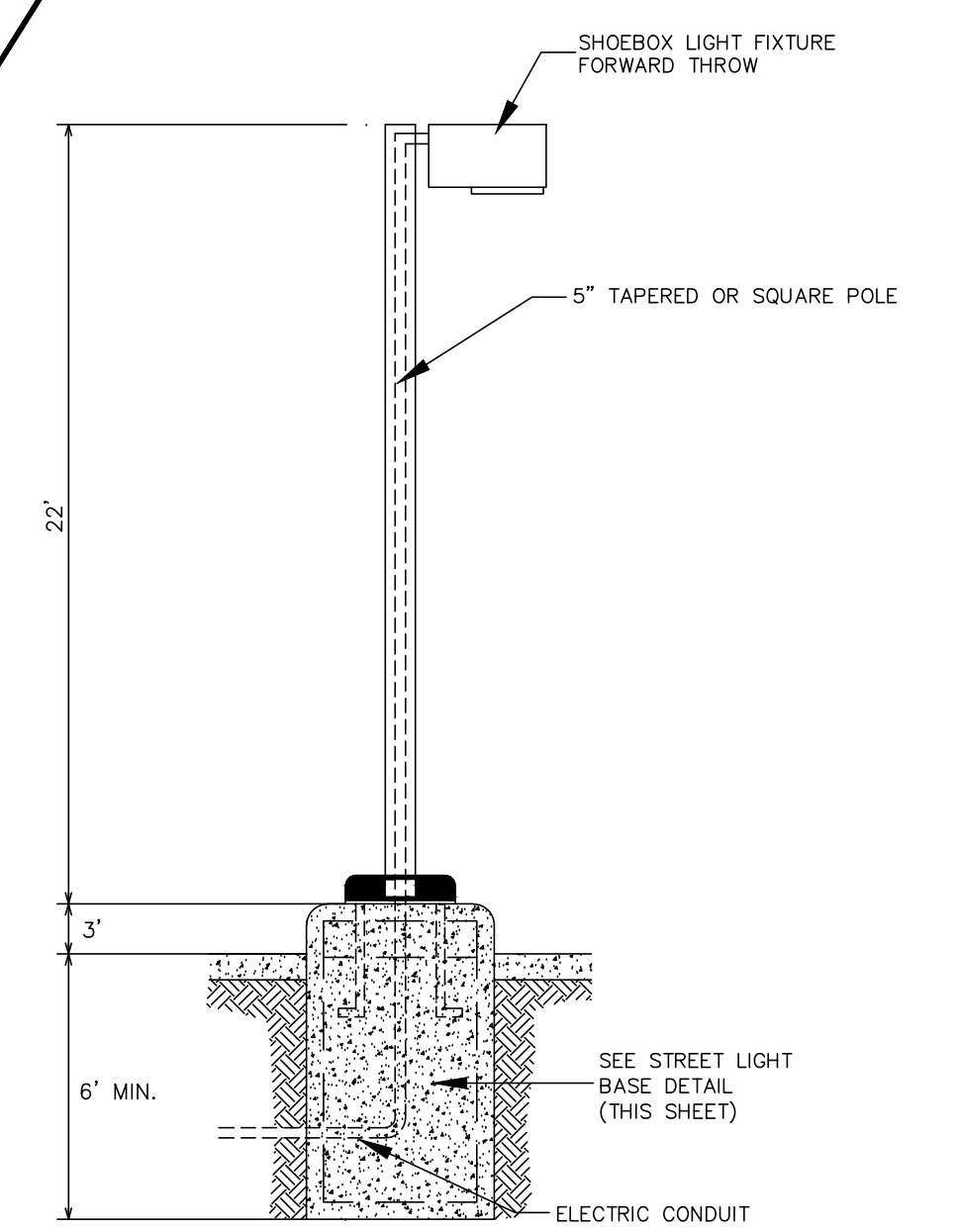


**12' LAMP POST LIGHT DETAIL**  
NO SCALE

NOTES:  
1. ALL LAMP POST LIGHTS SHALL BE INSTALLED IN ACCORDANCE WITH METROPOLITAN-EDISON STANDARDS AND SPACING CRITERIA. LAMP POSTS LIGHTS WILL BE REQUIRED AT PERIODIC LOCATIONS WITHIN THE DEVELOPMENT.  
2. ALL LIGHT FIXTURES SHALL MEET THE IESNA FULL-CUTOFF CRITERIA.



**PARKING LIGHT BASE DETAIL**  
NO SCALE



**TYPICAL 22' POLE & FOUNDATION**  
NO SCALE

NOTES:  
1. WHEN REQUIRED BY THE TOWNSHIP, ALL STREETLIGHTS WILL BE INSTALLED BY MET-ED (FIRST ENERGY) WITH THE DEVELOPER PAYING FOR ALL THE MATERIAL AND LABOR COST. THE DEVELOPER MUST USE THE COLONIAL STYLE POST TOP AND POLE OFFERED BY MET-ED (FIRST ENERGY). MET-ED (FIRST ENERGY) STILL OWNS AND MAINTAINS THE SYSTEM. A MINIMUM NINETY-WATT LED LIGHT IS REQUIRED. THE LIGHTS SHALL BE SHOWN ON THE SUBDIVISION PLAN AT INTERVALS OF NOT MORE THAN 200 FEET AND ARE SUBJECT TO APPROVAL BY MET-ED (FIRST ENERGY) AND THE TOWNSHIP. A SEPARATE SHEET SHALL REFLECT THE PROPOSED STREETLIGHT LAYOUT WITH DISTANCES BETWEEN LIGHTS SHOWN AND LOT WIDTHS AT CURB TO DETERMINE FUTURE STREETLIGHT ASSESSMENT COSTS.  
2. IT IS MET-ED'S POLICY TO ENERGIZE THE LIGHTS UPON INSTALLATION IN NORTH LEBANON TOWNSHIP. THE DEVELOPER WILL BE RESPONSIBLE FOR ALL COSTS, INCLUDING ENERGY COSTS, UNTIL SUCH TIME AS THE STREET IS DEDICATED AND ACCEPTED BY THE TOWNSHIP. STREETLIGHT ASSESSMENT IS BASED ON FRONT FOOT ASSESSMENT.  
3. THE DEVELOPER IS REQUIRED TO PROVIDE A LOCKING MECHANISM AT THE BOX THAT HOUSES THE SWITCH FOR THE STREETLIGHT(S). THE LOCKING MECHANISM MUST BE APPROVED BY THE ROADMASTER OF NORTH LEBANON TOWNSHIP PRIOR TO INSTALLATION.  
4. AS-BUILT DRAWINGS ARE REQUIRED FOR ALL STREETLIGHTS, WIRING AND DISCONNECT SWITCHES.

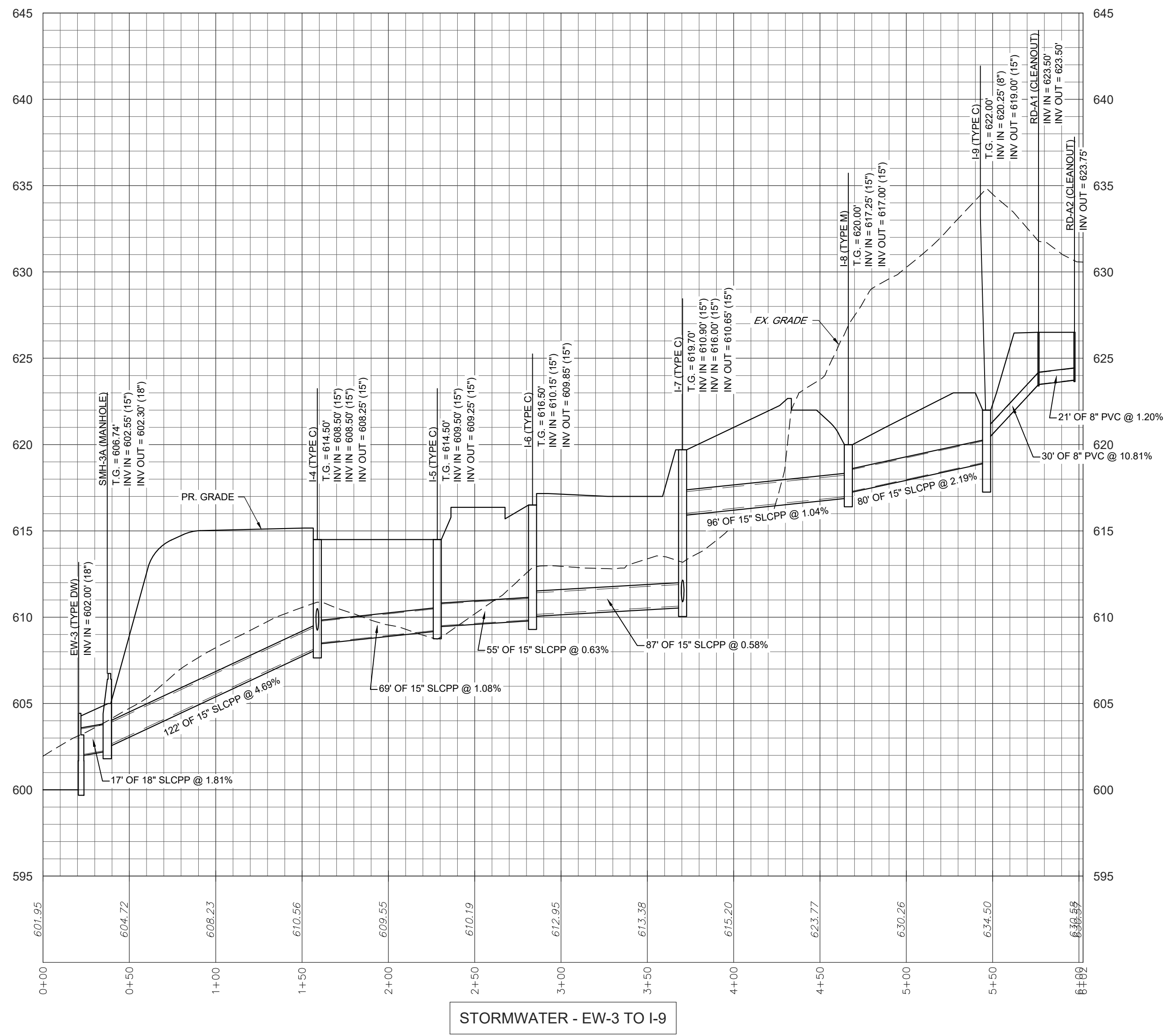
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⊙	SF6	13	SIGNIFY GARDCO	SFRA-3-110LA-4870-NW	SlenderForm Round Arm Mount SFRA, 48 LED's, 4000K CCT, TYPE 3 OPTIC.	(1(48LED)) FLEXgine ARRAY(S) DRIVEN AT 700mA	sfr-3-110la-4870-nw.ies	12556	0.9	214

REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-33-23	5-8-23	CDS
PER LCPD LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

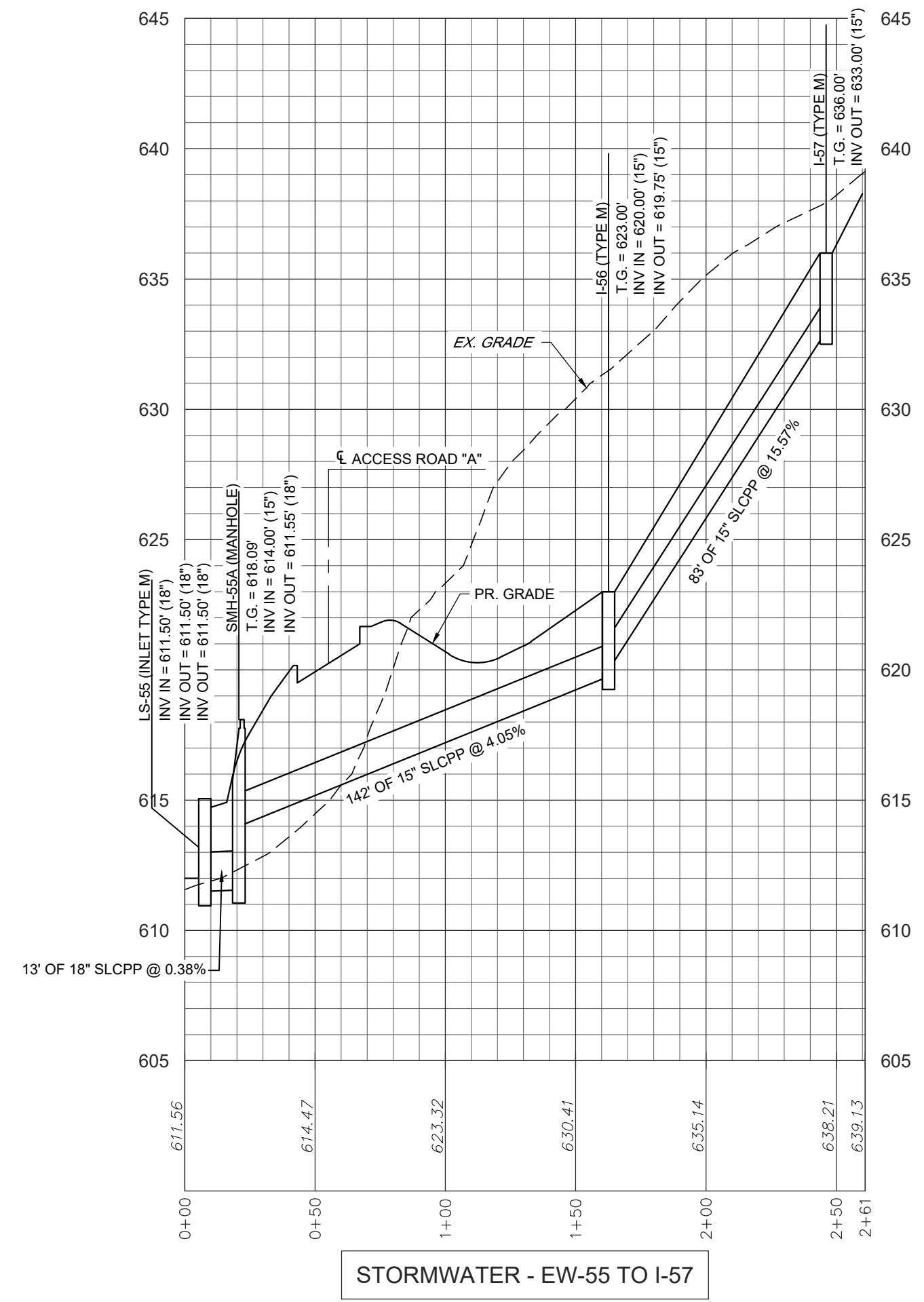
**LIGHTING PLAN**  
PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS  
FOR  
**BRIAR RIDGE COMMONS - APARTMENTS**  
NORTH LEBANON TOWNSHIP  
LEBANON COUNTY, PENNSYLVANIA

FIELD CREW:	MOD, JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	1"=50'
PROJECT #	135-19-001

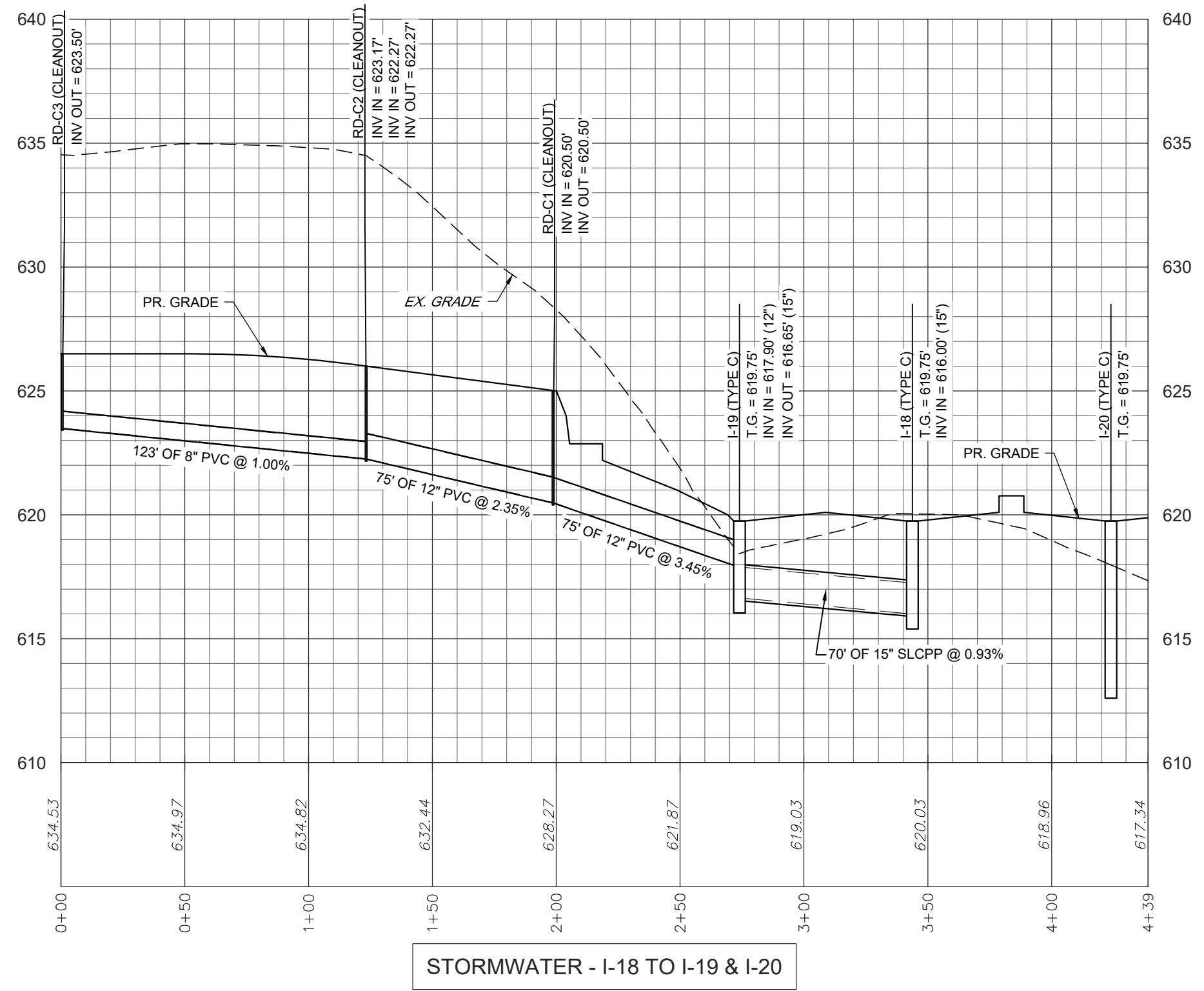




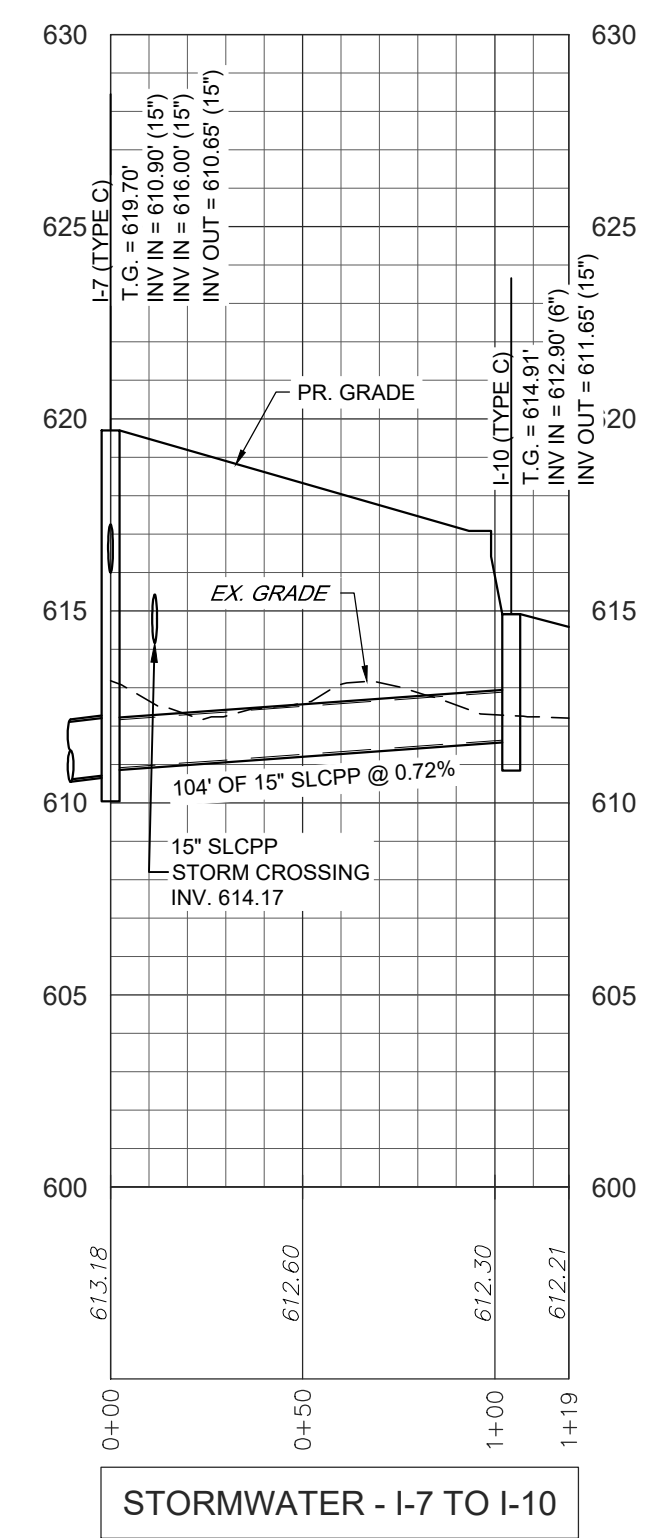
STORMWATER - EW-3 TO I-9



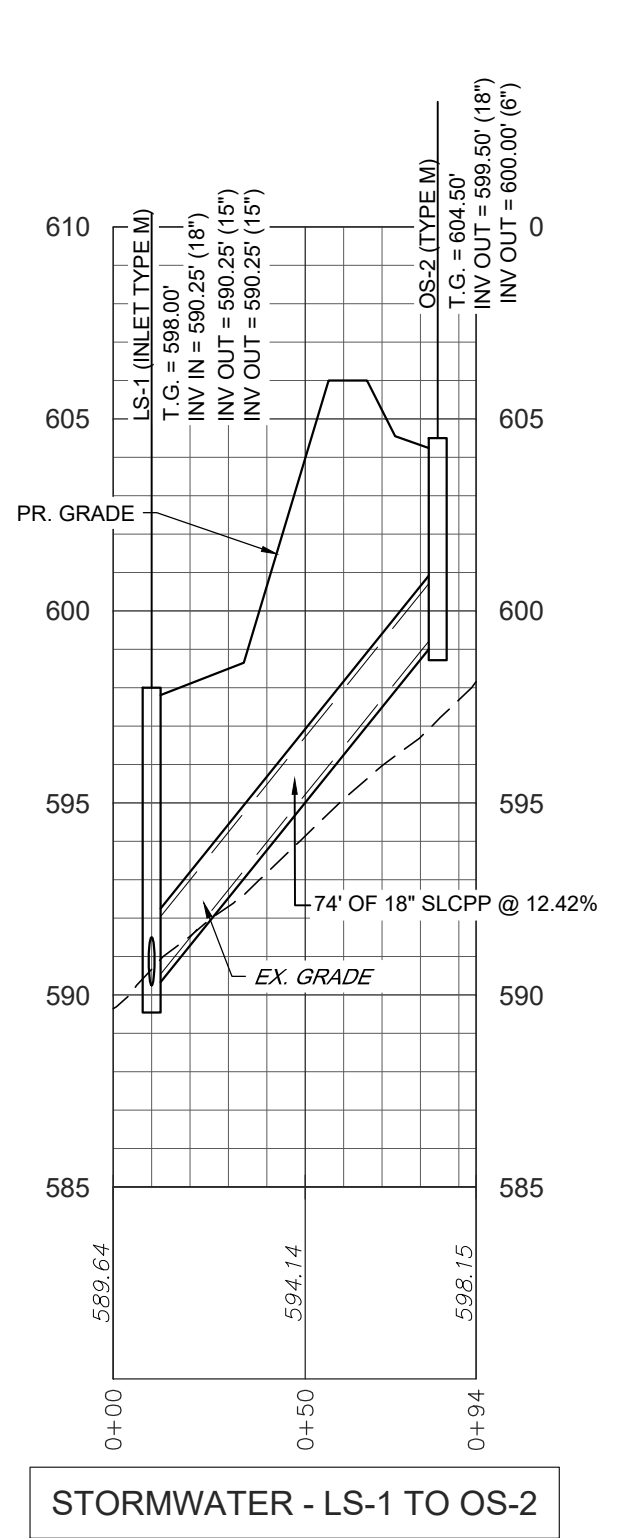
STORMWATER - EW-55 TO I-57



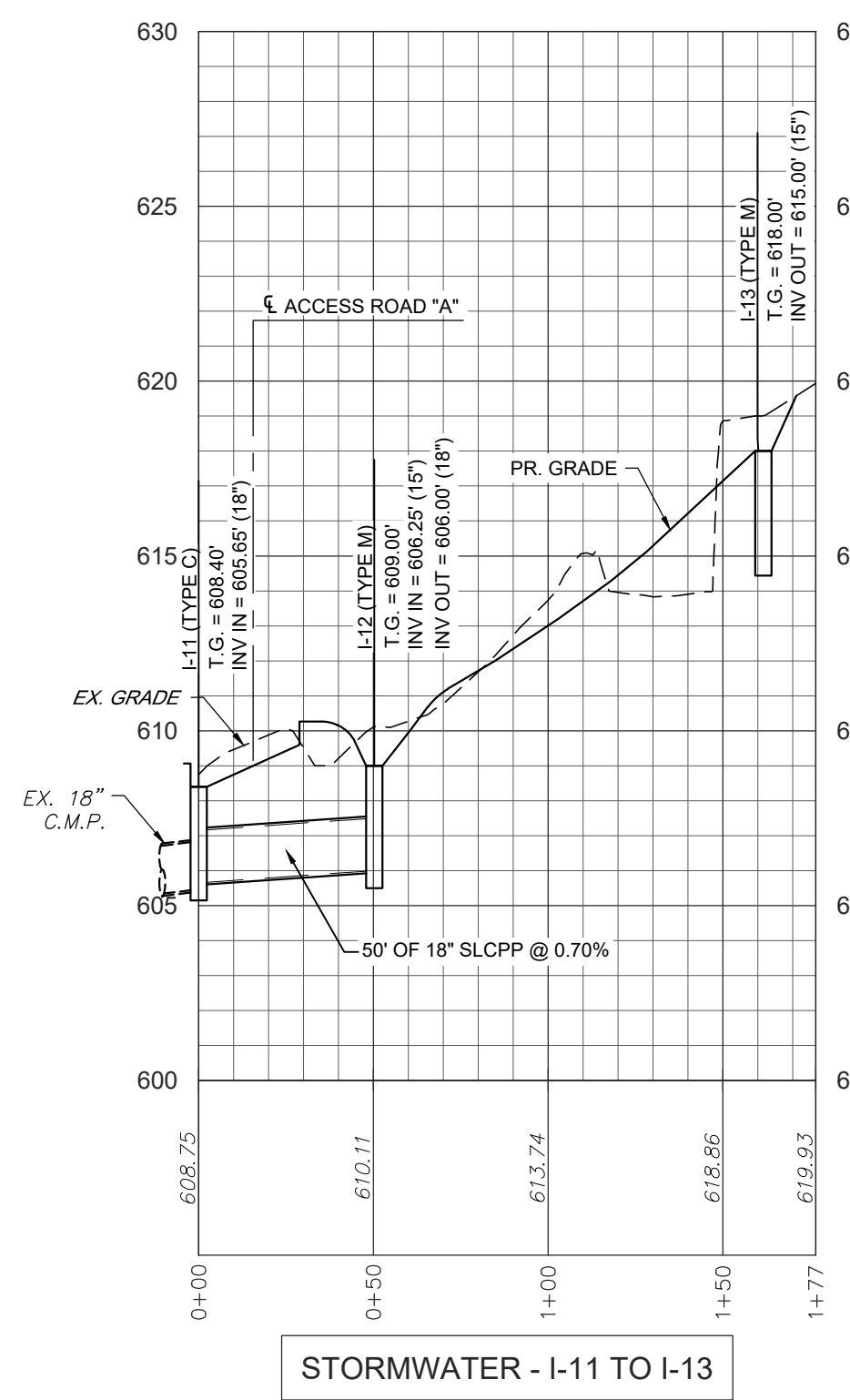
STORMWATER - I-18 TO I-19 & I-20



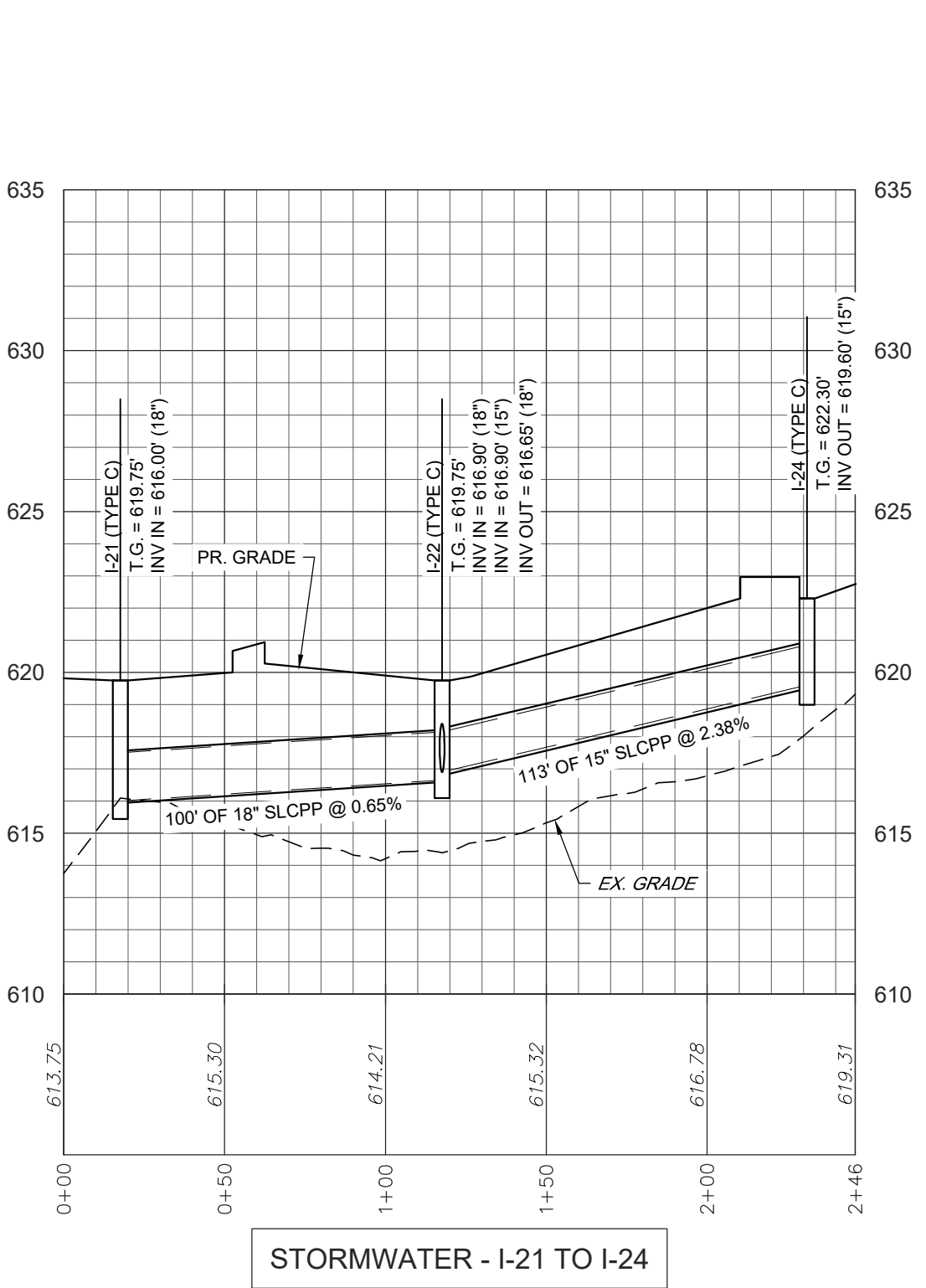
STORMWATER - I-7 TO I-10



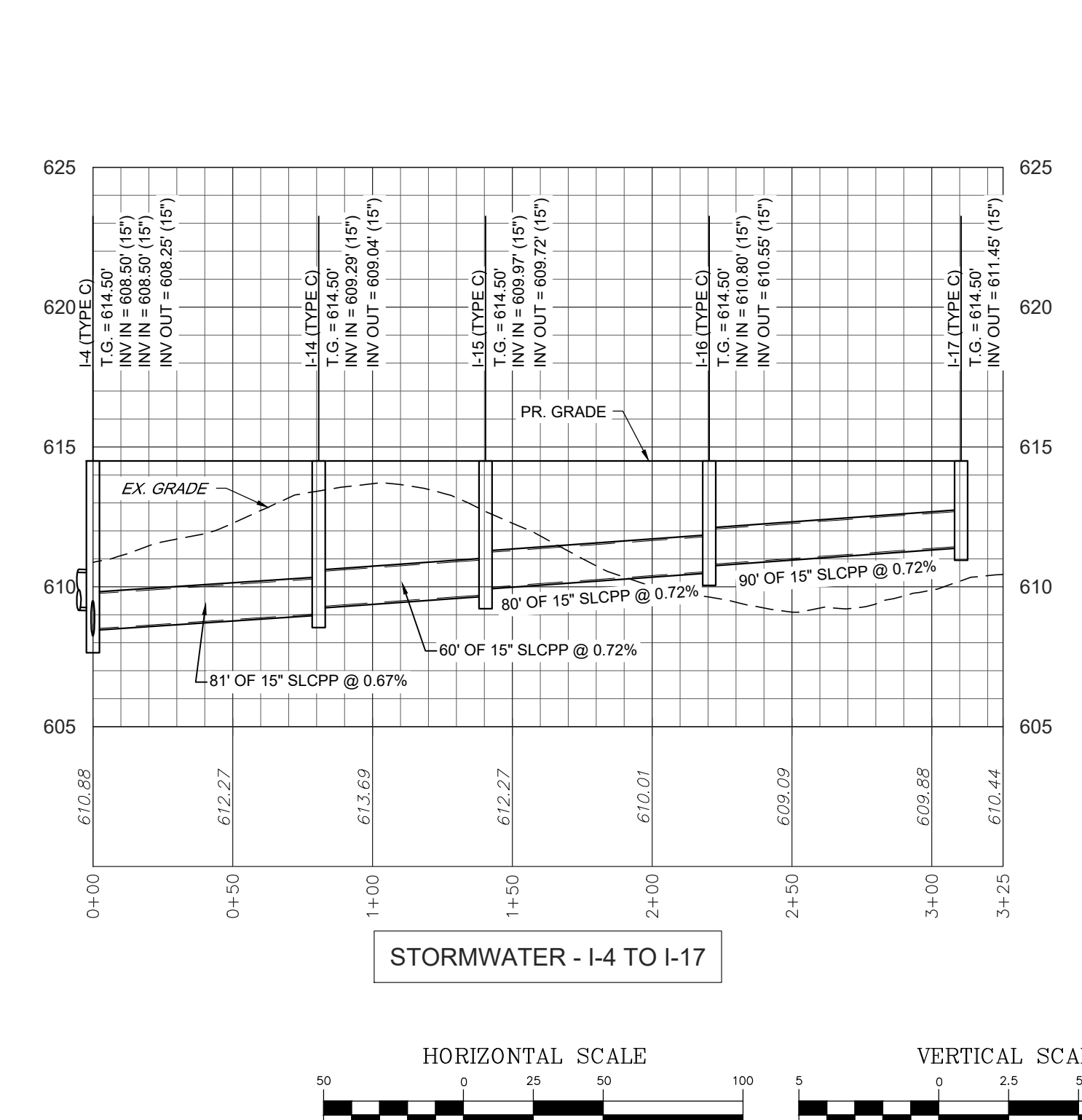
STORMWATER - LS-1 TO OS-2



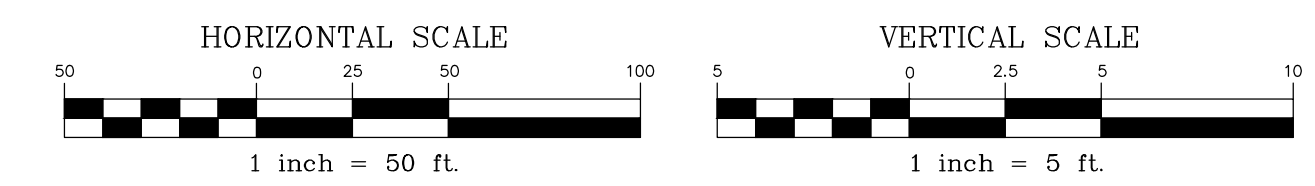
STORMWATER - I-11 TO I-13



STORMWATER - I-21 TO I-24

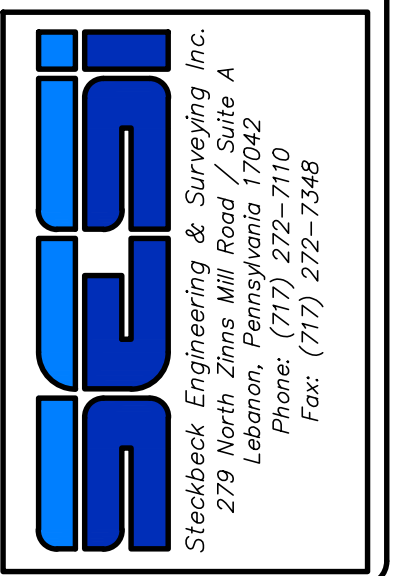


STORMWATER - I-4 TO I-17

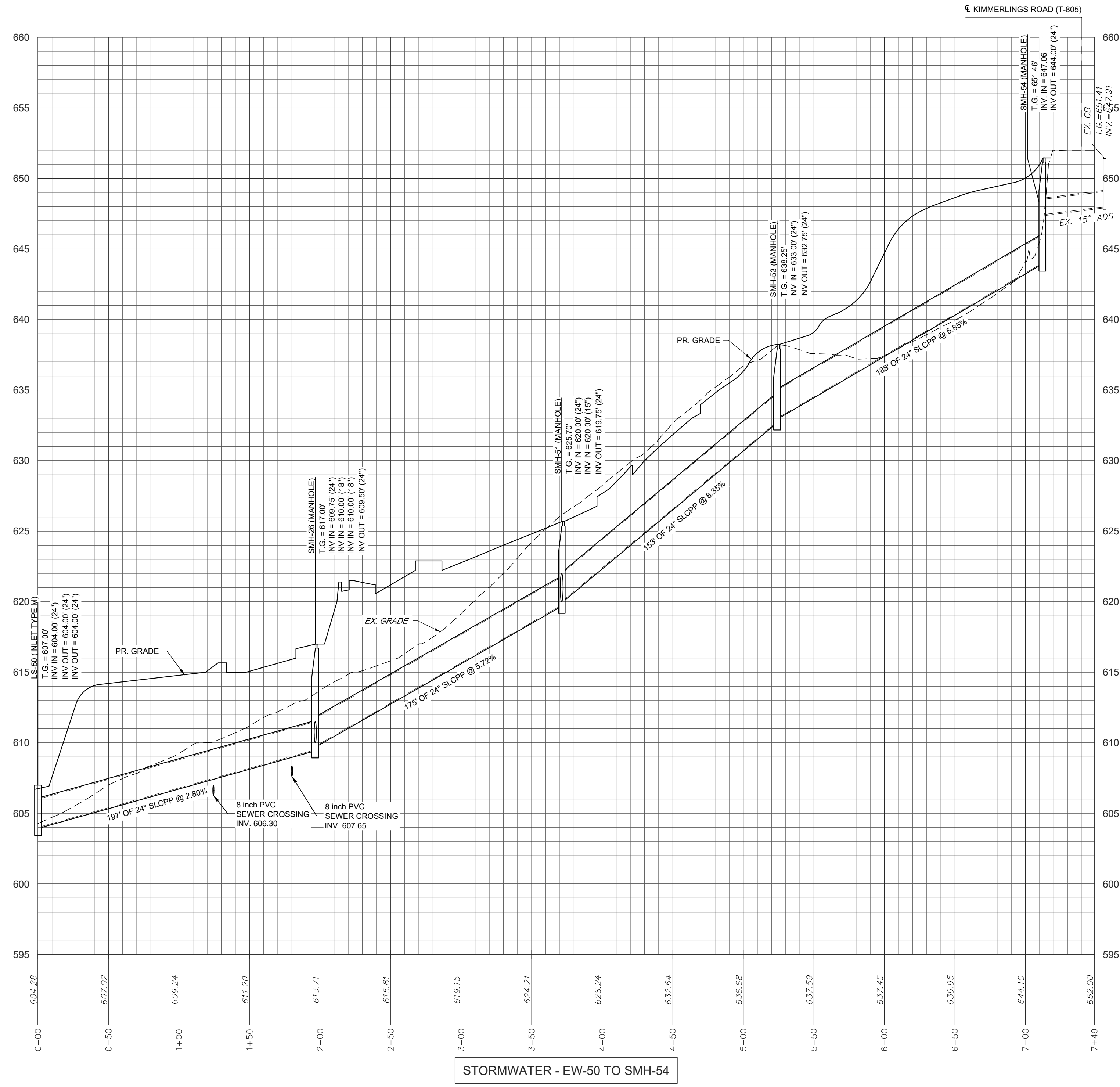


REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-3-23	5-8-23	CDS
PER LCPD LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
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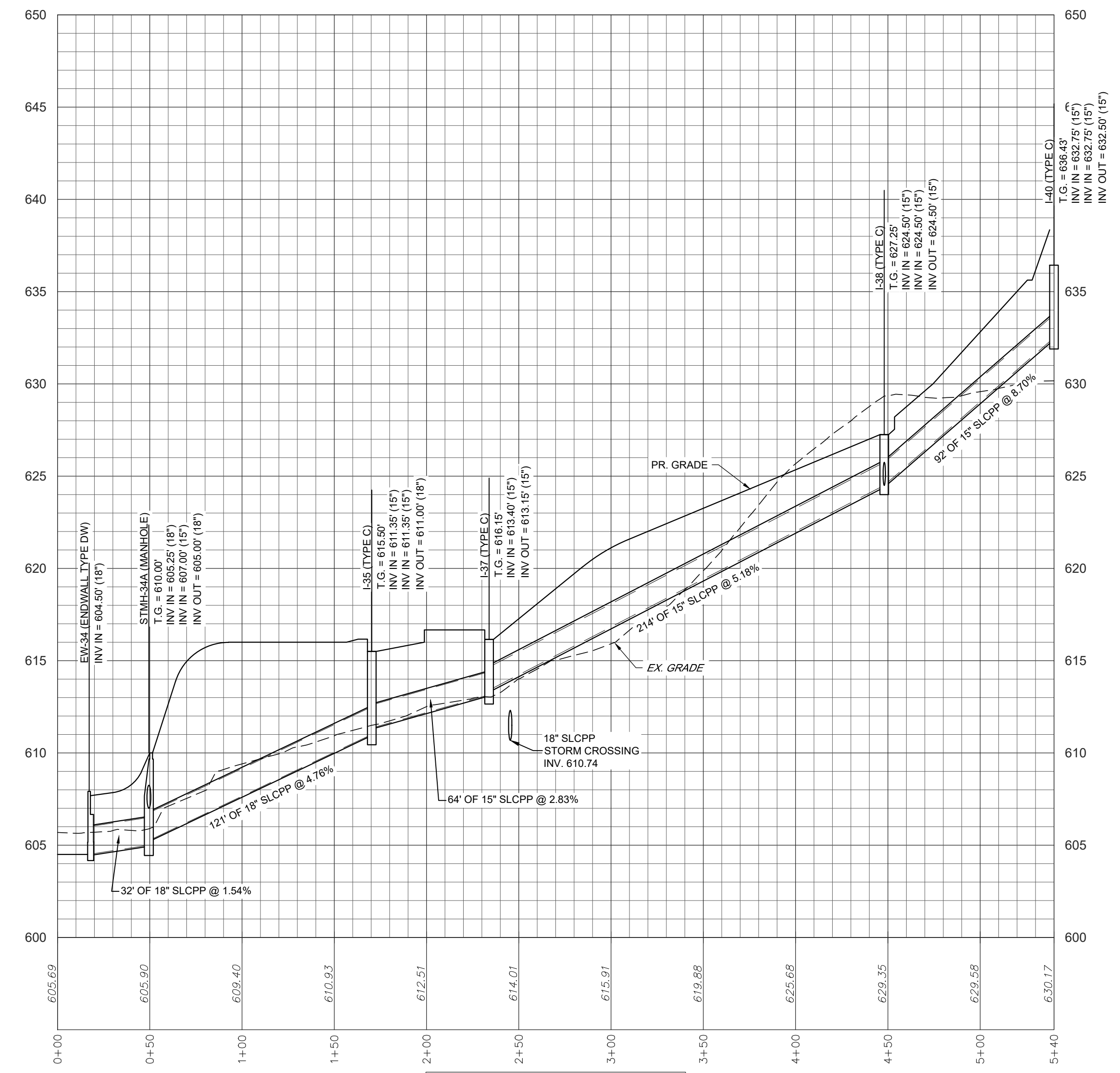
**PROFILES**  
 For  
**PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS**  
 Briar Ridge Commons - Apartments  
 located in  
 NORTH LEBANON TOWNSHIP  
 Lebanon County, Pennsylvania



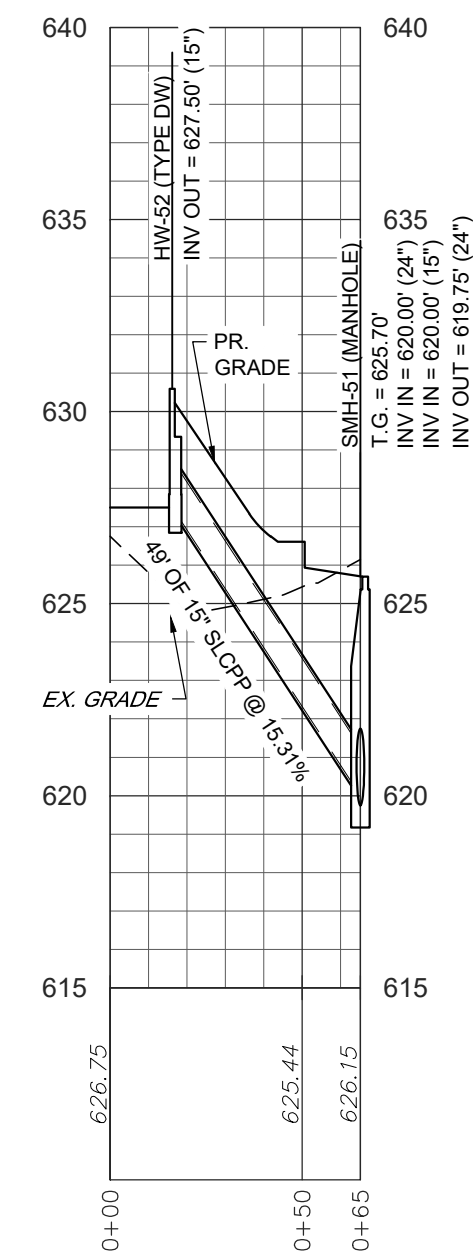
FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	AS NOTED
PROJECT #	135-19-001



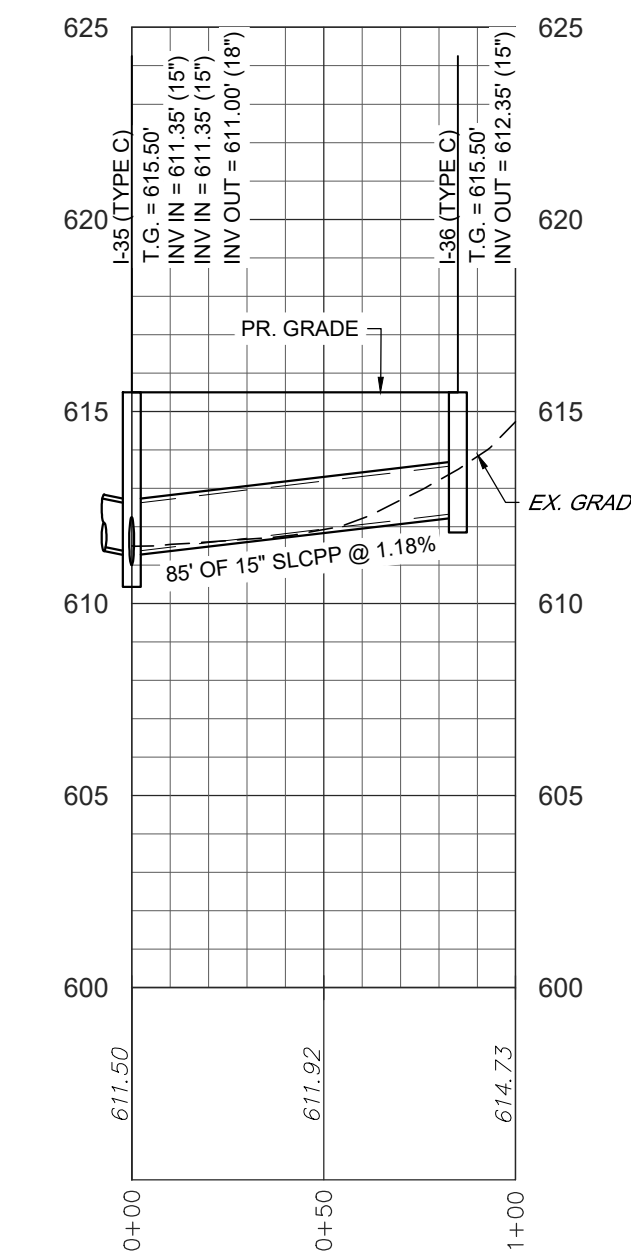
STORMWATER - EW-50 TO SMH-54



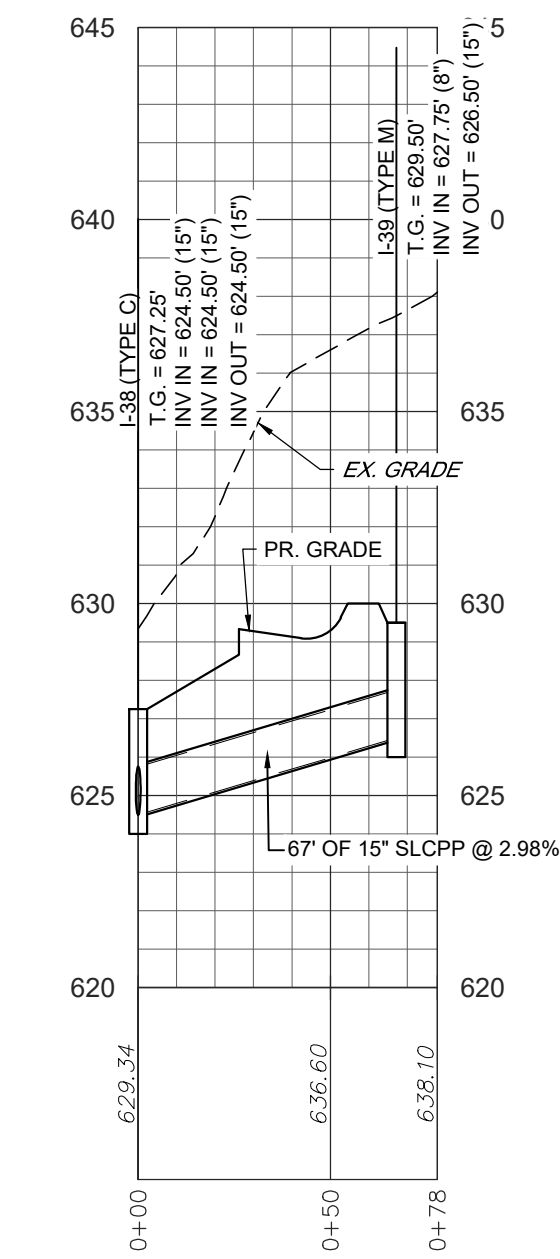
STORMWATER - EW-34 TO I-40



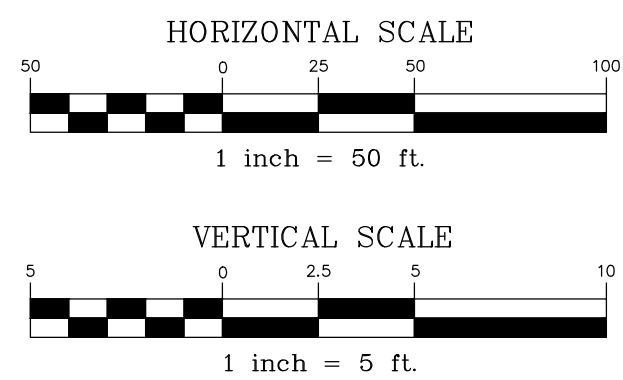
STORMWATER - HW-52 TO SMH-51



STORMWATER - I-35 TO I-36



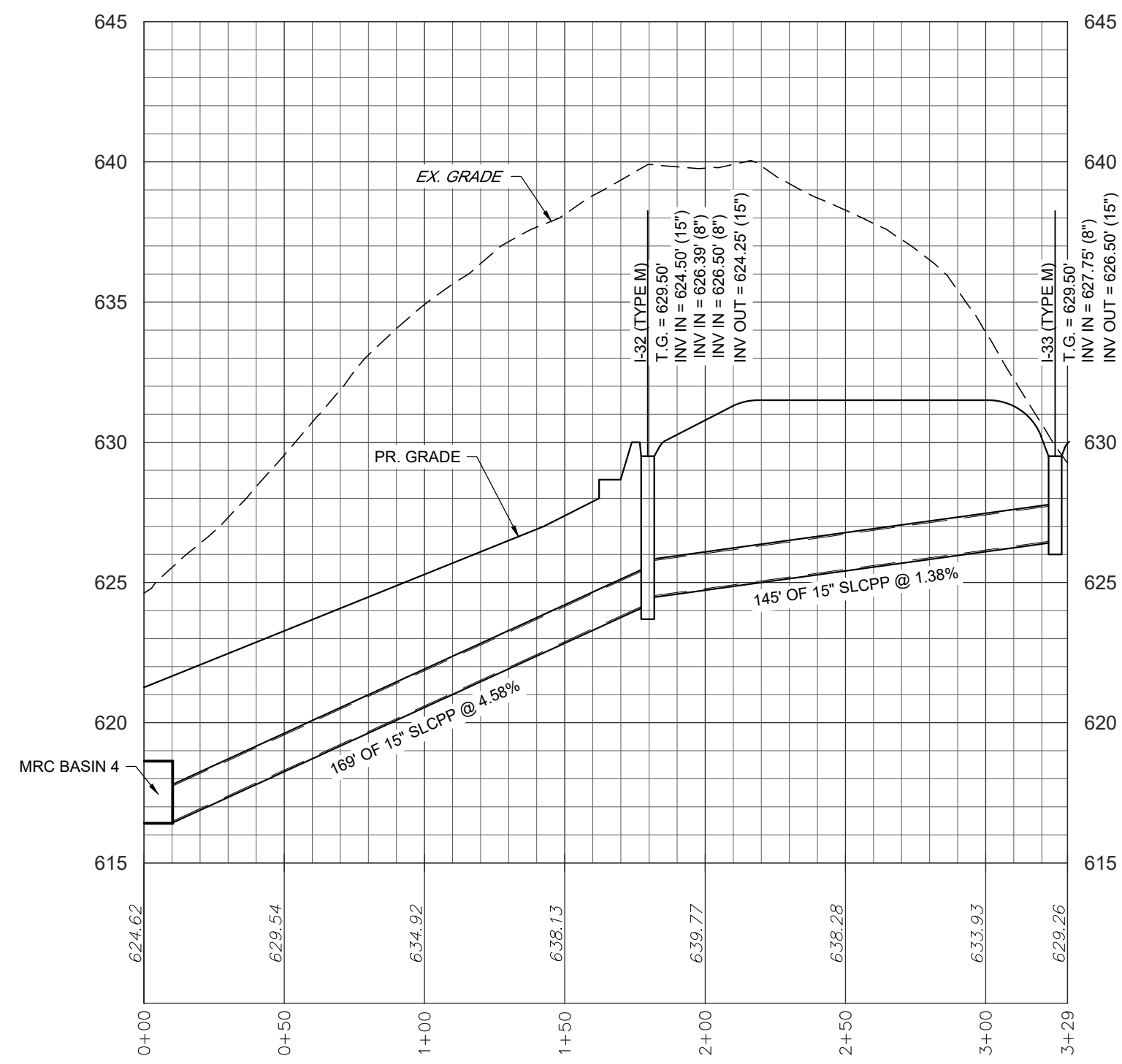
STORMWATER - I-38 TO I-39



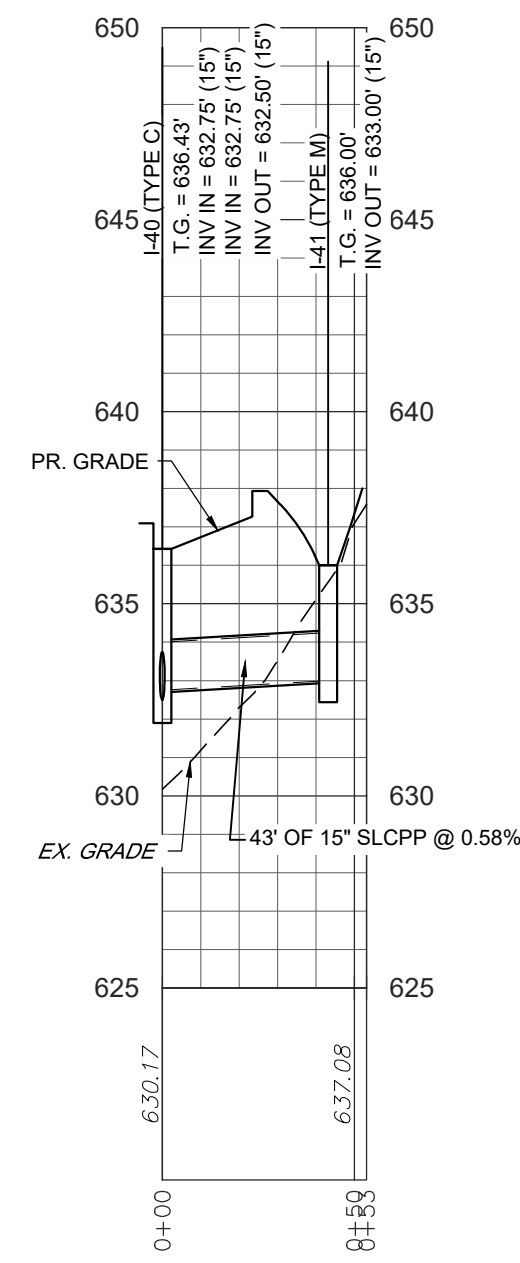
REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-3-23	5-8-23	CDS
PER LCPD LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

**PROFILES**  
 For  
**PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS**  
 Briar Ridge Commons - Apartments  
 located in  
 NORTH LEBANON TOWNSHIP  
 LEBANON COUNTY, PENNSYLVANIA

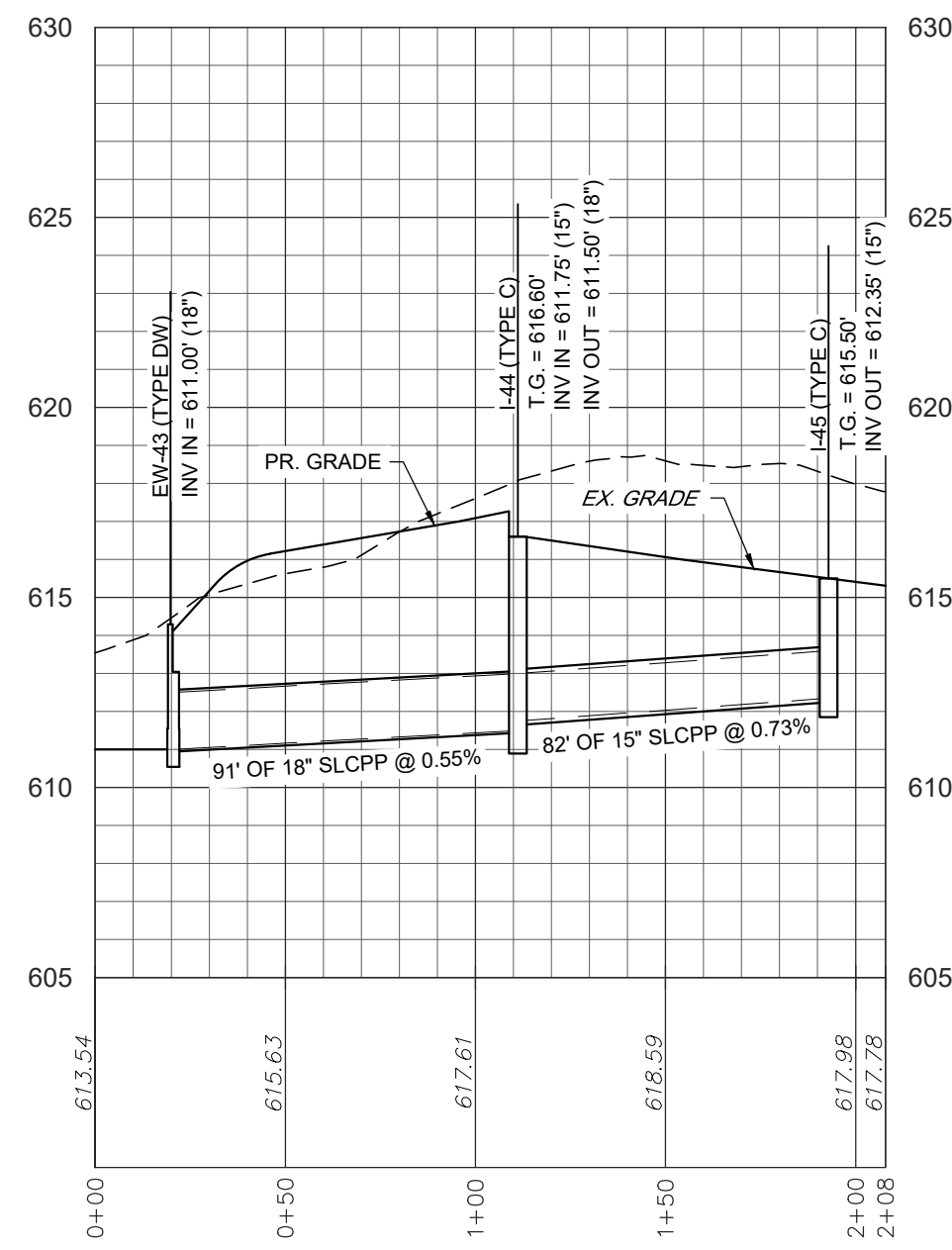
FIELD CREW:	MOD, JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	AS NOTED
PROJECT #	135-19-001



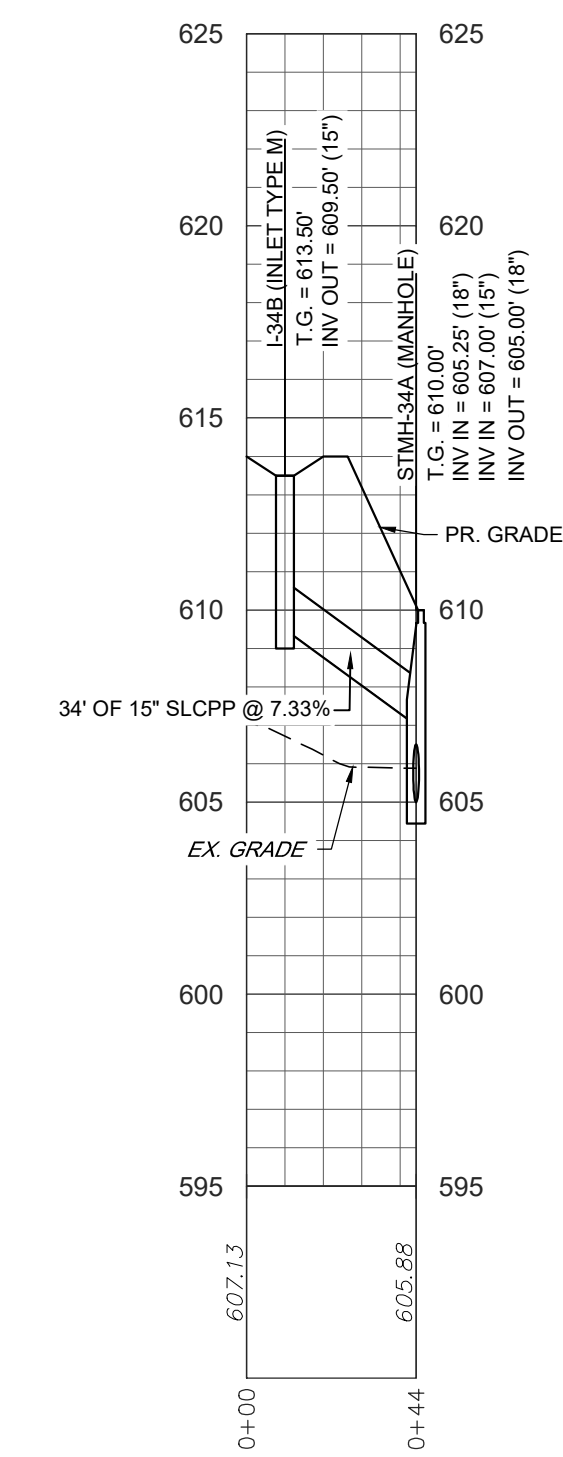
STORMWATER - MRC BASIN 4 TO I-33



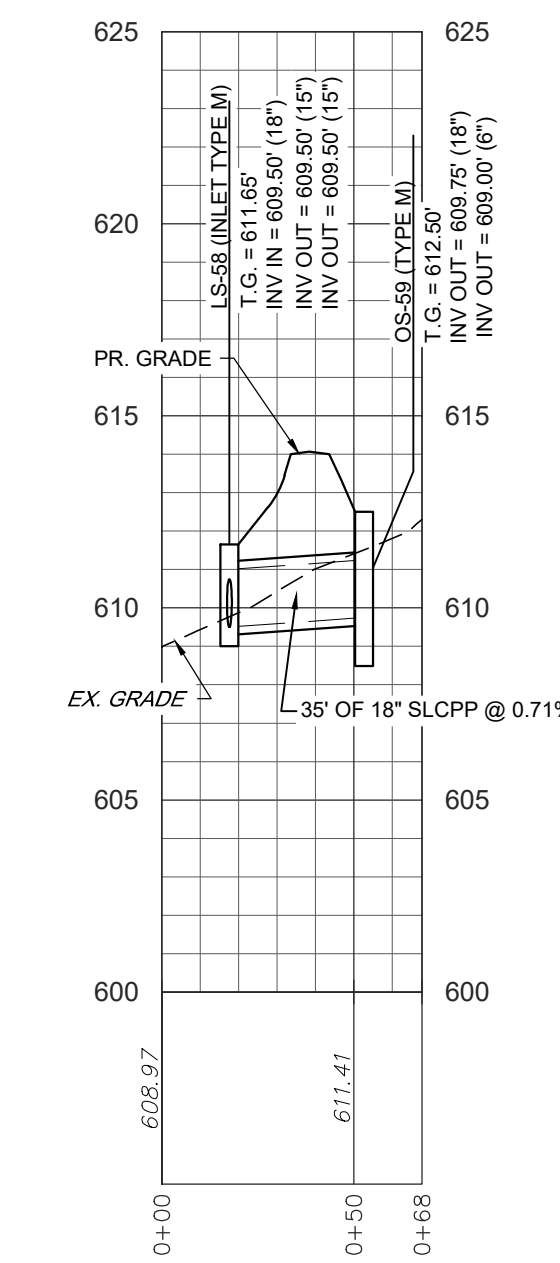
STORMWATER - I-40 to I-41



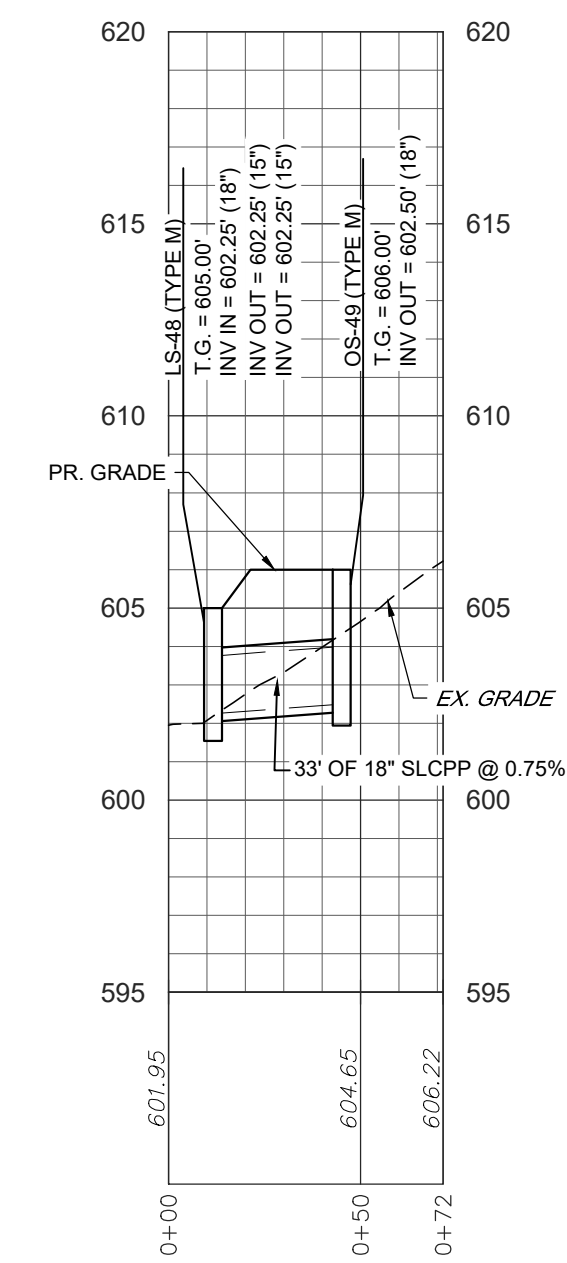
STORMWATER - EW-43 TO I-45



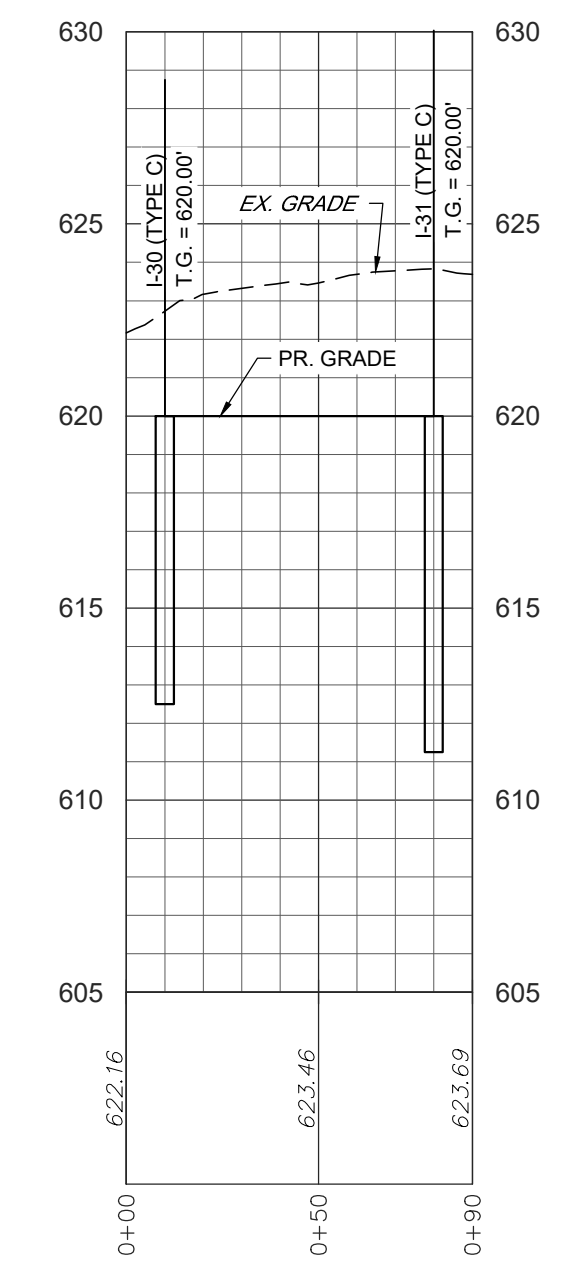
STORMWATER - I-34B TO STMH-34A



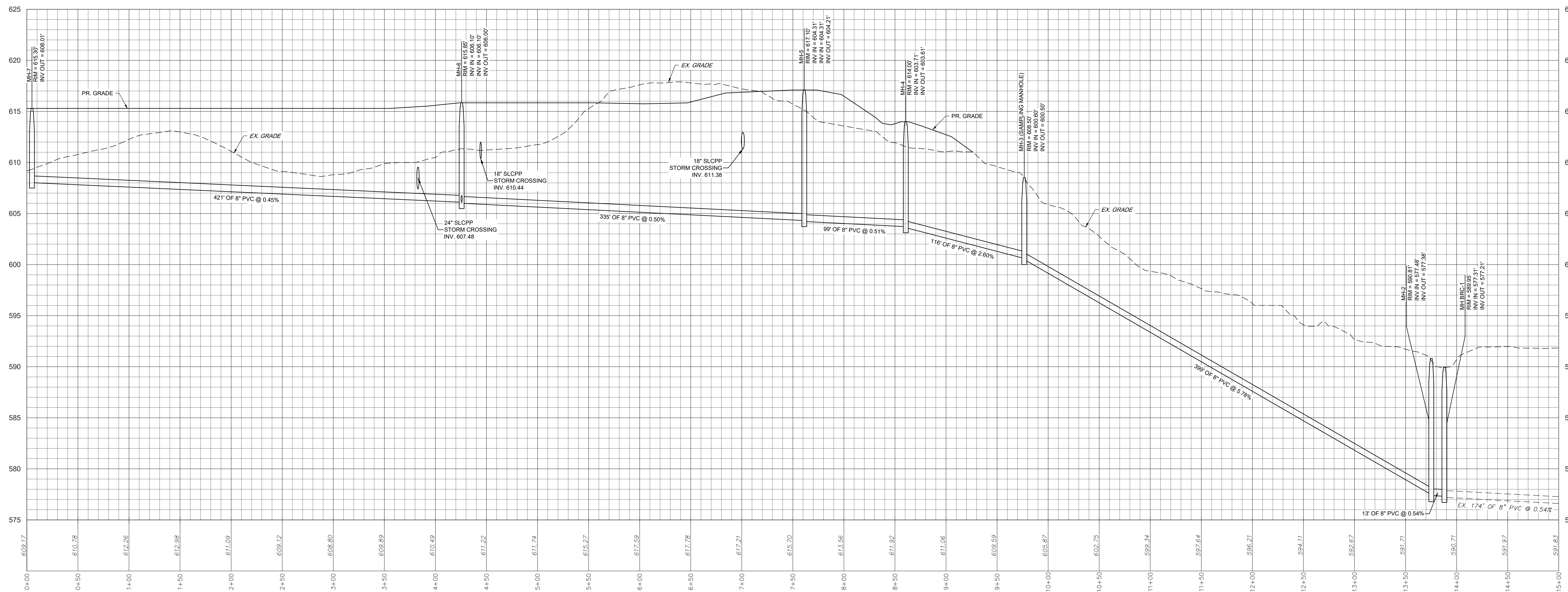
STORMWATER - LS-58 TO OS-59



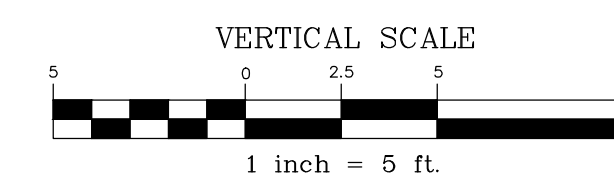
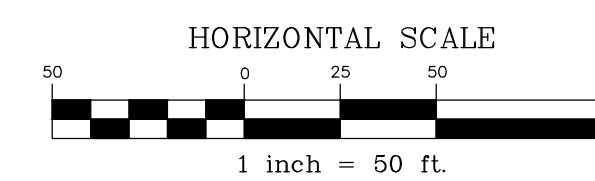
STORMWATER - LS-48 TO OS-49



STORMWATER - I-30 TO I-31



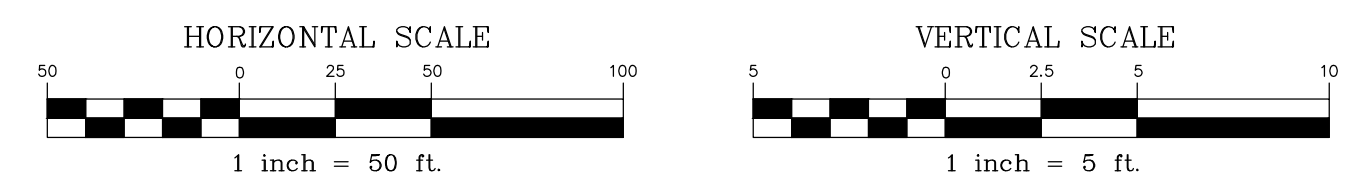
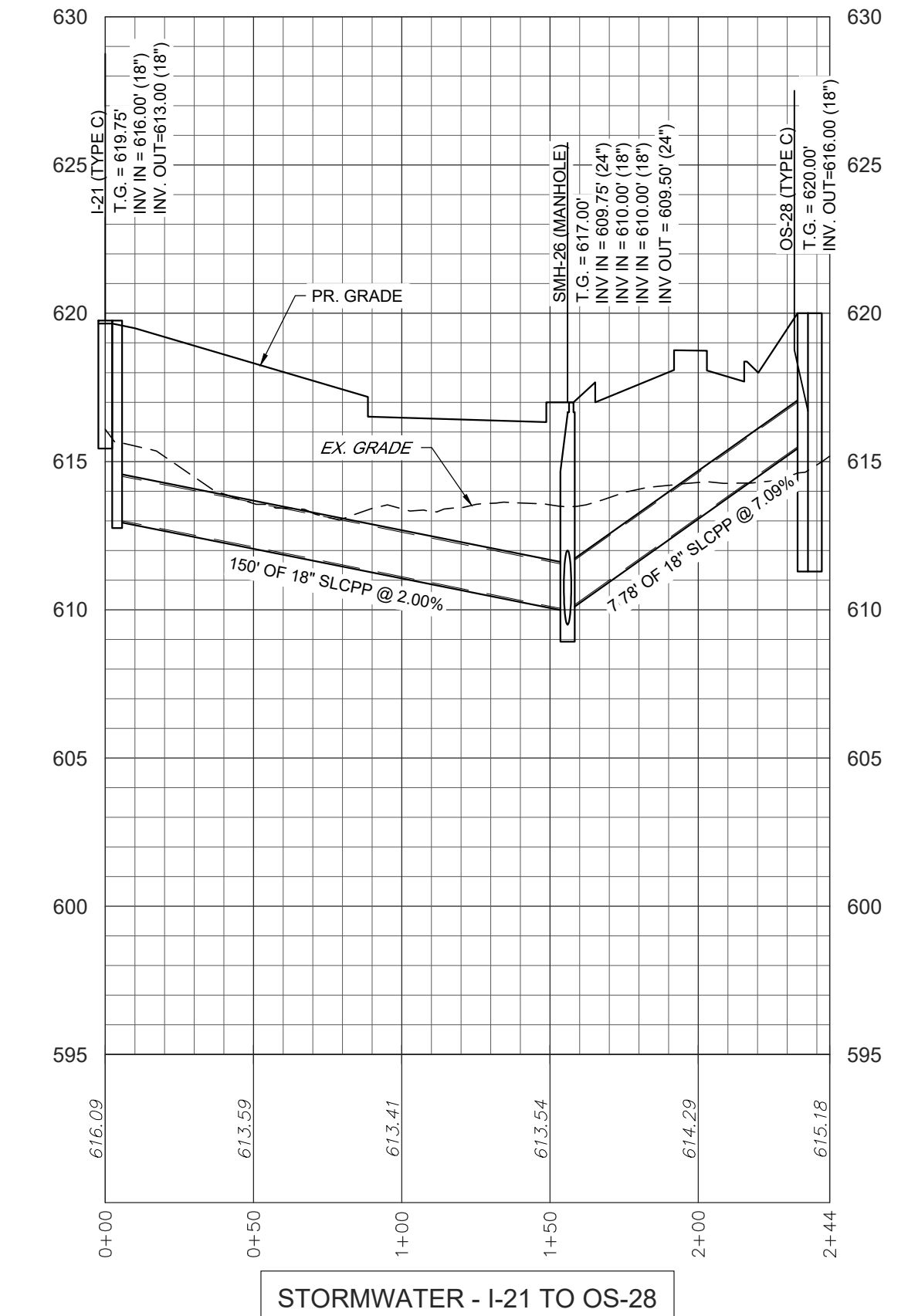
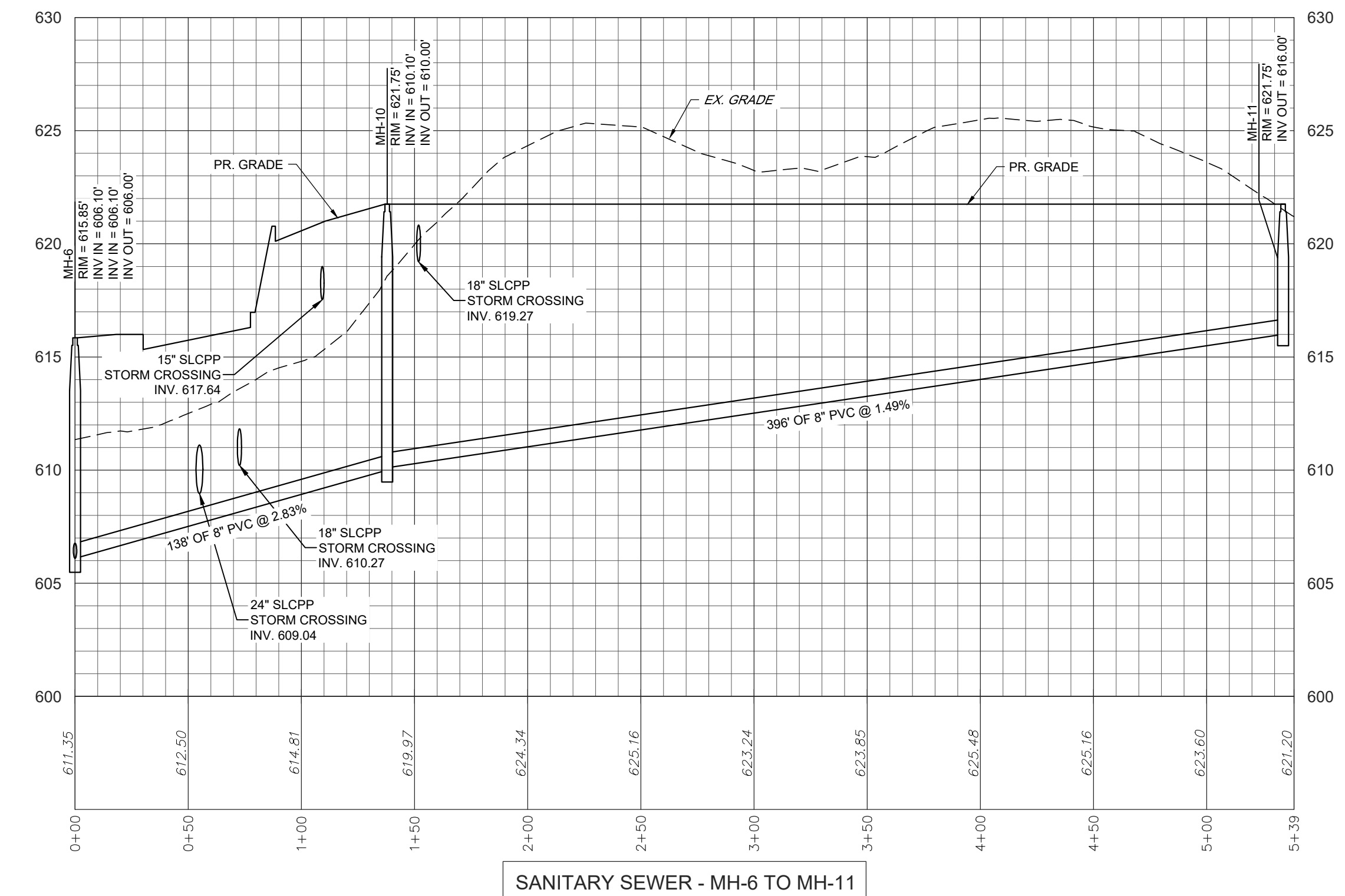
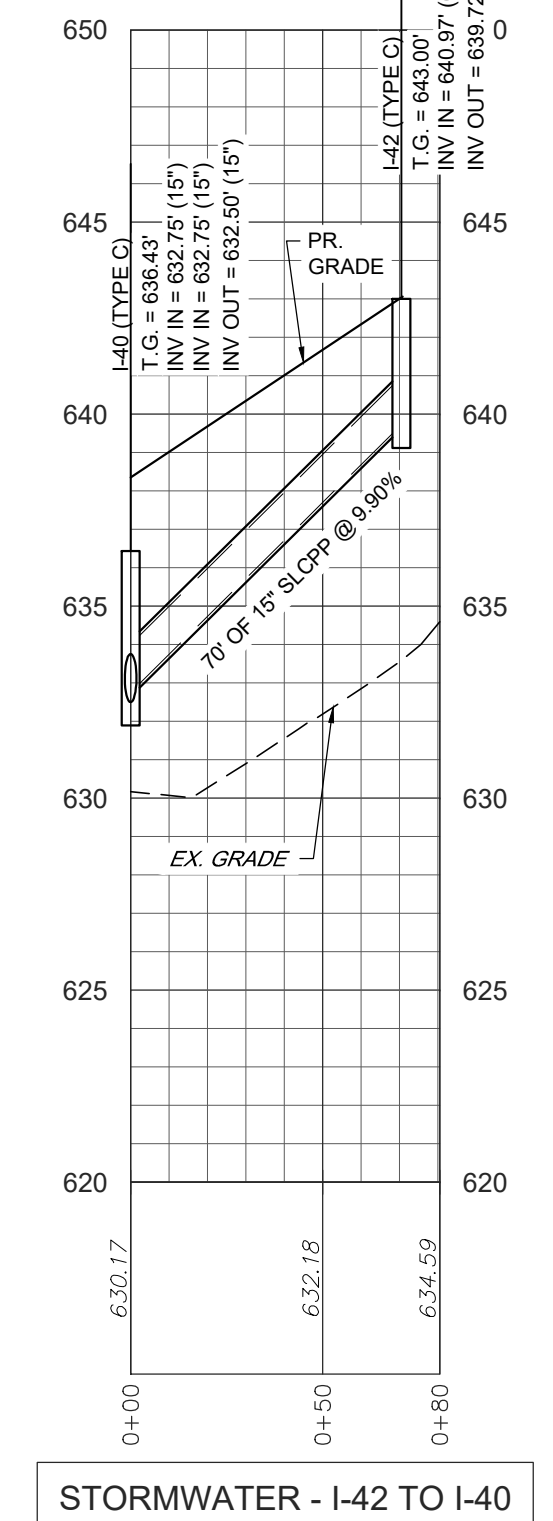
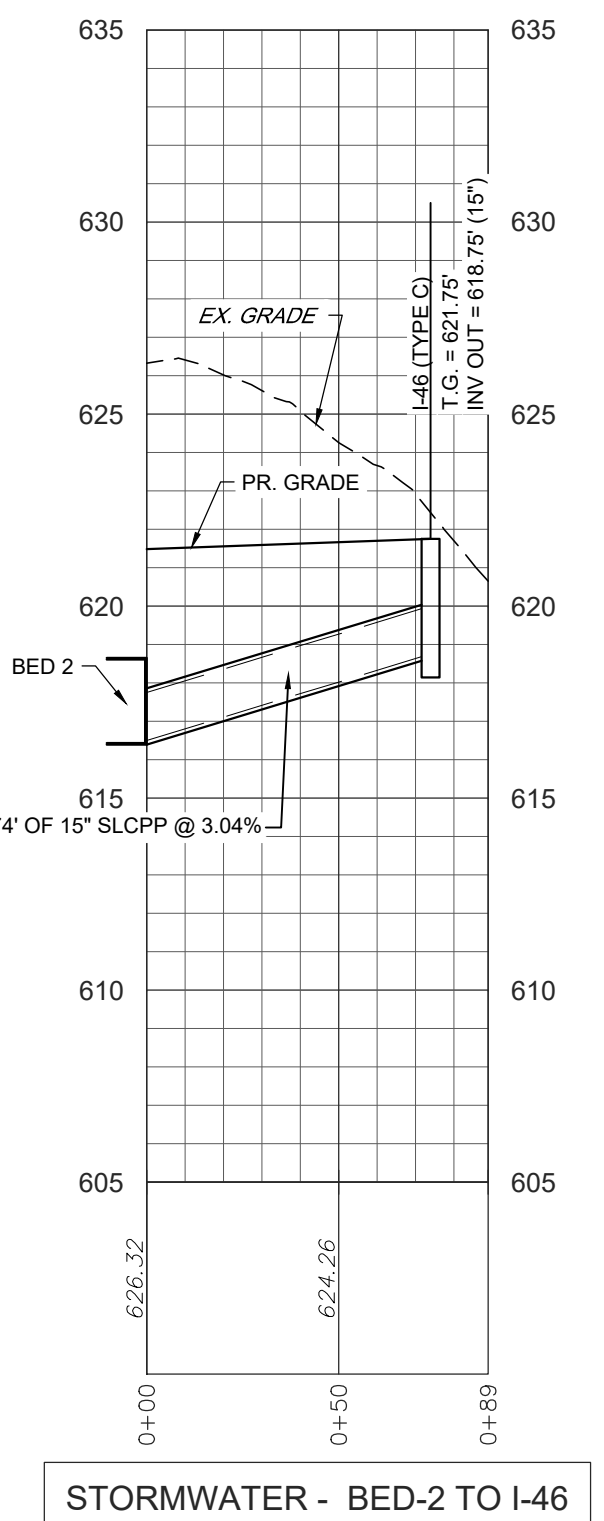
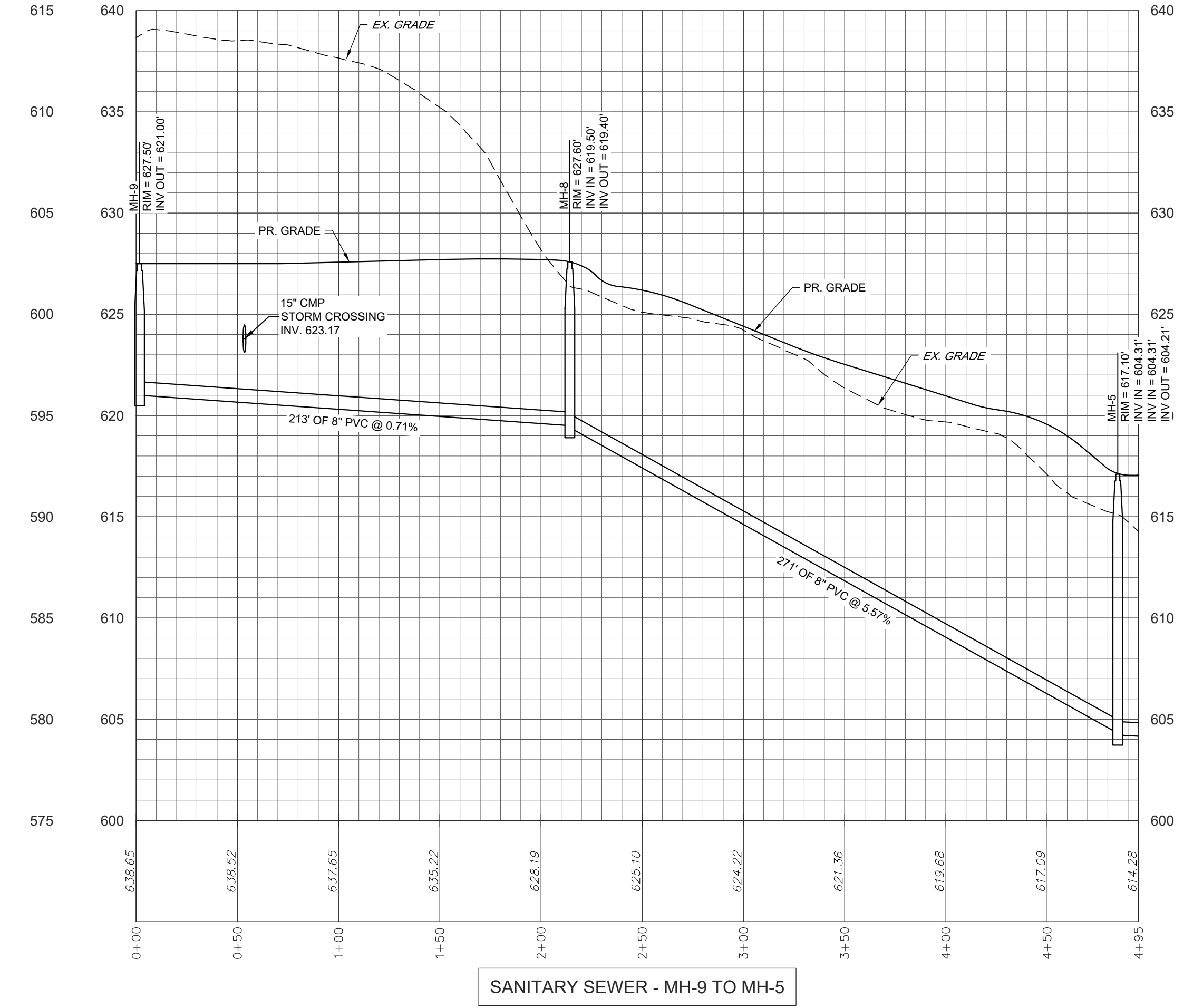
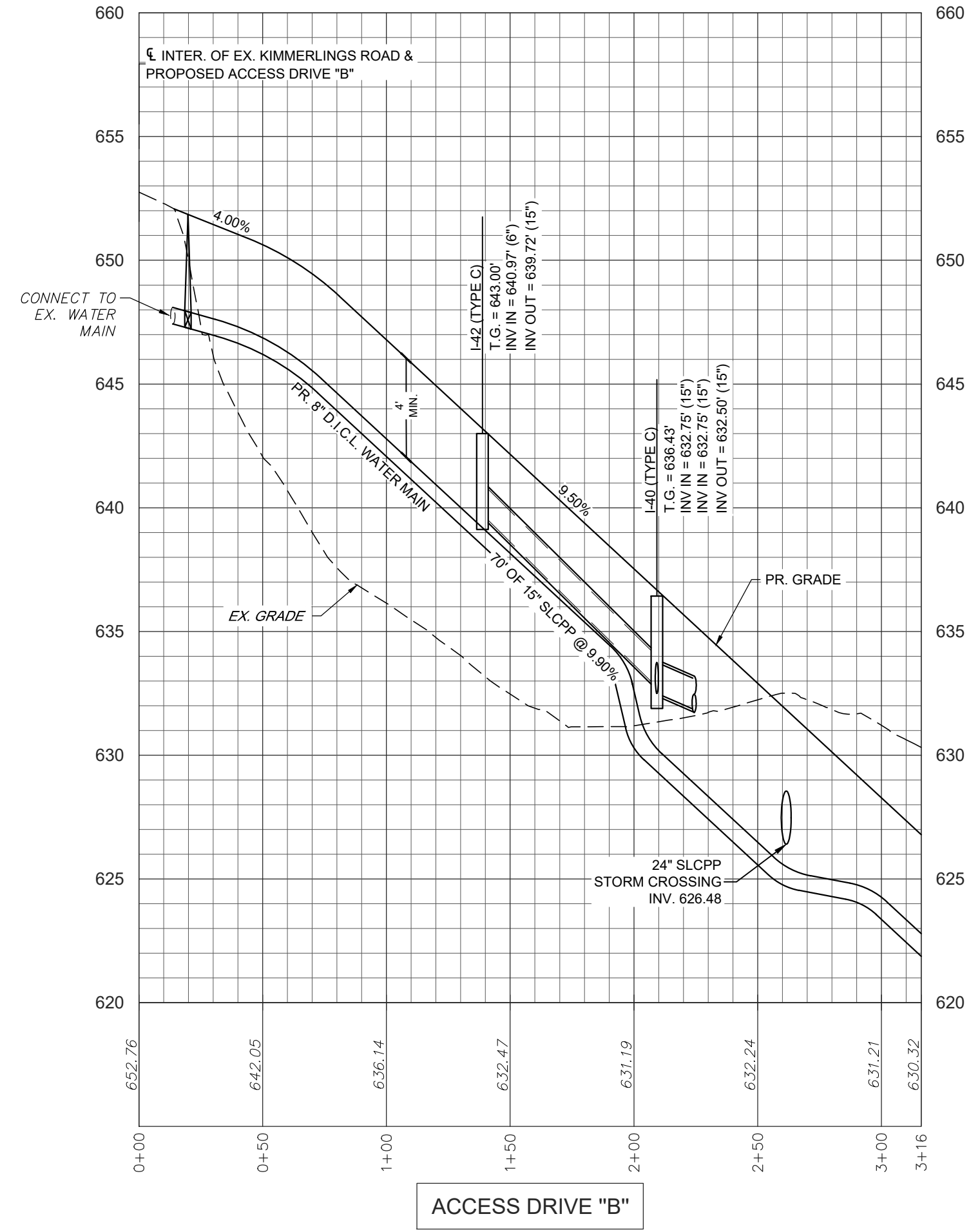
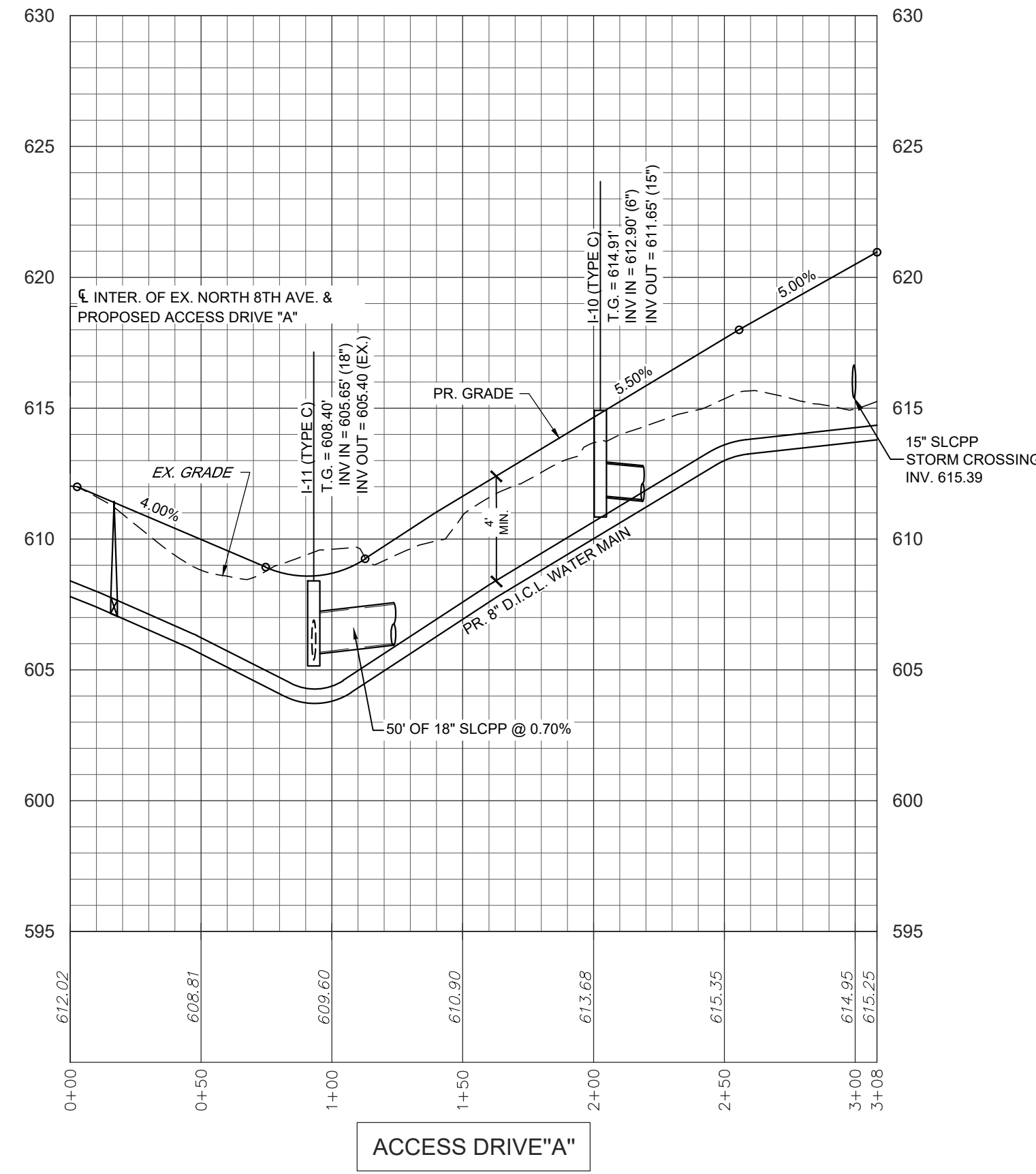
SANITARY SEWER - MH-7 TO EX MH



REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-33-23	5-8-23	CDS
PER LCPD LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

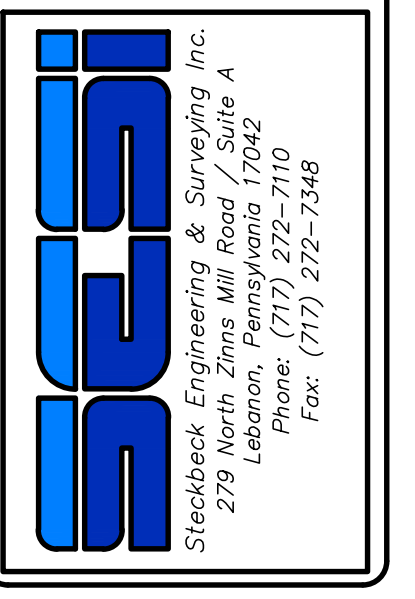
PROFILES  
 PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS  
 For  
**BRIAR RIDGE COMMONS - APARTMENTS**  
 located in  
 NORTH LEBANON TOWNSHIP  
 LEBANON County, Pennsylvania

FIELD CREW:	MOD, JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	AS NOTED
PROJECT #	135-19-001

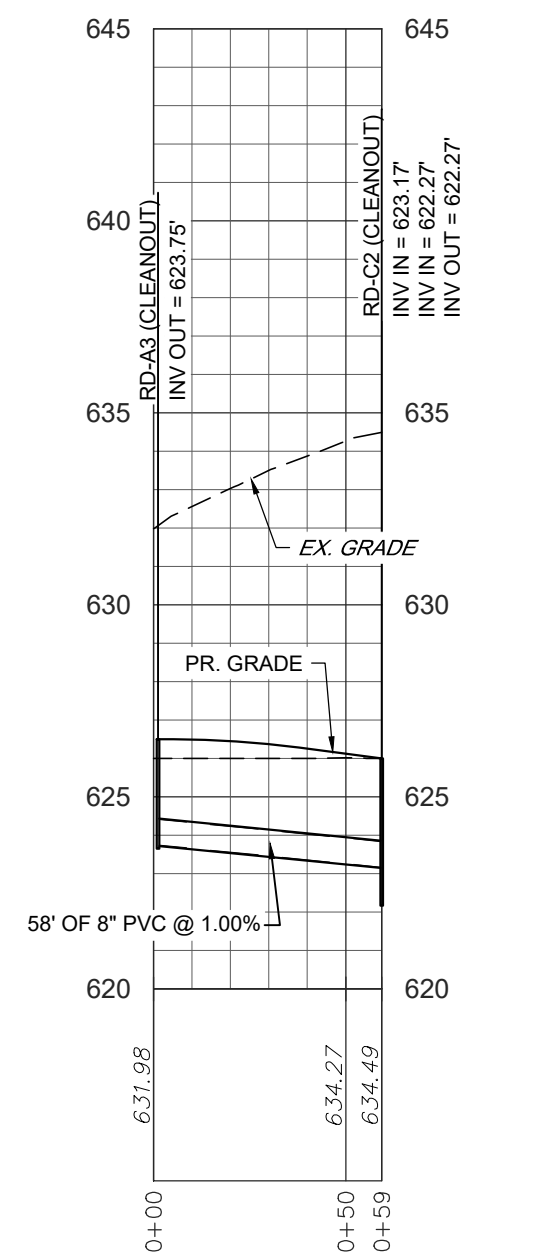


REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-3-23	5-8-23	CDS
PER COLA LETTER DATED 4-4-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

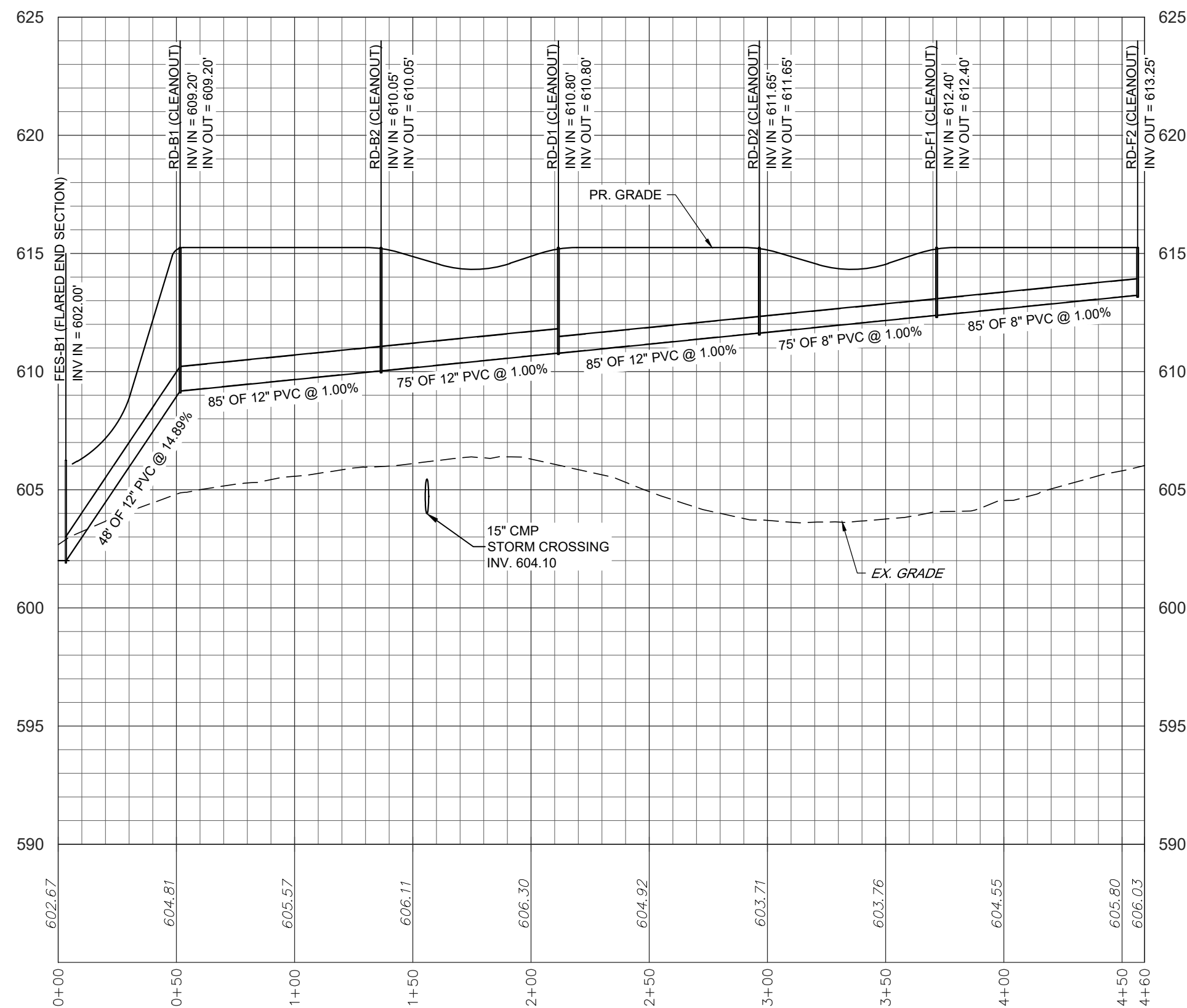
**PROFILES**  
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NORTH LEBANON TOWNSHIP  
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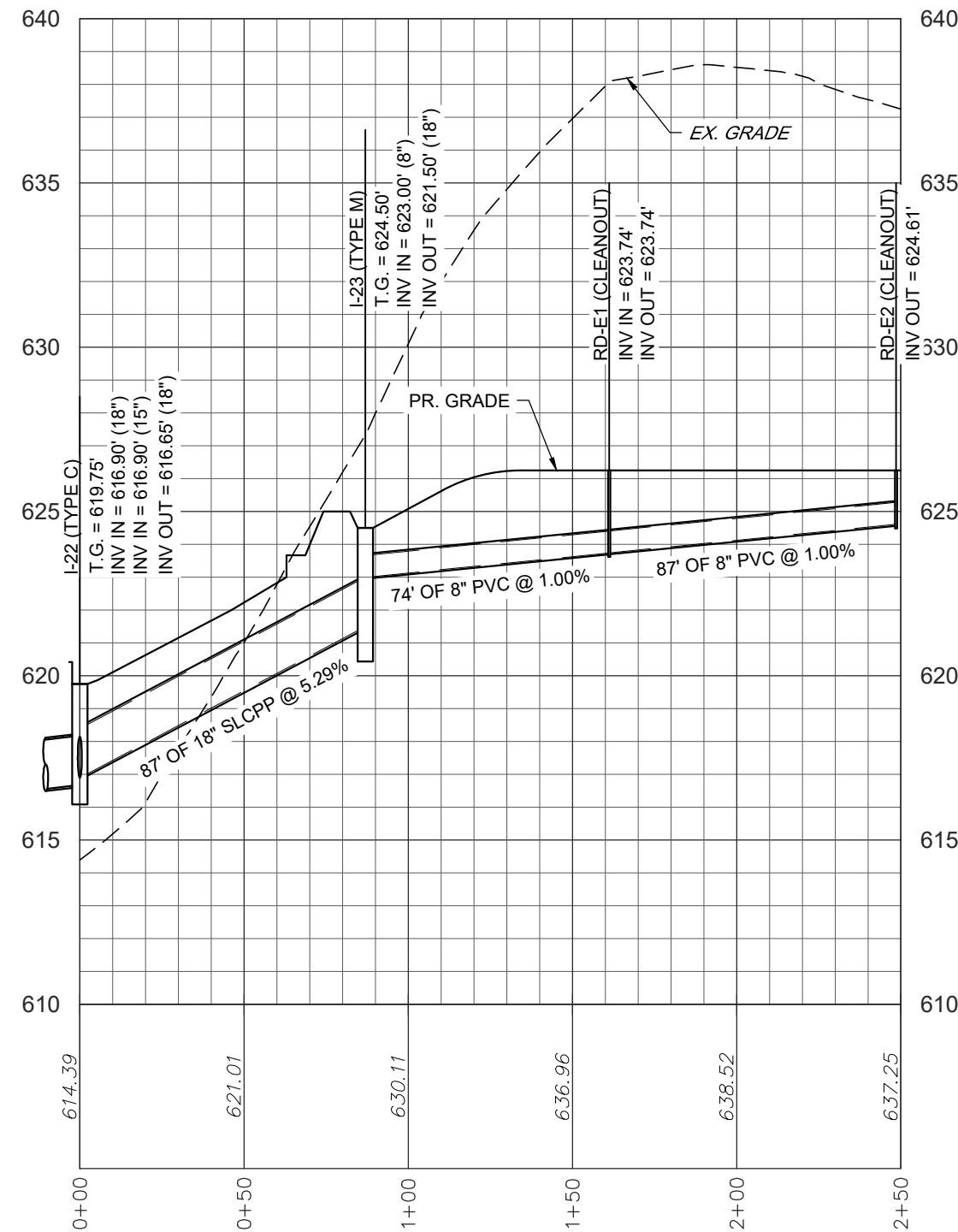
FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
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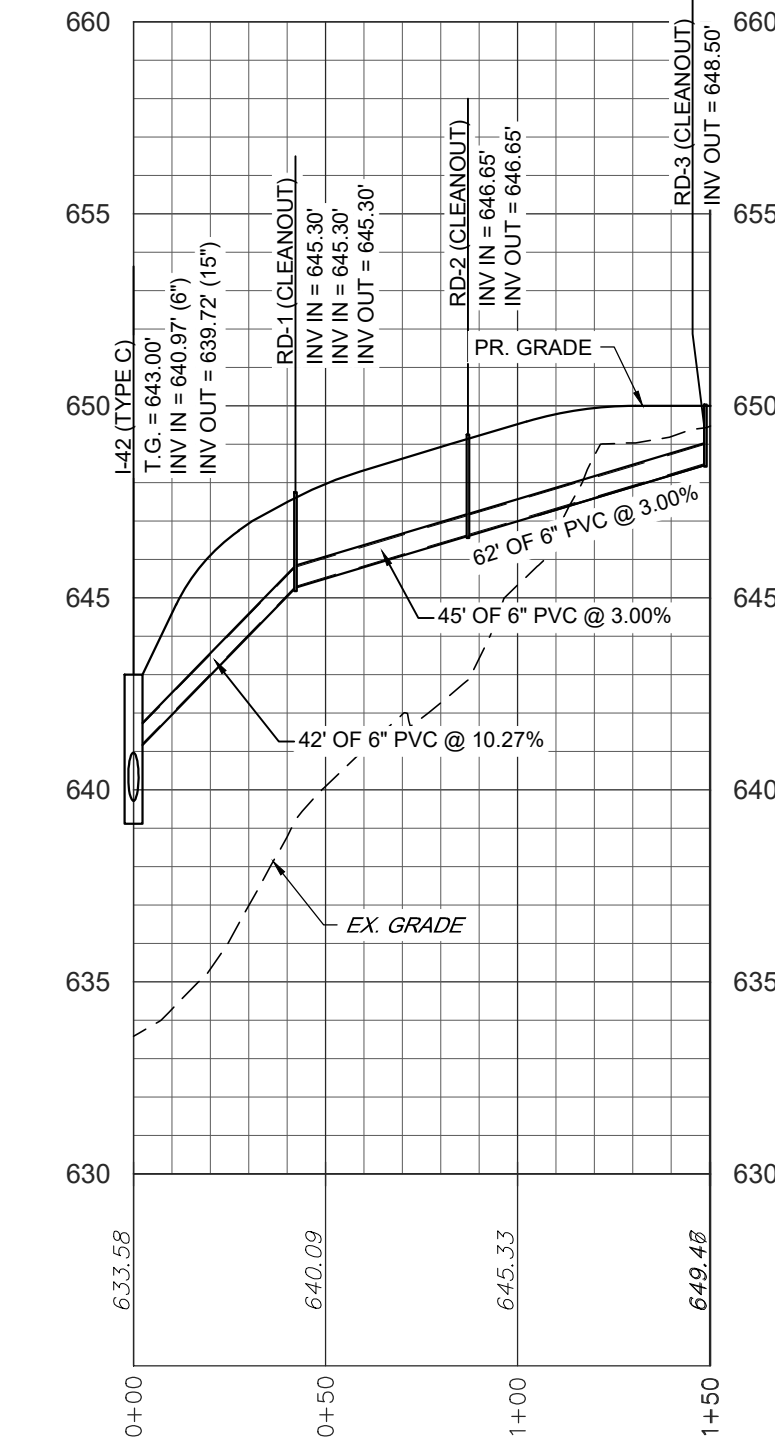
STORMWATER - RD-C2 TO RD-A3



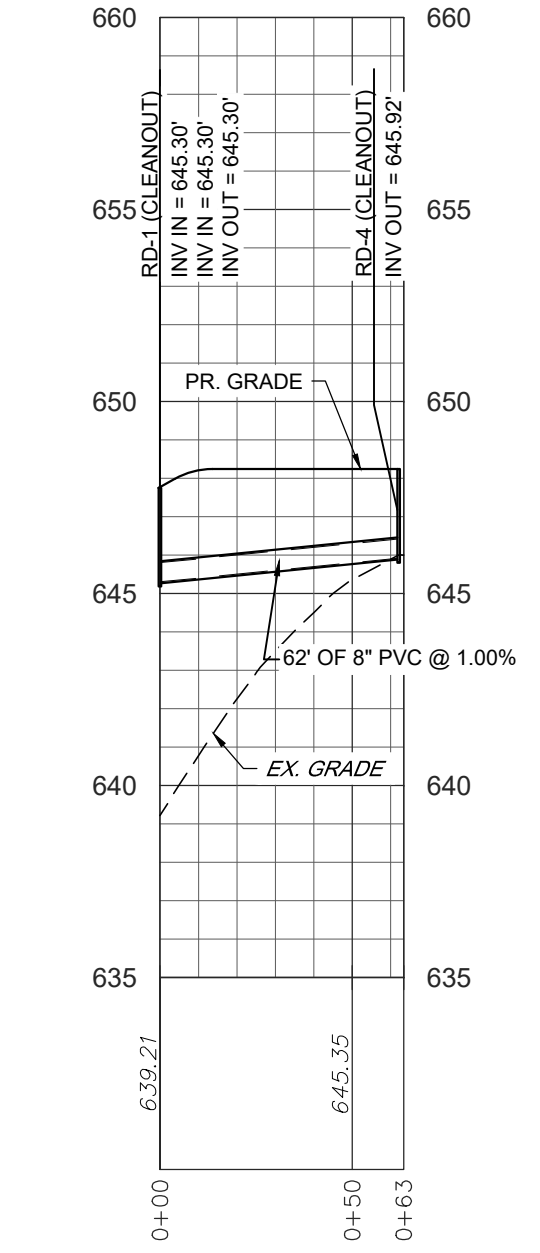
STORMWATER - EW-B1 TO RD-F2



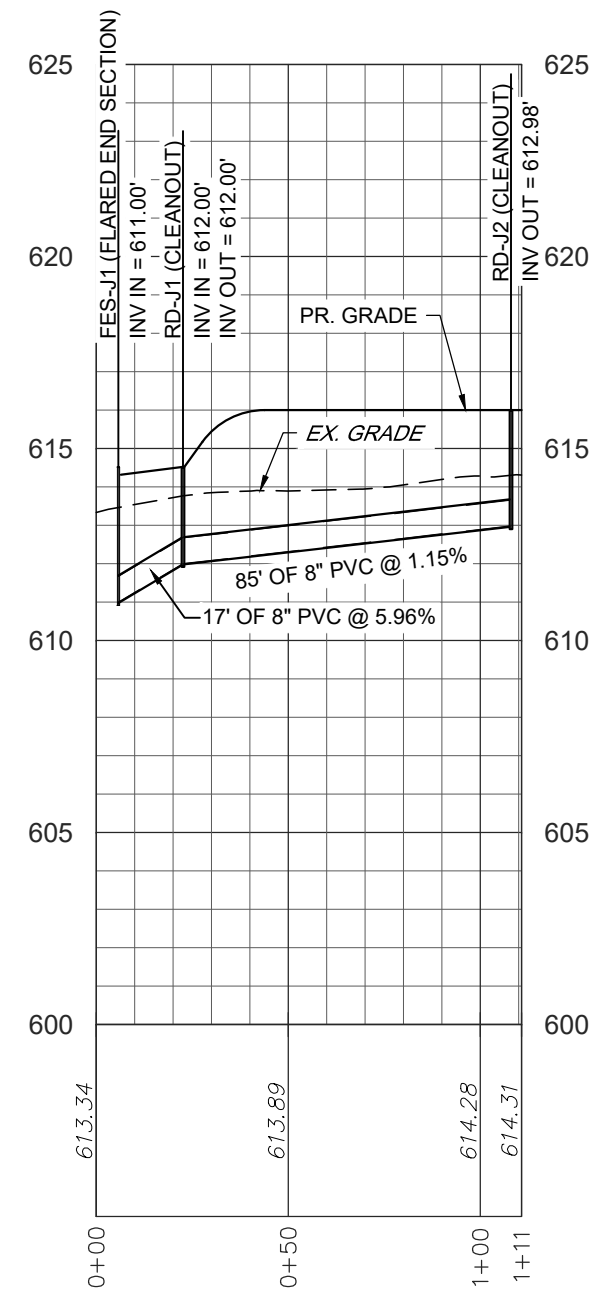
STORMWATER - I-22 TO I-23



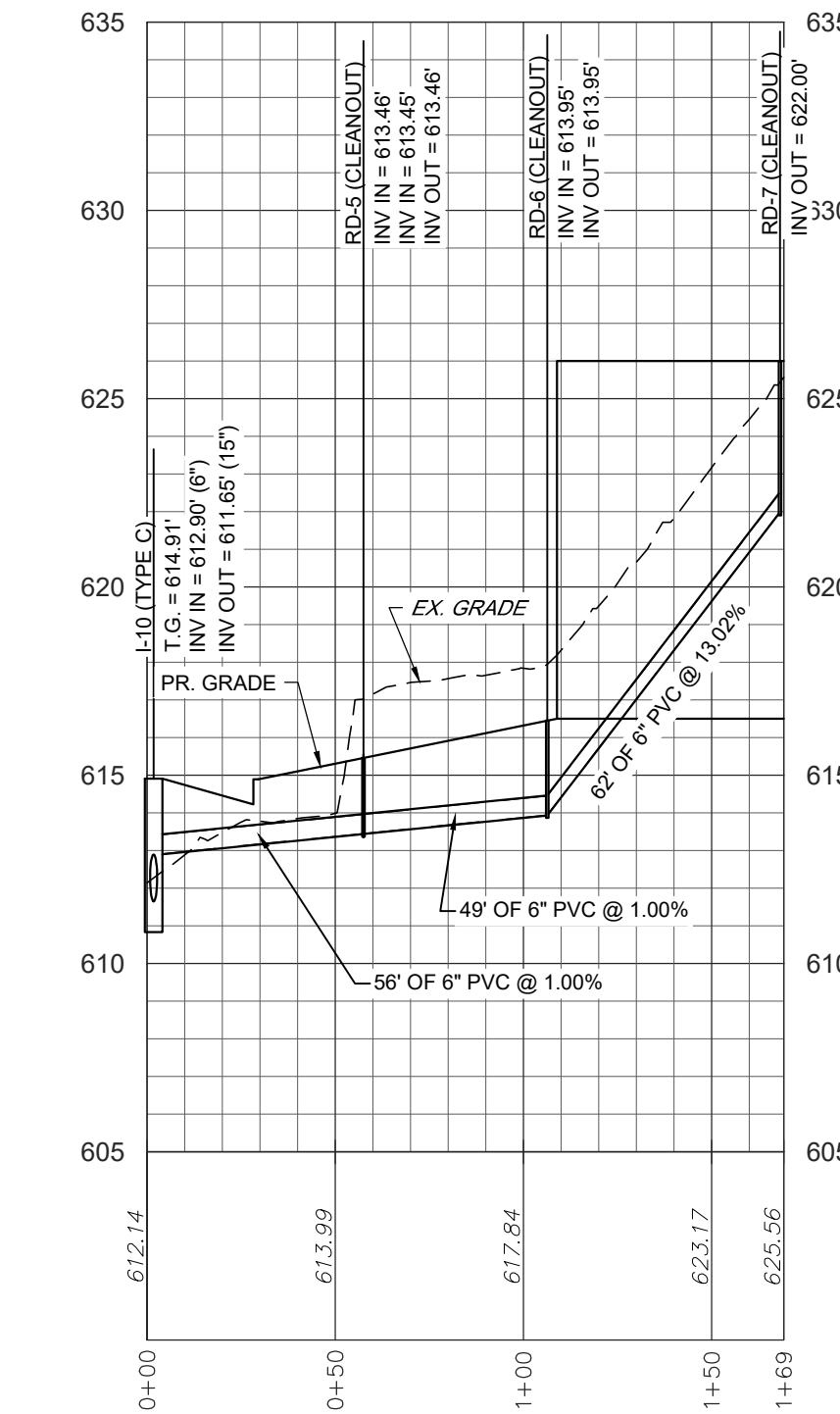
STORMWATER - I-42 TO RD-3



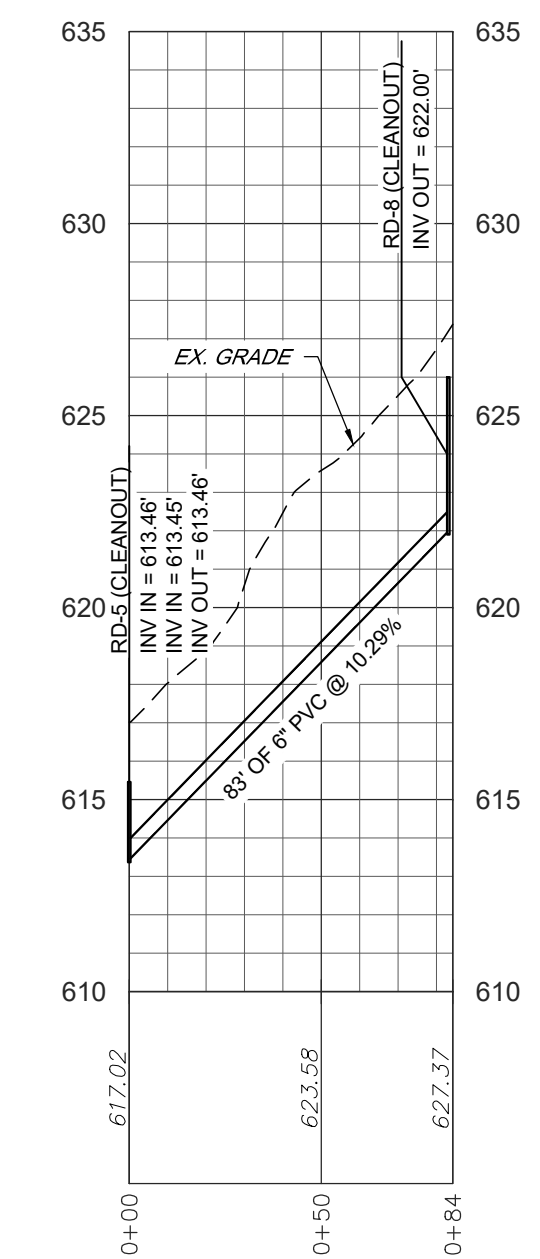
STORMWATER - RD-1 TO RD-4



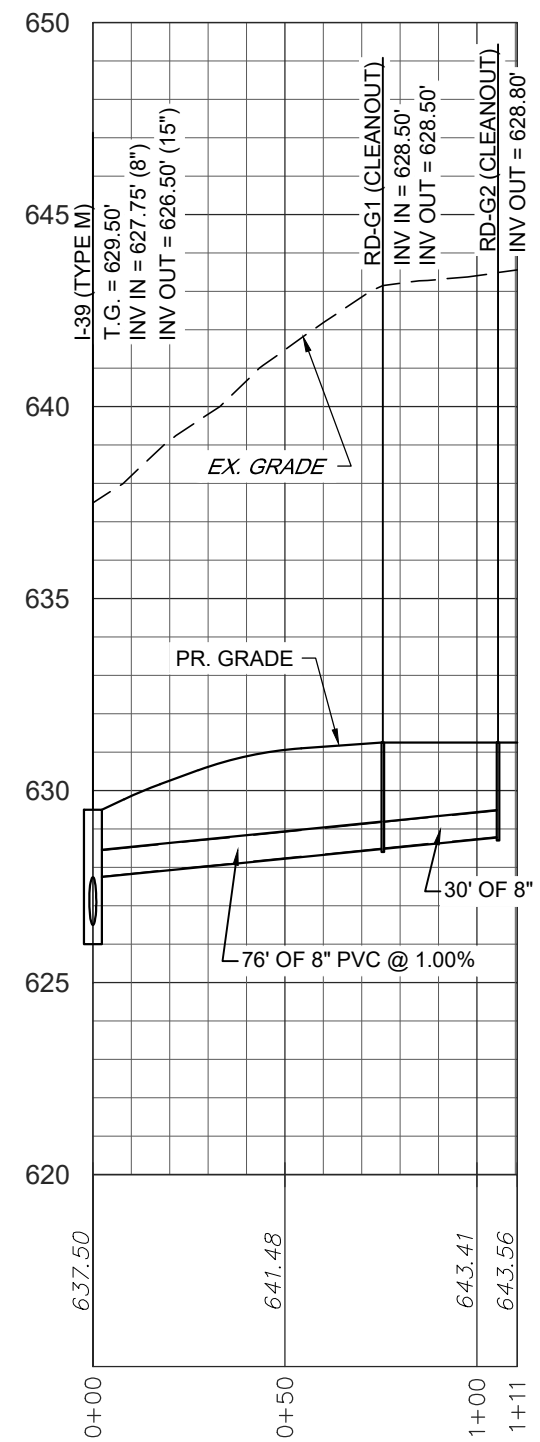
STORMWATER - EW-J1 TO RD-J2



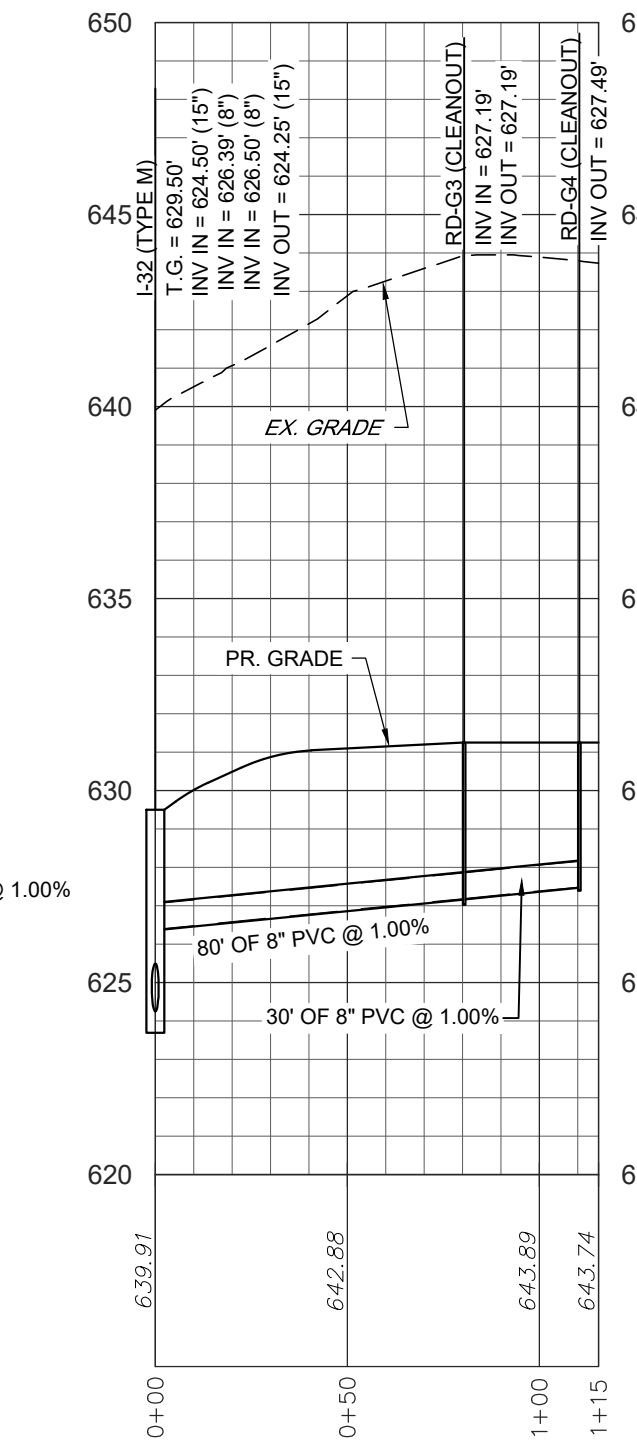
STORMWATER - I-10 TO RD-7



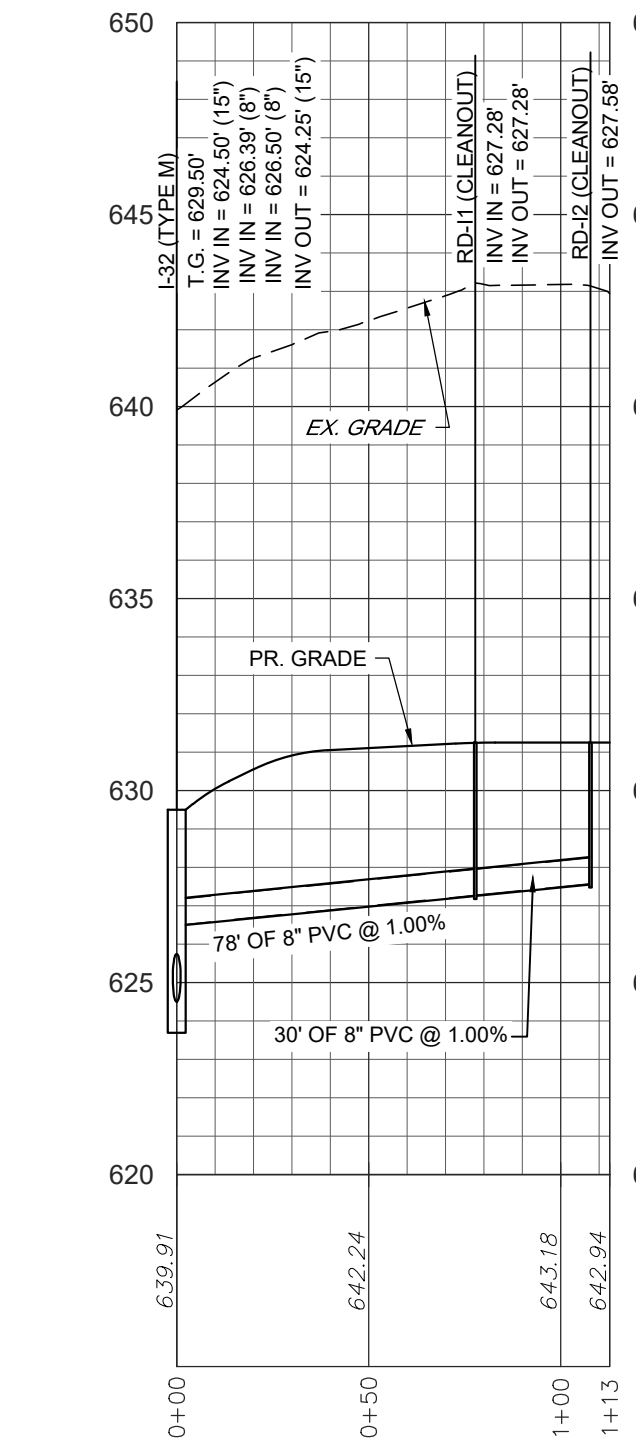
STORMWATER - RD-5 TO RD-8



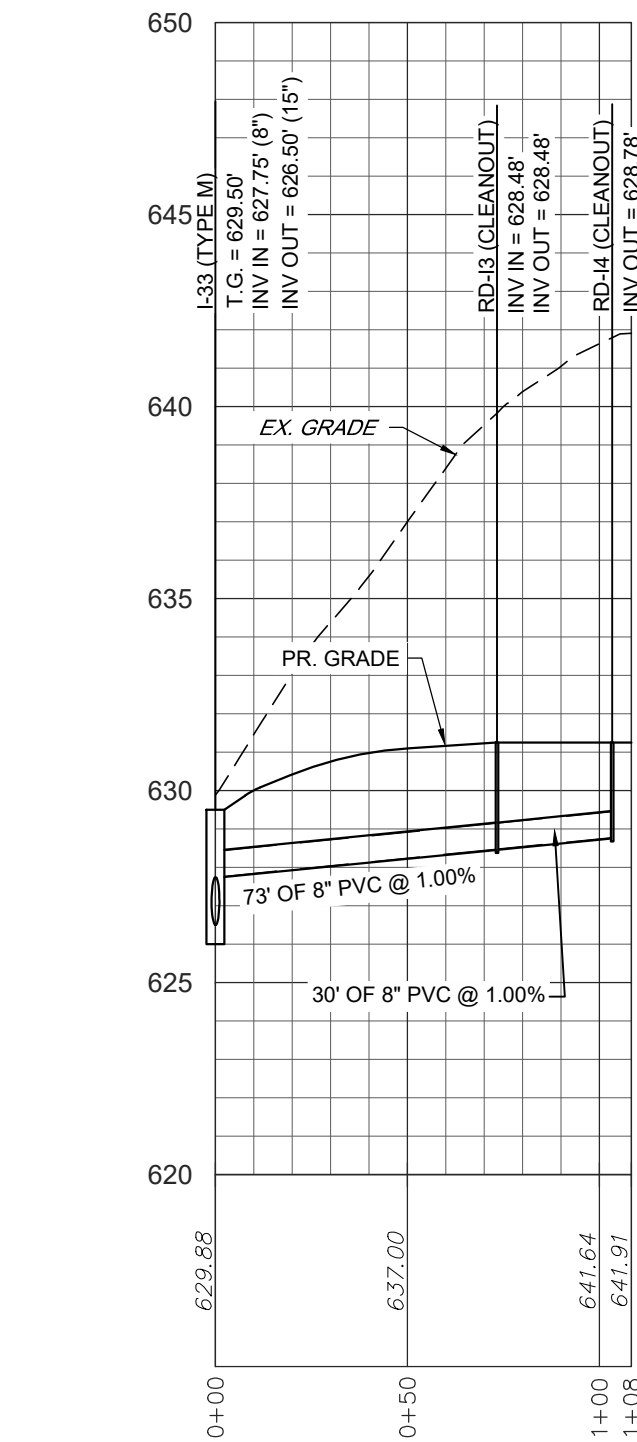
STORMWATER - I-39 TO RD-G2



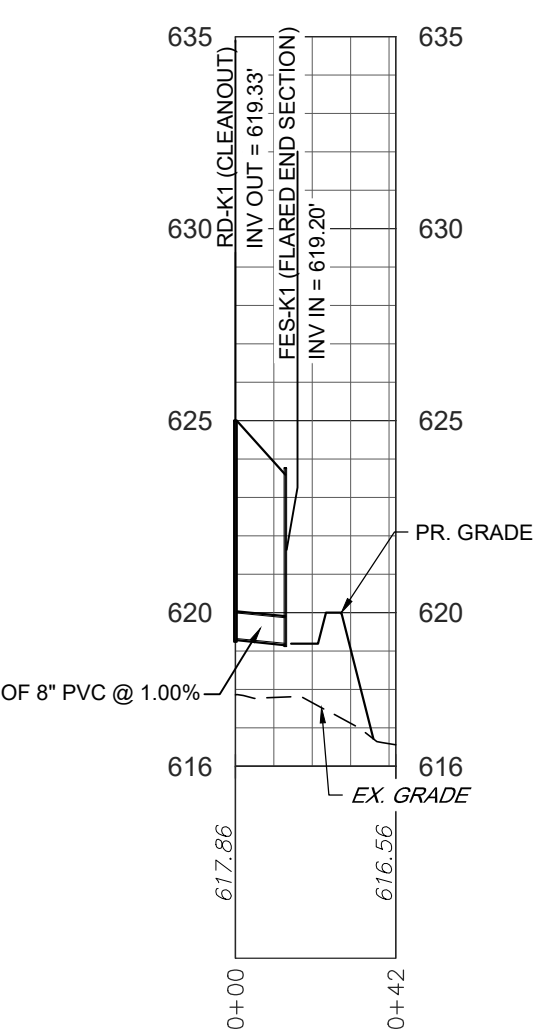
STORMWATER - I-32 TO RD-G4



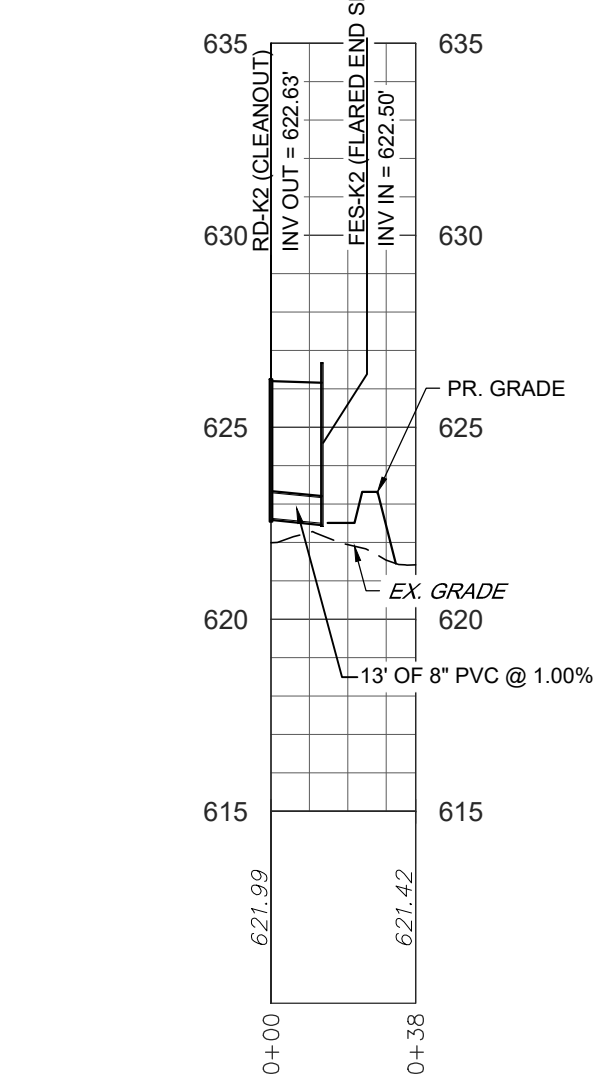
STORMWATER - I-32 TO RD-I2



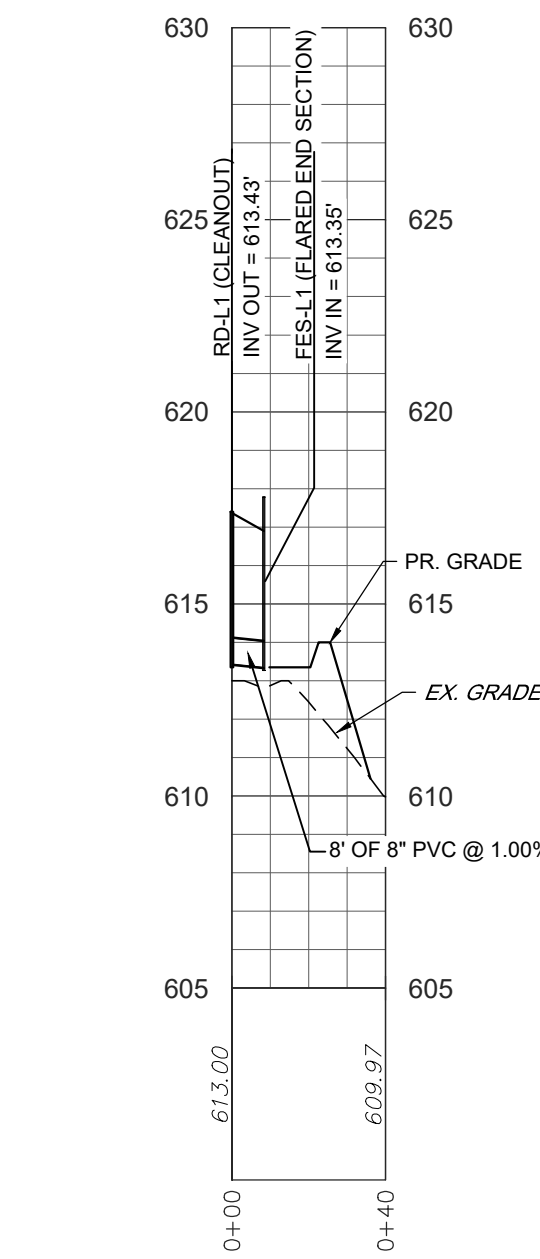
STORMWATER - I-33 TO RD-I4



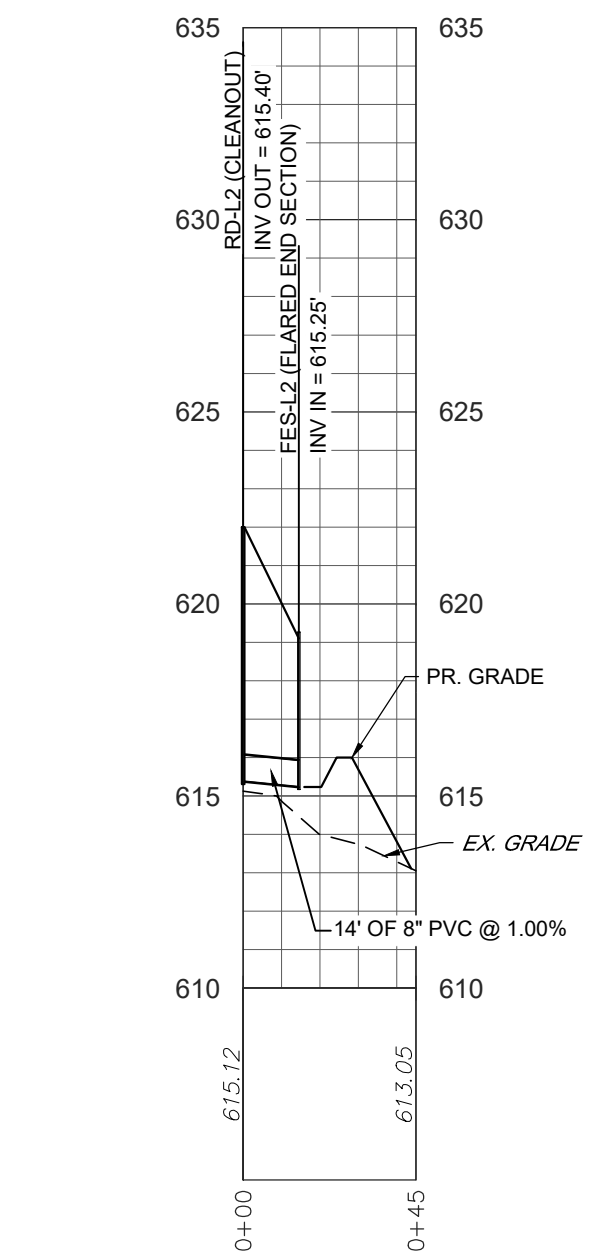
STORMWATER - EW-K1 TO RD-K1



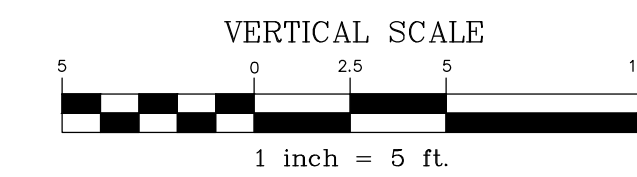
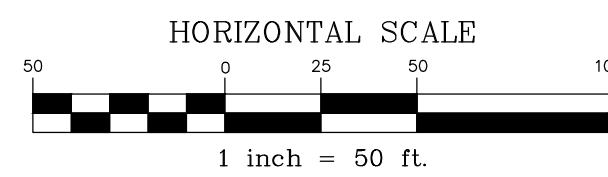
STORMWATER - EW-K2 TO RD-K2



STORMWATER - EW-L1 TO RD-L1

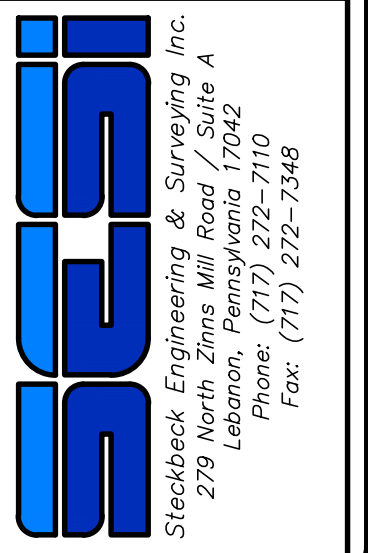


STORMWATER - EW-L2 TO RD-L2



REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-3-23	5-8-23	CDS
PER LCPD LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

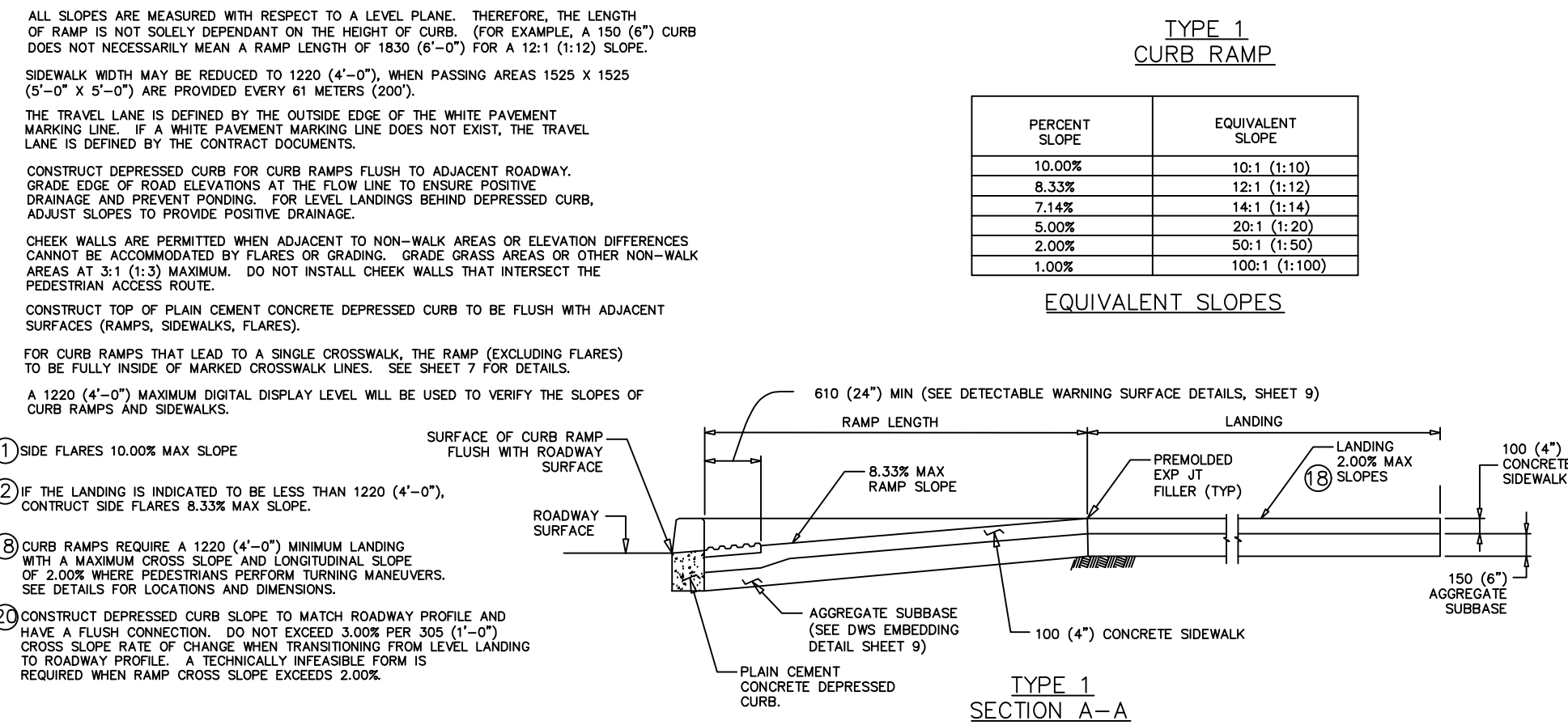
**PROFILES**  
 For  
**PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS**  
**BRIAR RIDGE COMMONS - APARTMENTS**  
 located in  
 NORTH LEBANON TOWNSHIP  
 LEBANON County, Pennsylvania



FIELD CREW:	MOD, JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	AS NOTED
PROJECT #	135-19-001

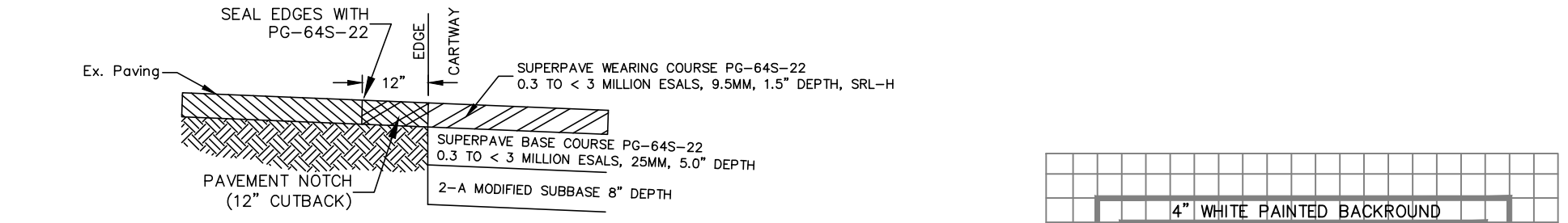
**NOTES**

PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 305, 409, 630, 678 AND 684.  
 PROVIDE EXPANSION JOINT MATERIAL 13 (3/4)" THICK WHERE CURB RAMP ADJACENT ANY RIGID PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETE SURFACE.  
 CONSTRUCT CURB RAMP FLARE WITH A MINIMUM 1200 X 1200 (4'-0") MIN. CLEAR RAMP LENGTH BEYOND THE CURB FACE WITHIN THE WIDTH OF THE CROSSWALK AND MOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE.  
 SEAL JOINTS WITH AN APPROVED SEALING MATERIAL.  
 PROVIDE CURB RESTRICTION ON CURB RAMP BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB RAMP INCLUDING FLARED SIDE RAMPS. MODIFY CONSTRUCTION DETAILS TO ADAPT DIMENSIONS TO EXISTING CURB HEIGHTS WHERE THE CURB IS LESS THAN THE STANDARD 205 (8") HEIGHT.  
 CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE. TO AVOID CHANGING GRADE INDEFINITELY TRAVELING THE HEIGHT OF CURB RAMP LENGTH NOT TO EXCEED 4000 (10'-0"). ADJUST RAMP SLOPE AS NEEDED TO PROVIDE ACCESS TO THE MAXIMUM EXTENDABLE.  
 NON-WALK AREA IS AN OBSTRUCTED OR GRASS/NON-PAVED AREA ADJACENT TO THE PEDESTRIAN ACCESS ROUTE THAT IS NOT USED BY THE PEDESTRIAN FOR ACCESS.  
 THE DETAILS DEPICT PEDESTRIAN PUSHBUTTON HOLES TO ILLUSTRATE THE RECOMMENDED PLACEMENT OF PEDESTRIAN PUSHBUTTONS. FOR ALTERNATE PROJECTS, PROVIDE ACCESS TO EXISTING PEDESTRIAN PUSHBUTTONS TO THE MAXIMUM EXTENT FEASIBLE. INSTALL PEDESTRIAN PUSHBUTTON STUB POLES, WHERE APPLICABLE, SO AS NOT TO CREATE PEDESTRIAN OBSTRUCTIONS.  
 ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE NOTED. US CUSTOMARY UNITS IN ( ) PARENTHESES.  
 ALONG DETECTABLE WARNING SURFACE TRANSCVERSE COMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF THE RAMP AND PERPENDICULAR TO CURB.  
 PROVIDE DETECTABLE WARNING SURFACE (DWS) 610 (24") MINIMUM (IN THE DIRECTION OF PEDESTRIAN TRAVEL) ACROSS FULL WIDTH OF RAMP AT THE GRADE BREAK NEAR STREET EDGE. PROVIDE DWS THAT CONTRAST VISUALLY WITH ADJACENT SIDEWALK SURFACES. EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT FOR THE FULL WIDTH OF RAMP.  
 FOR NEW CONSTRUCTION, DO NOT EXCEED 2.00% CROSS SLOPE ON THE CURB RAMP OR PEDESTRIAN ACCESSIBLE ROUTE.  
 FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE POSSIBLE. THE SLOPES INDICATED IN THE DETAILS SHOW THE MAX. SLOPE ALLOWABLE. SLOPES THAT EXCEED THOSE INDICATED IN THE DETAILS, OR CONTRACT DOCUMENTS AS ACCEPTED AND WILL BE RECONSTRUCTED.  
 CONSTRUCT SIDEWALKS AT A LONGITUDINAL SLOPE NOT TO EXCEED 5.00% FOR ROADWAY PROFILE SLOPES THAT EXCEED 5.00%. CONSTRUCT PARALLEL SIDEWALKS ADJACENT TO ROADWAY AT A LONGITUDINAL SLOPE NOT TO EXCEED ROADWAY PROFILE SLOPE.  
 THE CHANGE IN GRADE AT THE BOTTOM OF THE CURB RAMP AND ADJOINING ROAD SURFACE IS NOT TO EXCEED AN ALGEBRAIC DIFFERENCE OF 11.00%. THE COUNTER SLOPE OF THE OUTER OR ROAD AT THE FOOT OF A CURB RAMP. LANDING OR BLENDED TRANSITION IS NOT TO EXCEED 5.00%. SEE SHEET 8 FOR DETAILS.  
 THE CONSTRUCTION STANDARDS DEPICTED ARE MOST APPROPRIATE FOR NEW CONSTRUCTION. ALL CONSTRUCTION MUST MEET THE STANDARDS CONTAINED HEREIN UNLESS OTHERWISE NOTED OR DIRECTED.  
 ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF RAMP IS NOT NECESSARILY DEPENDANT ON THE HEIGHT OF CURB. (FOR EXAMPLE, A 150 (6") CURB DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 1830 (6'-0") FOR A 12:1 (1:12) SLOPE.  
 SIDEWALK WIDTH MAY BE REDUCED TO 1220 (4'-0"), WHEN PASSING AREAS 1525 X 1525 (5'-7" X 5'-7") ARE PROVIDED EVERY 61 METERS (200').  
 THE TRAVEL LANE IS DEFINED BY THE OUTSIDE EDGE OF THE WHITE PAVEMENT MARKING LINE. A WHITE PAVEMENT MARKING LINE DOES NOT EXIST, THE TRAVEL LANE IS DEFINED BY THE CONTRACT DOCUMENTS.  
 CONSTRUCT DEPRESSED CURB FOR CURB RAMPS FLUSH TO ADJACENT ROADWAY. GRADE EDGE OF ROAD ELEVATIONS AT THE FLOW LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT PONDING. FOR LEVEL LANDINGS BEHIND DEPRESSED CURB, ADJUST SLOPE TO PROVIDE POSITIVE DRAINAGE.  
 CHECK WALLS ARE PERMITTED WHEN ADJACENT TO NON-WALK AREAS OR ELEVATION DIFFERENCES CANNOT BE ACCOMMODATED BY FLARES OR GRADING. GRADE GRASS AREAS OR OTHER NON-WALK AREAS AT 3:1 (1:3) MAXIMUM. DO NOT INSTALL CHECK WALLS THAT INTERSECT THE PEDESTRIAN ACCESS ROUTE.  
 CONSTRUCT TOP OF PLAN CEMENT CONCRETE DEPRESSED CURB TO BE FLUSH WITH ADJACENT SURFACES (RAMPS, SIDEWALKS, FLARES).  
 FOR CURB RAMPS THAT LEAD TO A SINGLE CROSSWALK, THE RAMP (EXCLUDING FLARES) TO BE FULLY INSIDE OF MARKED CROSSWALK LINES. SEE SHEET 7 FOR DETAILS.  
 A 1220 (4'-0") MAXIMUM DIGITAL DISPLAY LEVEL WILL BE USED TO VERIFY THE SLOPES OF CURB RAMPS AND SIDEWALKS.



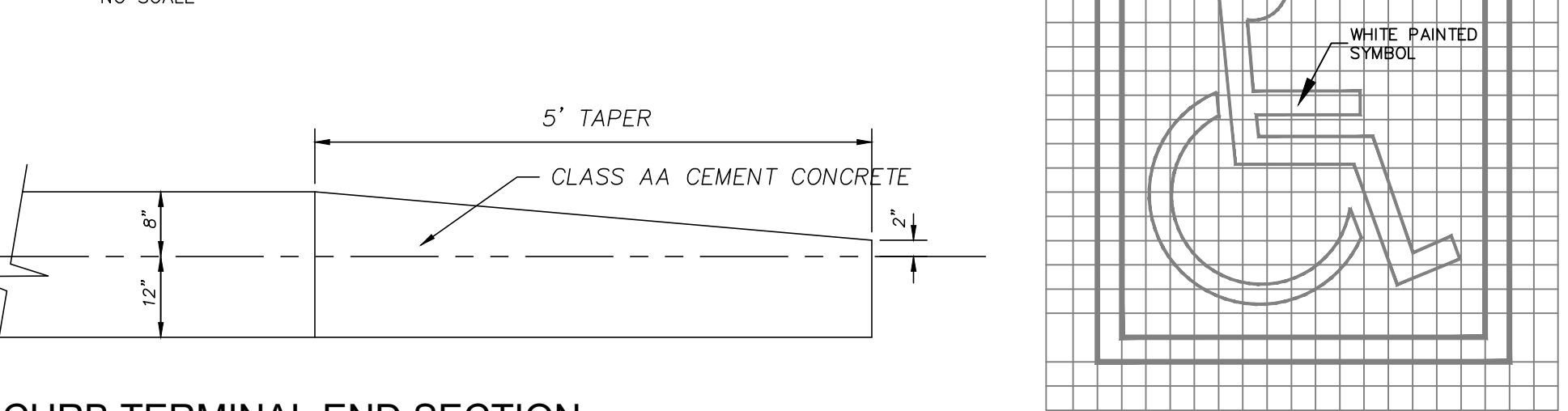
**TYPE 1 CURB RAMP DETAIL (PENNDOT RC-67M)**

NO SCALE



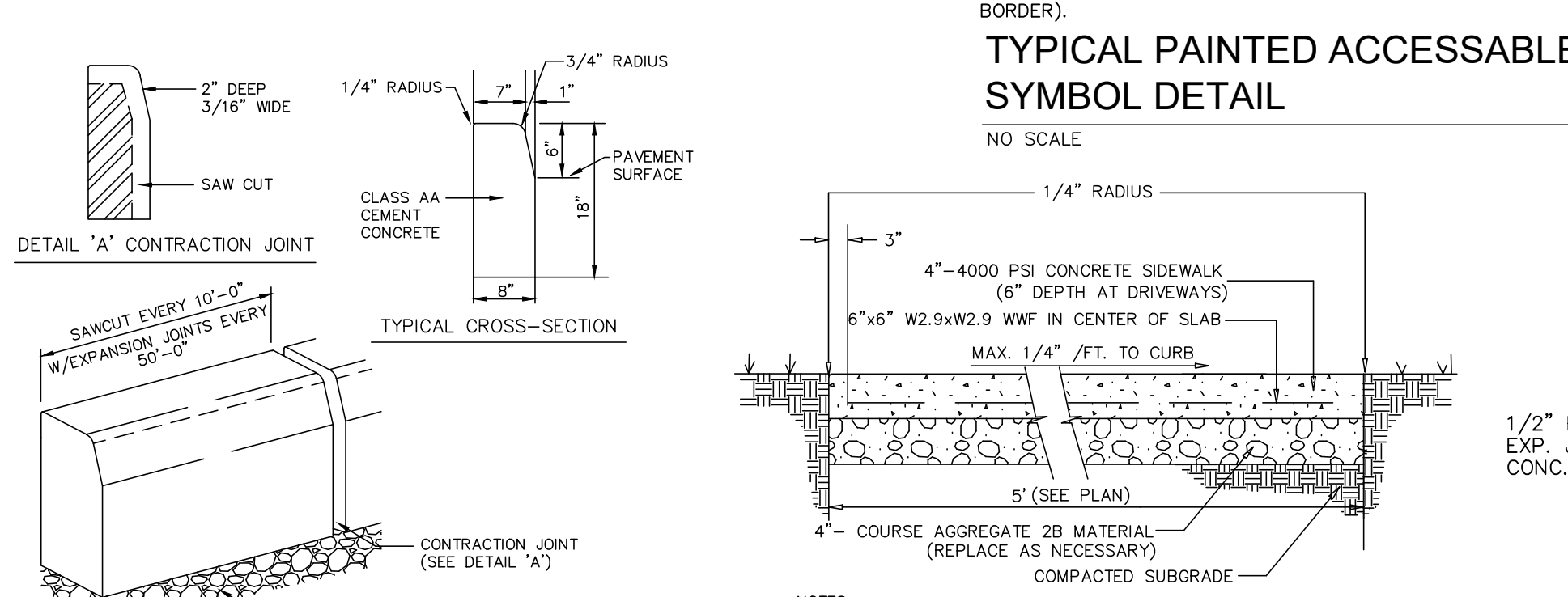
**PAVEMENT NOTCH DETAIL**

NO SCALE



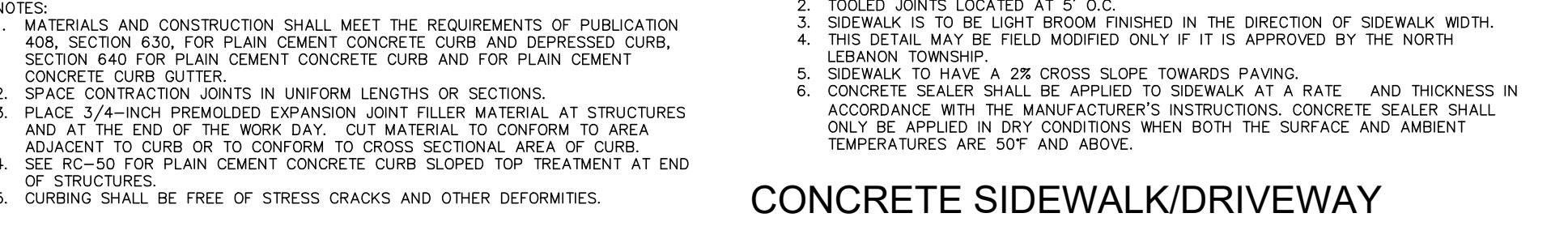
**CURB TERMINAL END SECTION**

NO SCALE



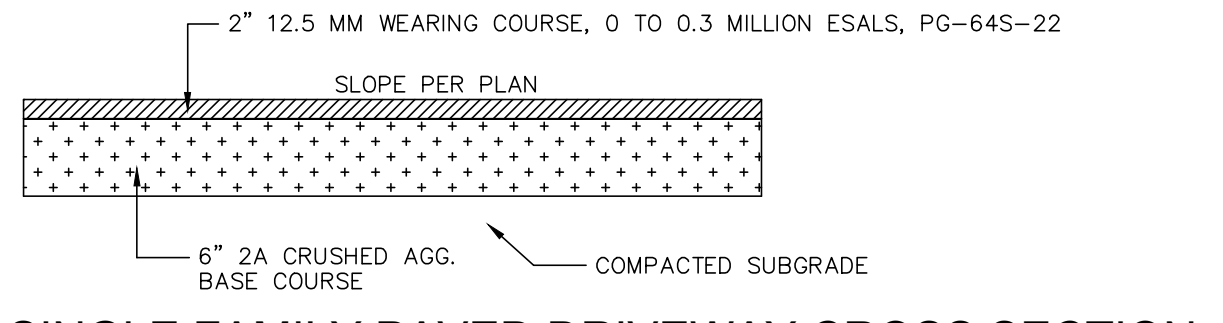
**TYPICAL PAINTED ACCESSIBLE SYMBOL DETAIL**

NO SCALE



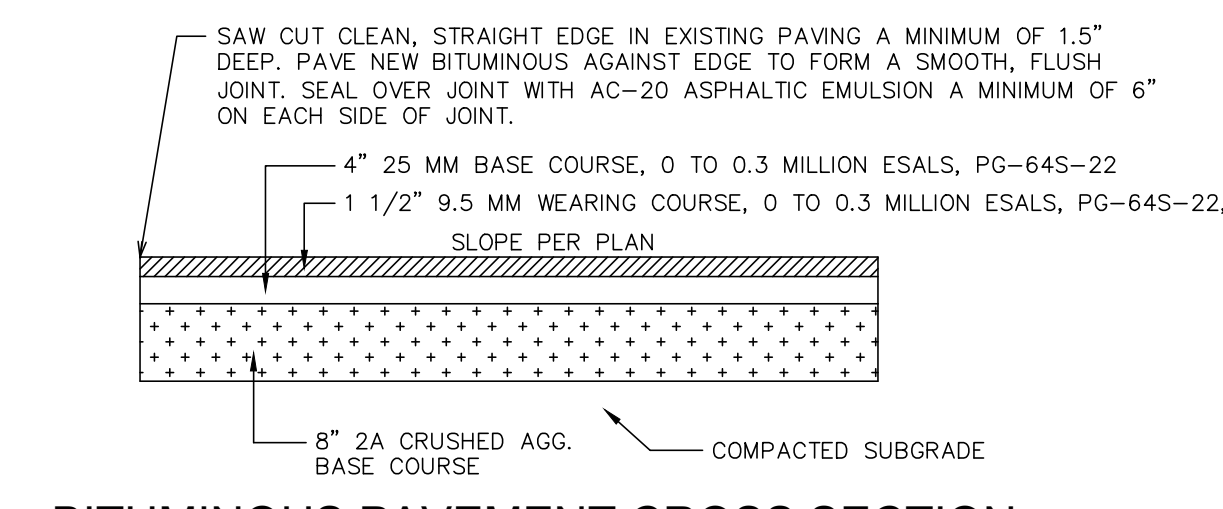
**CONCRETE SIDEWALK/DRIVEWAY APRON DETAIL**

NO SCALE



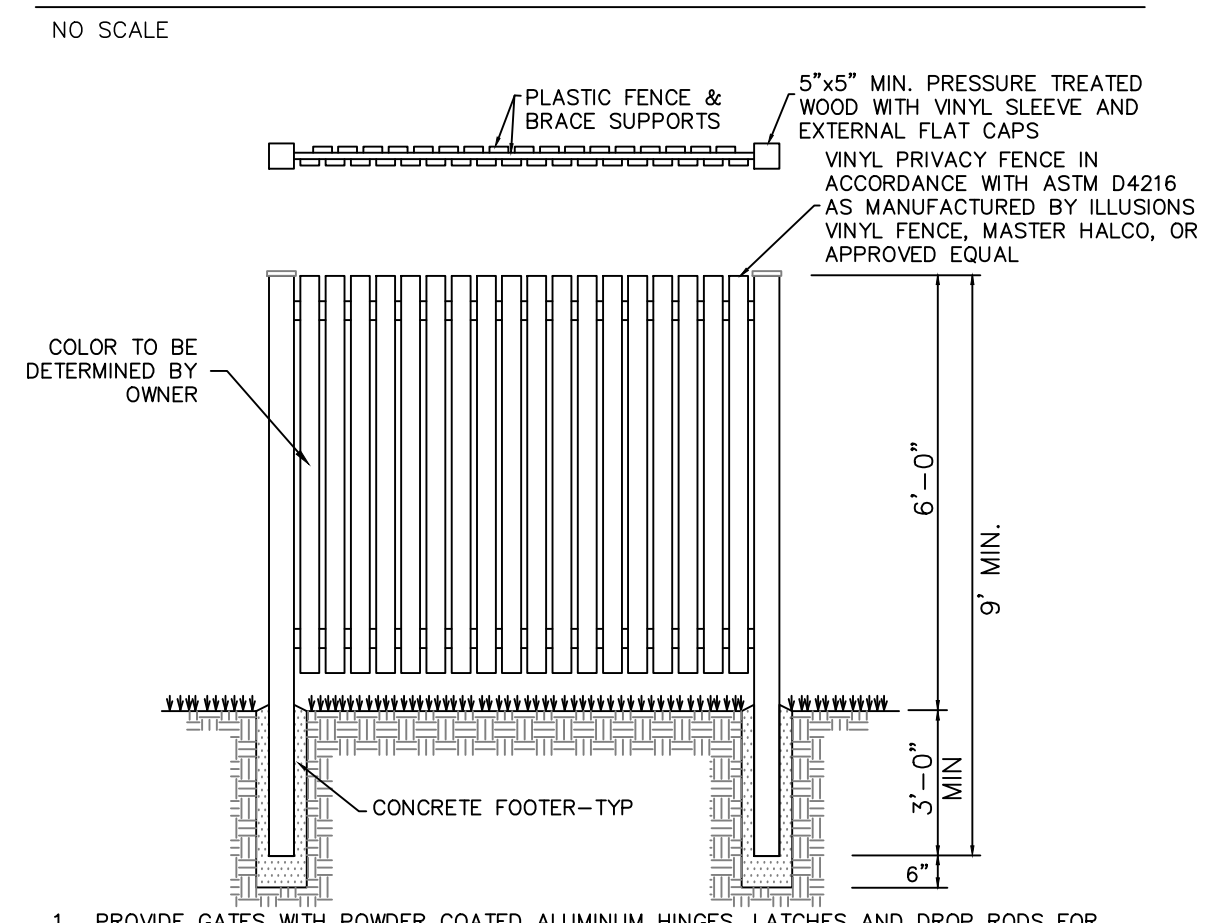
**SINGLE FAMILY PAVED DRIVEWAY CROSS SECTION**

NO SCALE



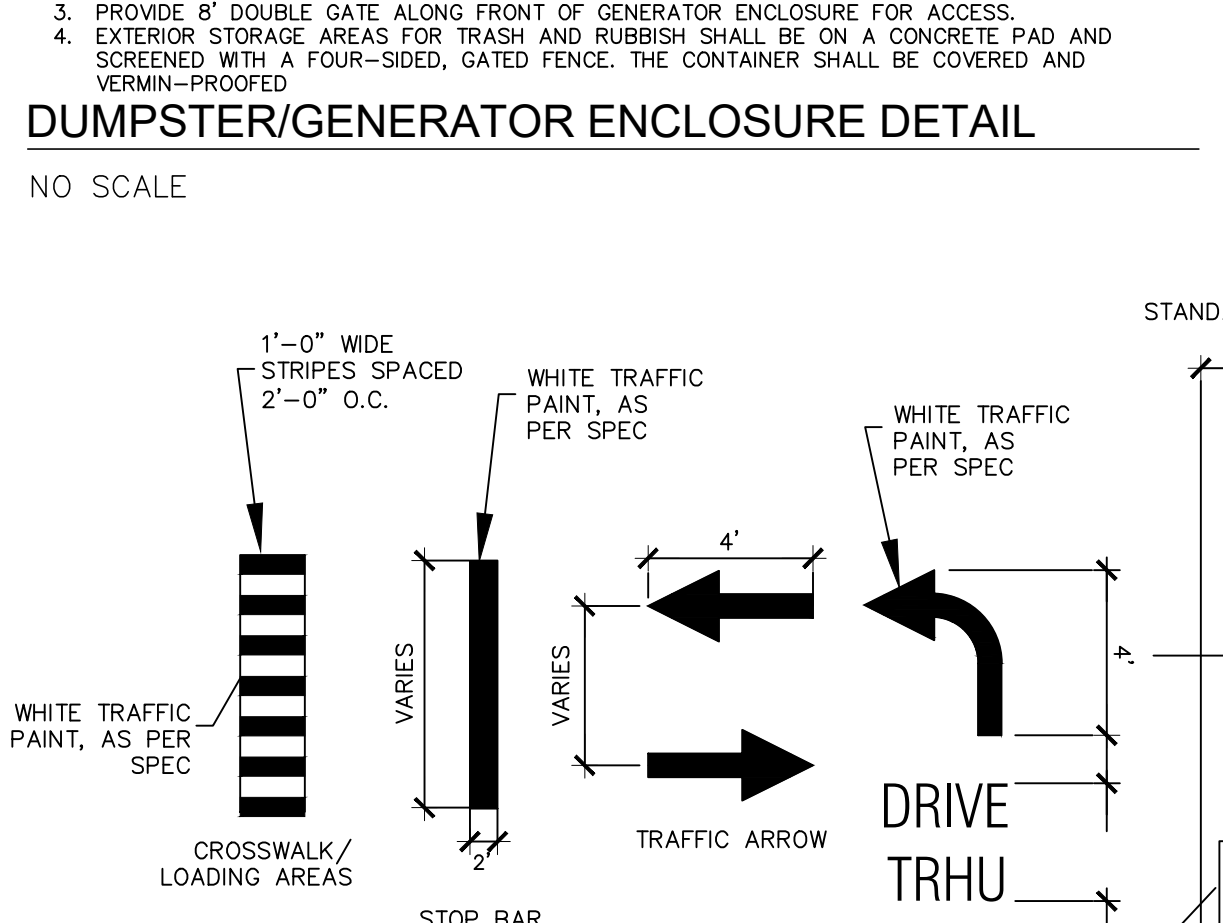
**BITUMINOUS PAVEMENT CROSS SECTION (STANDARD ACCESS DRIVES & PARKING LOTS)**

NO SCALE



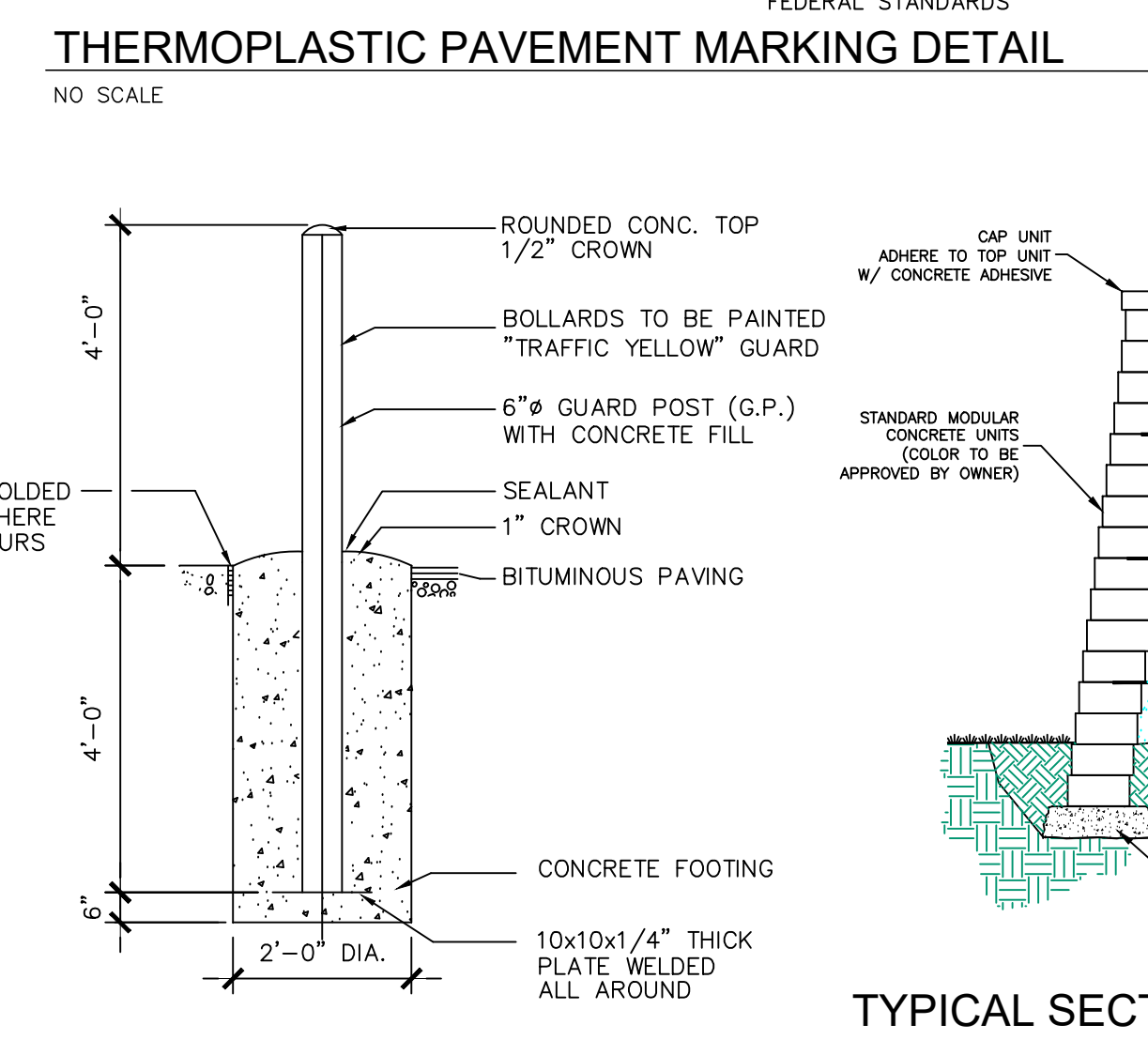
**DUMPSTER/GENERATOR ENCLOSURE DETAIL**

NO SCALE



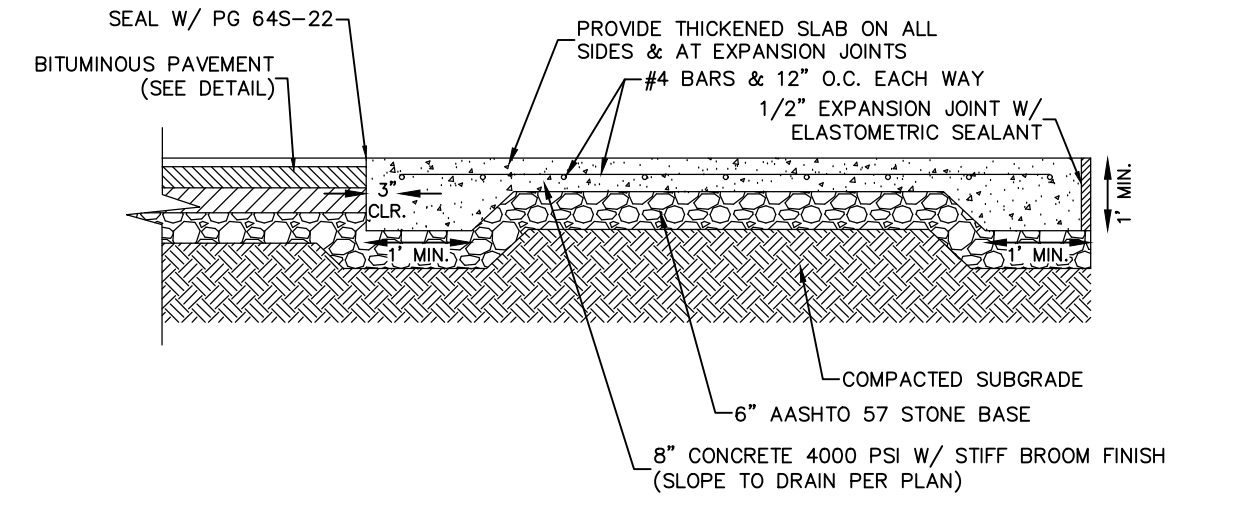
**THERMOPLASTIC PAVEMENT MARKING DETAIL**

NO SCALE



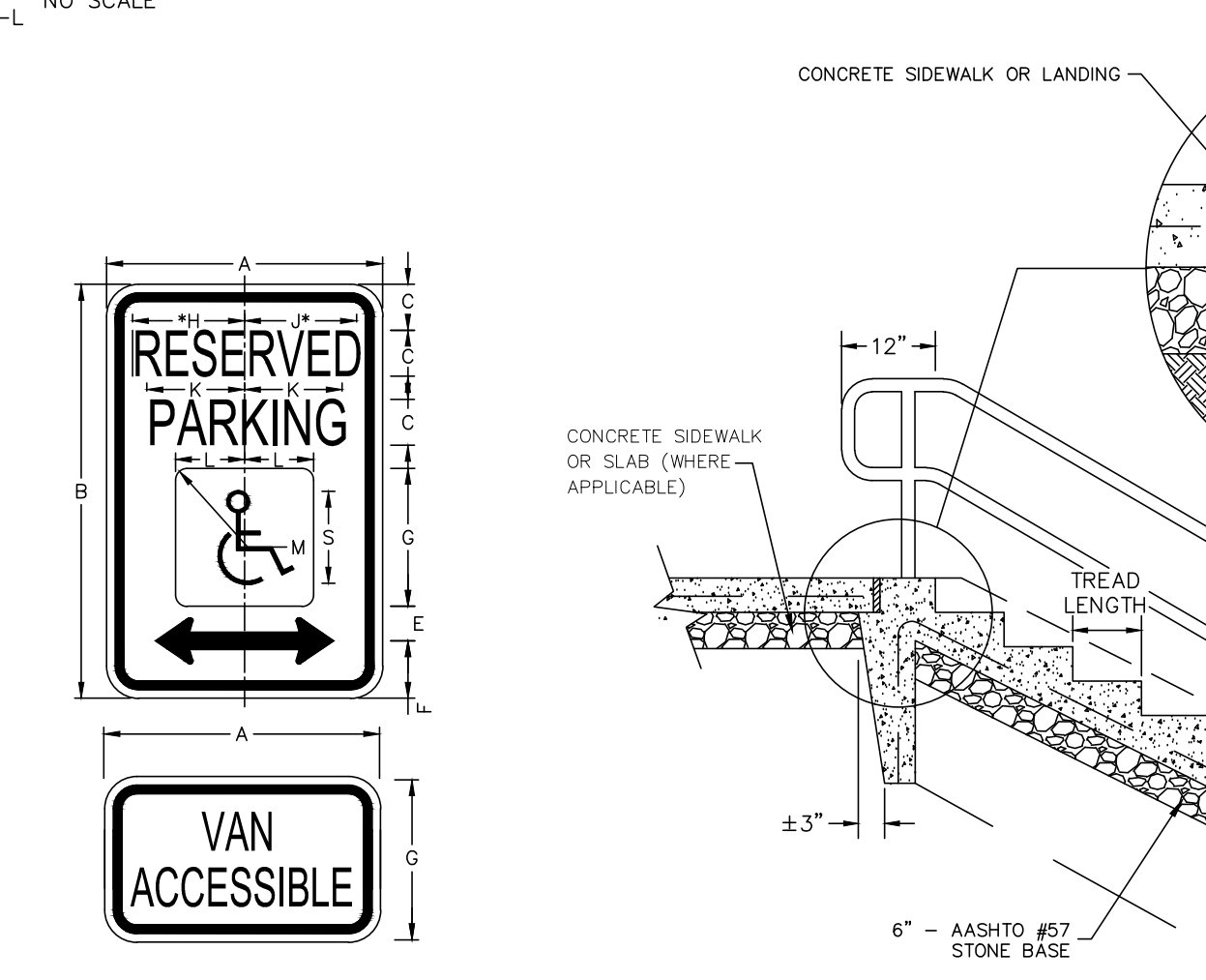
**TYPICAL SECTION-REINFORCED RETAINING WALL**

NO SCALE



**CONCRETE DUMPSTER PAD/LOADING AREA DETAIL**

NO SCALE



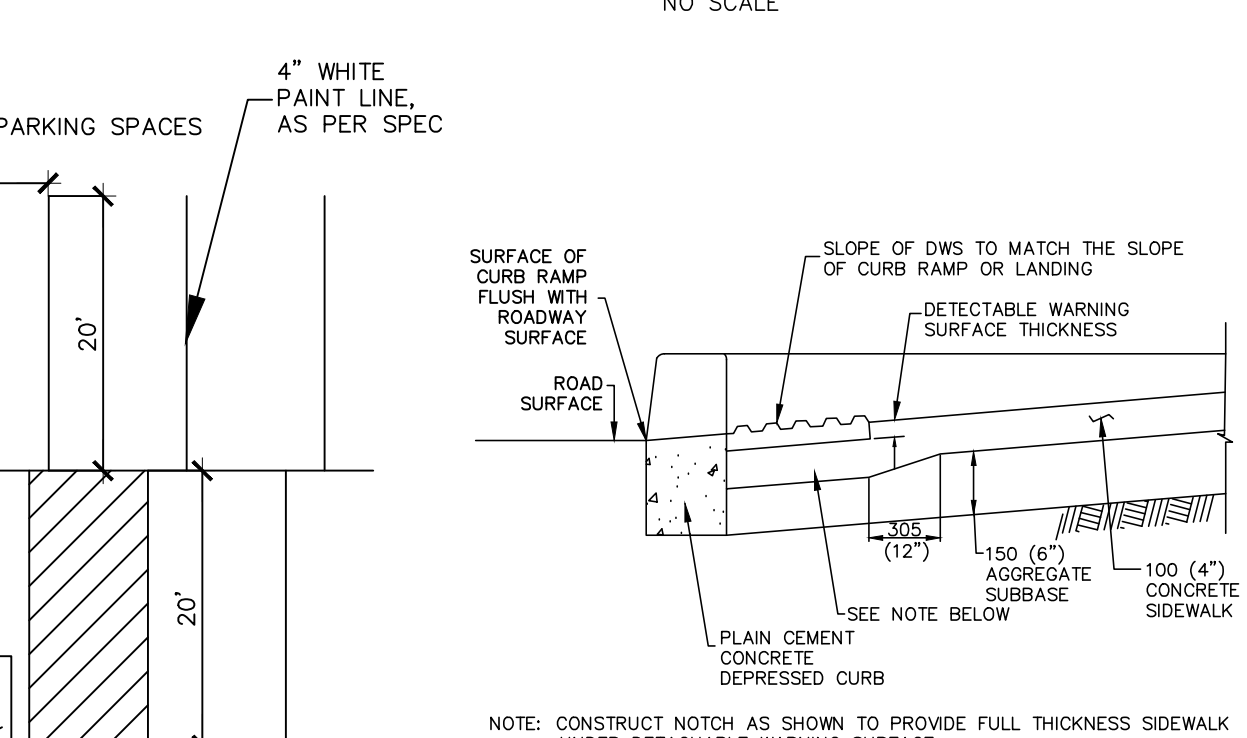
**ADA SIGNAGE DETAIL**

NO SCALE

SIGN SIZE	DIMENSIONS												
	A	B	C	D	E	F	G	H	J	K	L	M	
12x18	12	18	2	1	2	1	2	6	4	5	4	3	2

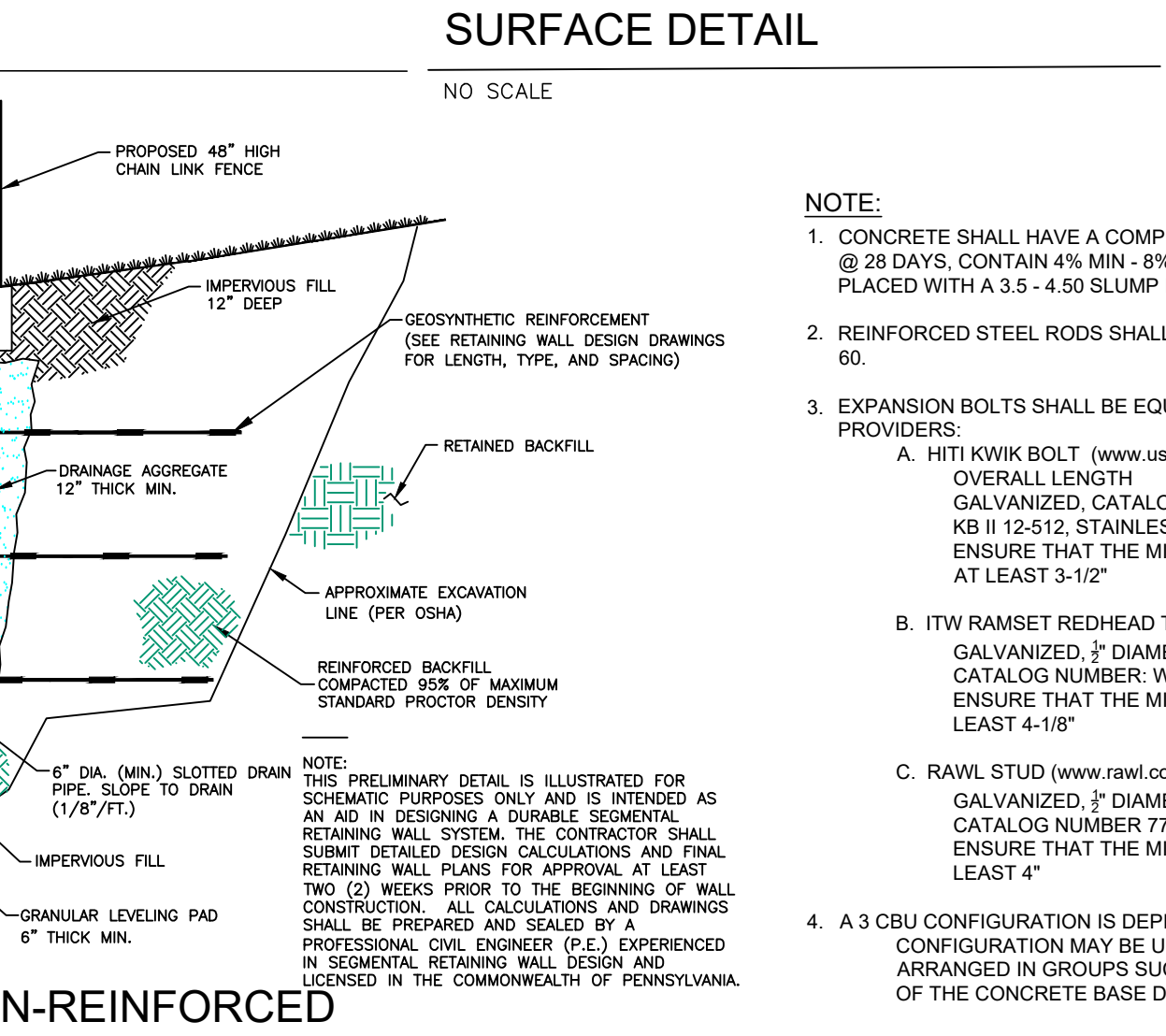
**EXTERIOR STAIR DETAIL**

NO SCALE



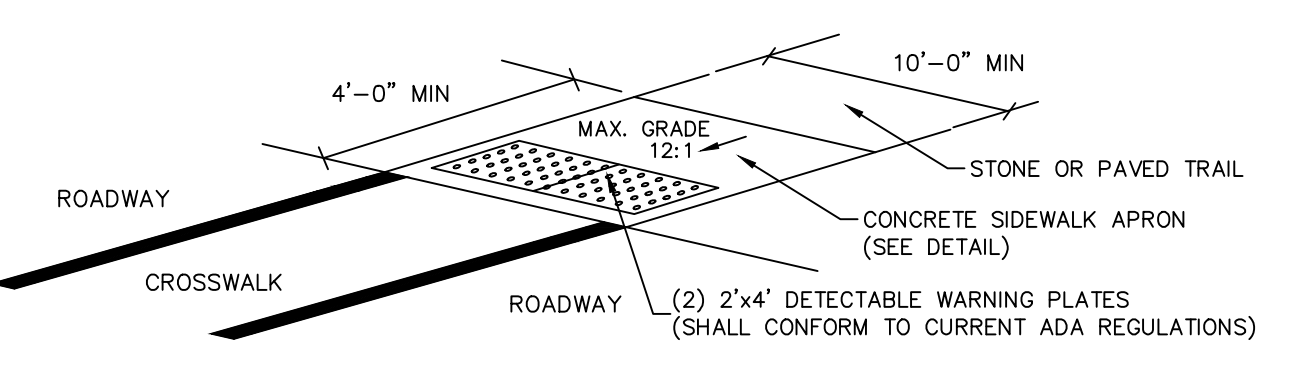
**ADA SIGN POST DETAIL**

NO SCALE



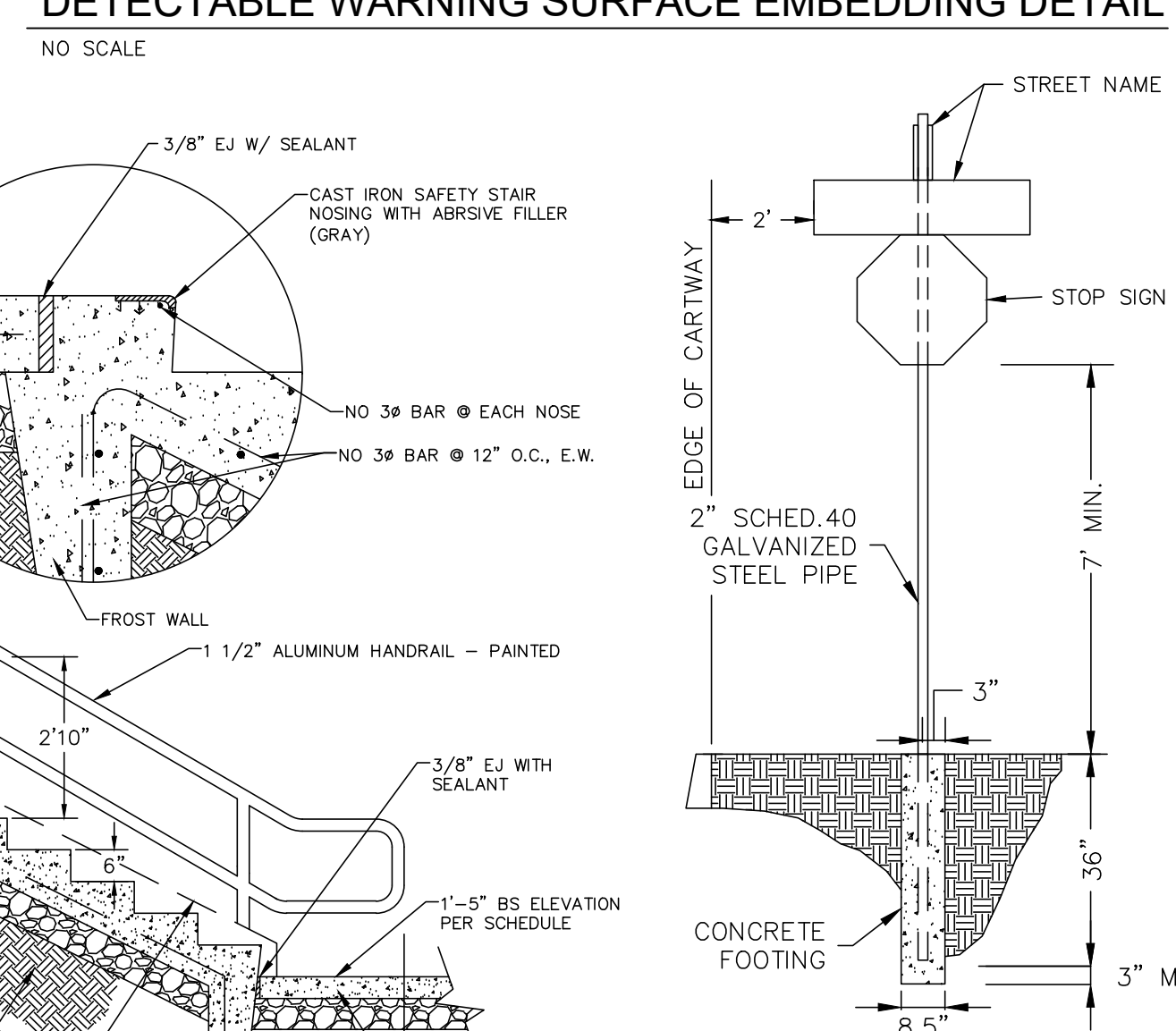
**TYPICAL CLUSTER BOX UNIT DETAIL**

NO SCALE



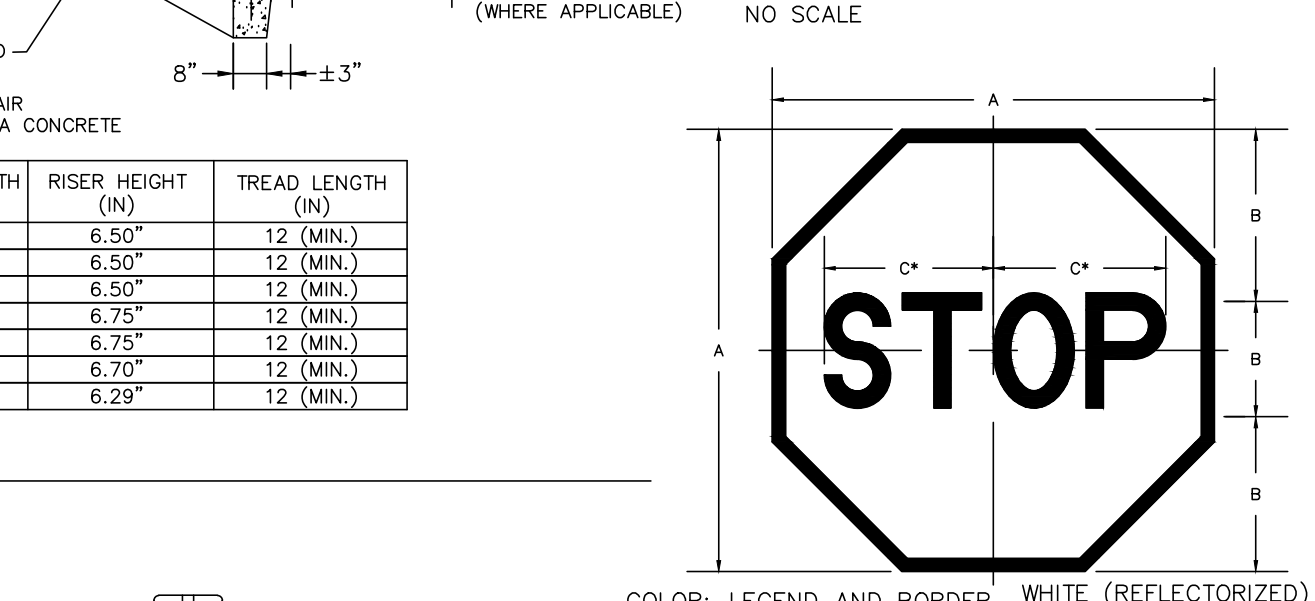
**DETECTABLE WARNING SURFACE EMBEDDING DETAIL**

NO SCALE



**SIGN POST DETAIL**

NO SCALE



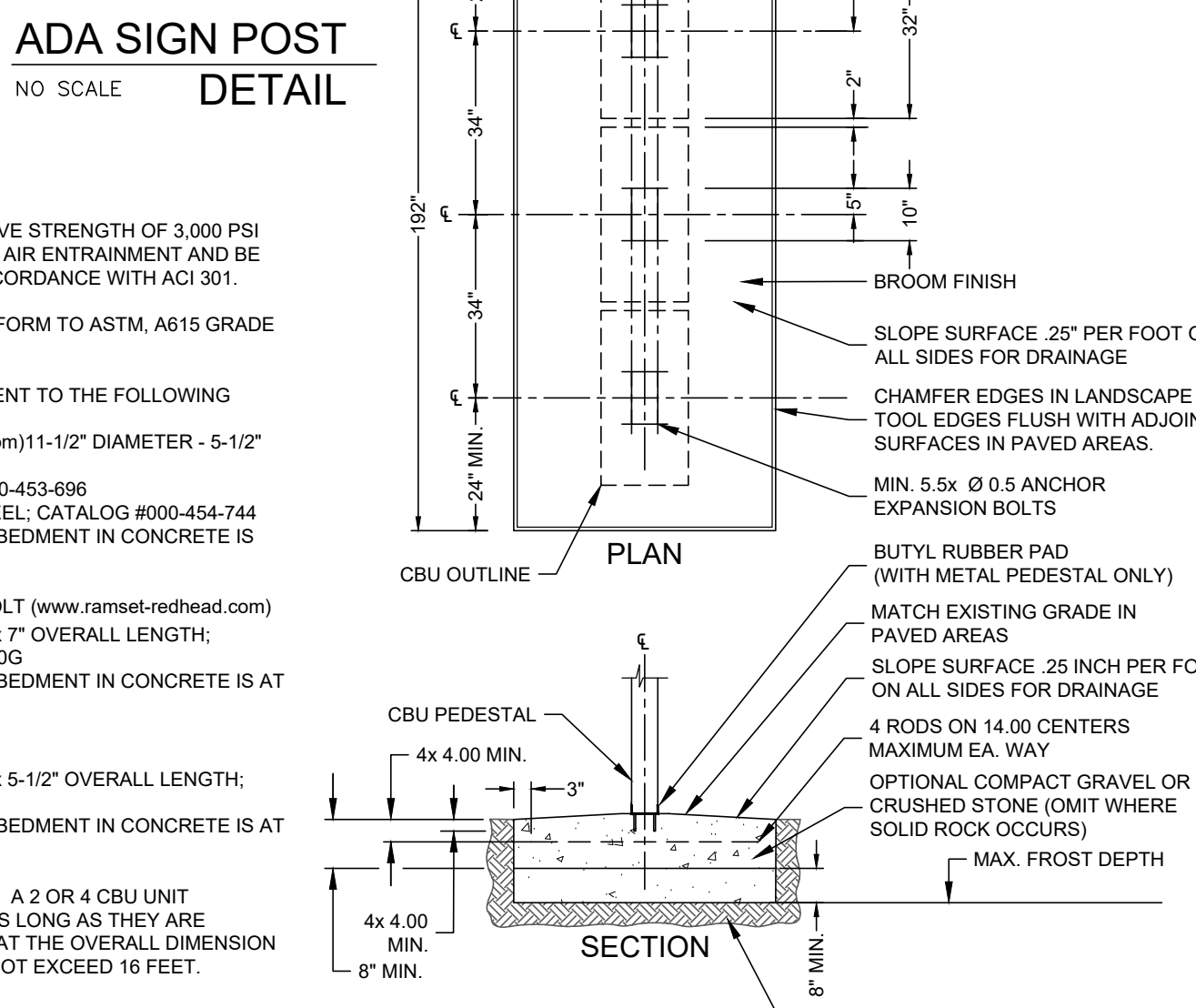
**STOP SIGN DETAIL**

NO SCALE

SIGN SIZE	DIMENSIONS			SERIES	BOR DER	BLANK STD
	A	B	C			
24 X 24	24	8	10	C	1	B1-24
30 X 30	30	10	12 1/2	C	1	B1-30
36 X 36	36	12	15	C	1	B1-36
48 X 48	48	16	20	C	1 1/2	B1-48

**STOP SIGN DETAIL**

NO SCALE



**TYPICAL SECTION-REINFORCED RETAINING WALL**

NO SCALE

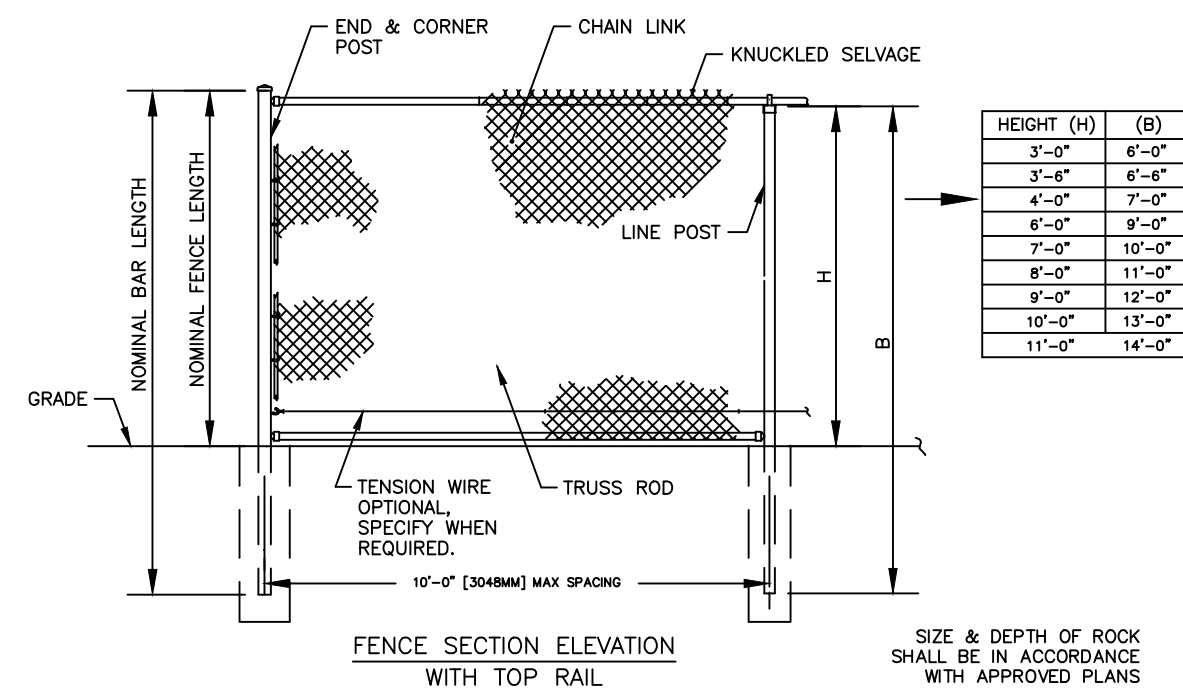
REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-33-23	5-8-23	CDS
PER LCPO LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-33-23	5-8-23	CDS
PER LCPO LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

**PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS**  
 For  
**BIARRIDGE COMMONS - APARTMENTS**  
 located in  
 NORTH LEBANON TOWNSHIP  
 LEBANON County, Pennsylvania

**is**  
 Steadbeck Engineering & Surveying Inc.  
 279 Lebanon, Pennsylvania 17042  
 Phone: (717) 272-7110  
 Fax: (717) 272-7348

FIELD CREW: MOD,JEC  
 BASE MAP: JEC  
 DRAWN: CDS  
 DESIGN: CDS  
 CHECKED: SAS  
 DATE: 3/1/23  
 SCALE: AS NOTED  
 PROJECT #135-19-001



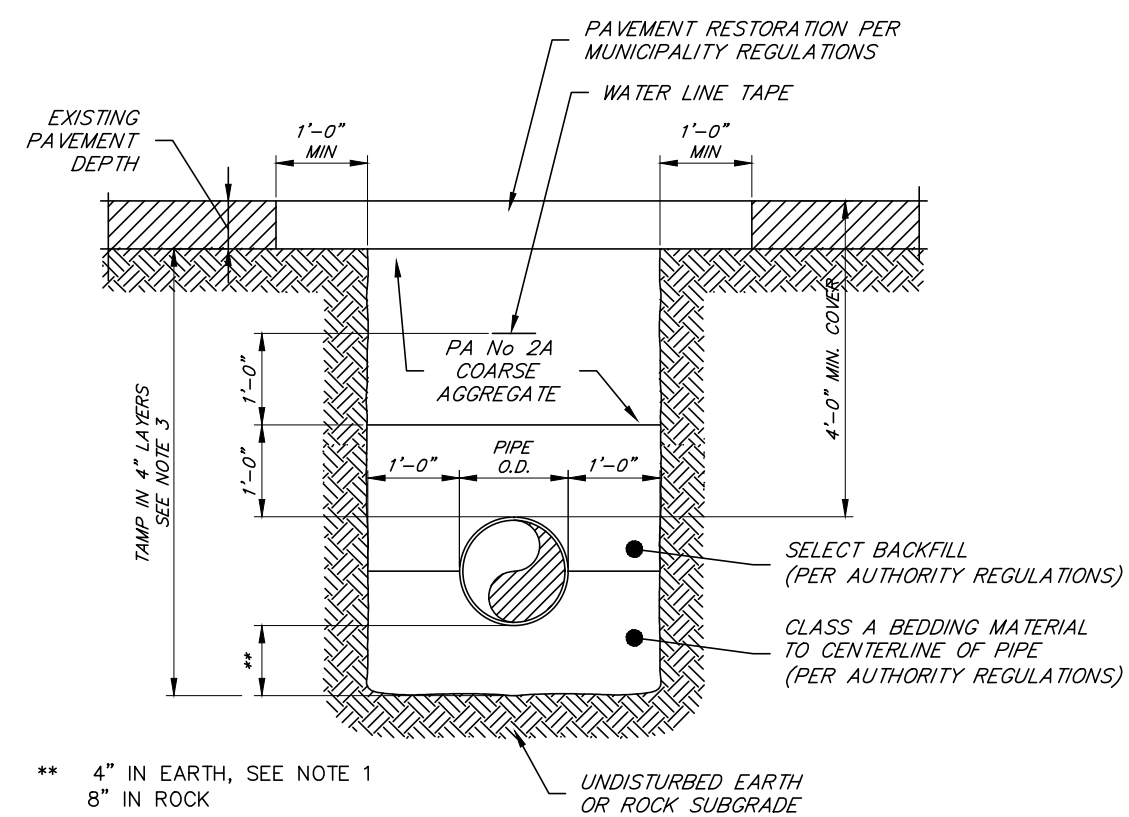
HEIGHT (H)	(B)
3'-0"	6'-0"
3'-6"	6'-6"
4'-0"	7'-0"
6'-0"	9'-0"
7'-0"	10'-0"
8'-0"	11'-0"
9'-0"	12'-0"
10'-0"	13'-0"
11'-0"	14'-0"

**BLACK PVC COATED CHAIN LINK FENCE**

NO SCALE

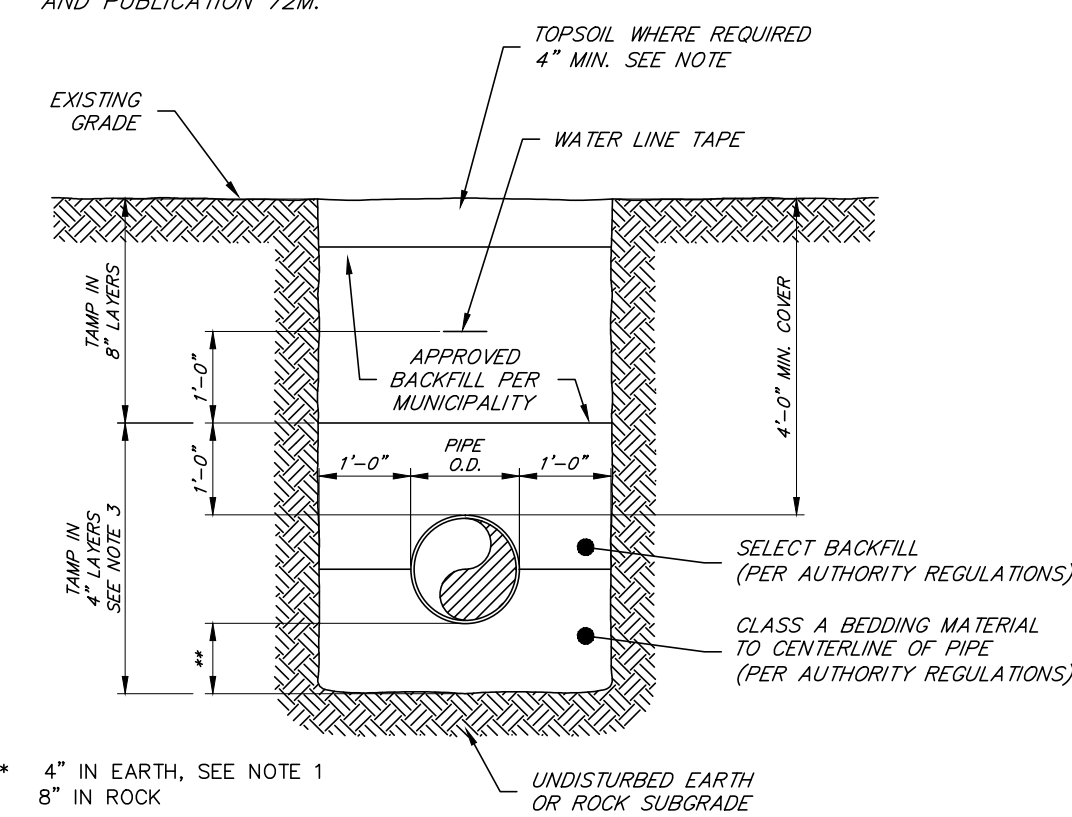
**TRENCH NOTES**

- IF UNSUITABLE SUBSOIL IS ENCOUNTERED AT THE NORMAL TRENCH SUBGRADE THE CONTRACTOR SHALL REMOVE IT TO THE DEPTH DIRECTED BY THE ENGINEER IN THE FIELD, AND SHALL BACKFILL W/ CLASS A BEDDING IN 4" LAYERS.
- BOTTOM OF TRENCH SHALL BE FREE OF WATER PRIOR TO WATER MAIN INSTALLATION.
- IF VIBRATORY COMPACTION EQUIPMENT IS USED BACKFILL MAY BE IN 8" LAYERS.
- PROVIDE 4" OF TOPSOIL WHERE SEEDING IS REQUIRED. SEE NOTE 6 AT GRAVEL DRIVEWAYS.
- CONTRACTOR SHALL SHORE THE TRENCH IN ACCORDANCE WITH SECTION 02151 OF THE SPECIFICATIONS.
- GRAVEL AND PAVED DRIVEWAYS TO BE RESTORED IN KIND.
- CONTRACTOR MAY SUBSTITUTE PA No. 2A FOR CLASS A BEDDING AT NO INCREASED COST TO THE OWNER WITH WRITTEN PERMISSION FROM THE ENGINEER OR OWNER. FOR DESCRIPTION OF BACKFILL MATERIAL, SEE SPECIFICATION SECTION 02221.
- ALL PAVING RESTORATION TO BE IN ACCORDANCE WITH PennDOT PUBLICATION 408/2003 AND PUBLICATION 72M.



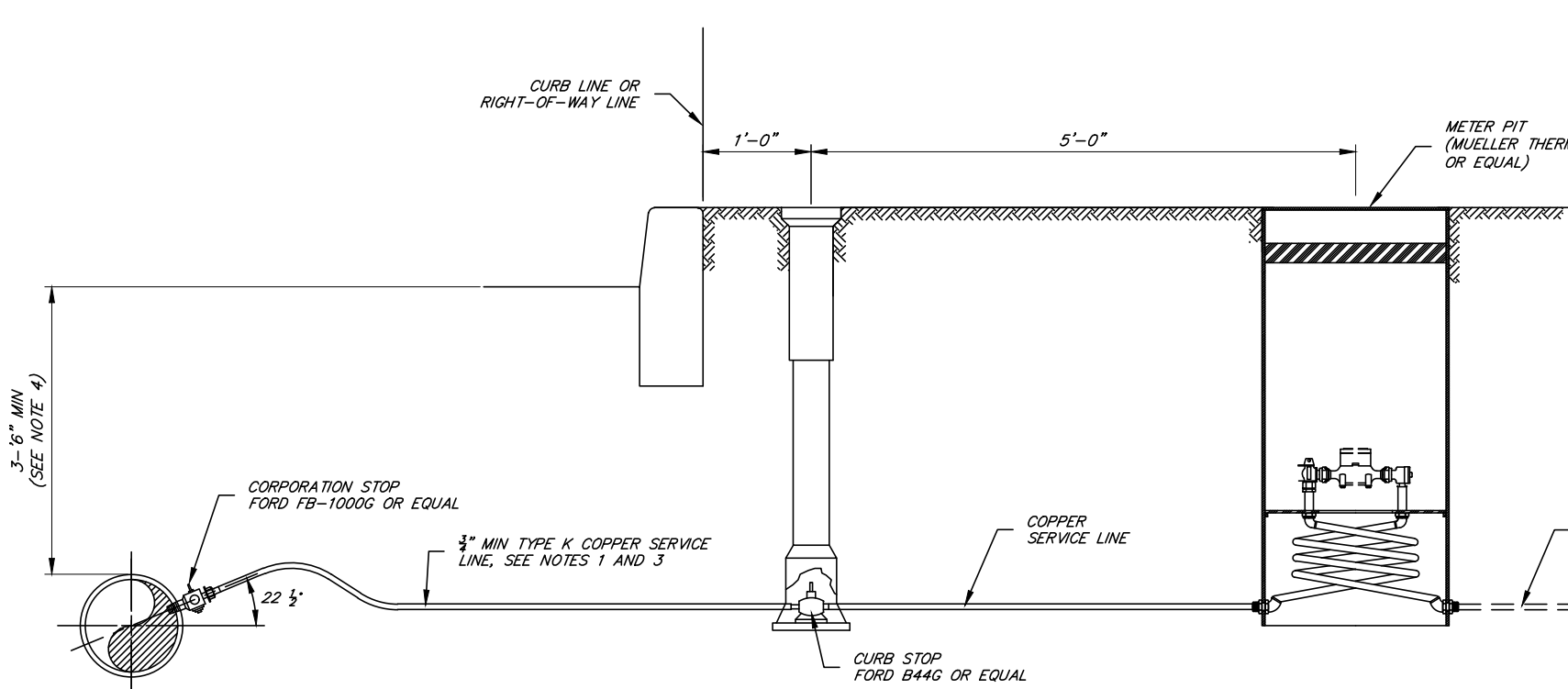
**TYPICAL TRENCH DETAIL - PAVED AREAS**

NO SCALE



**TYPICAL TRENCH DETAIL - UNPAVED AREAS**

NO SCALE

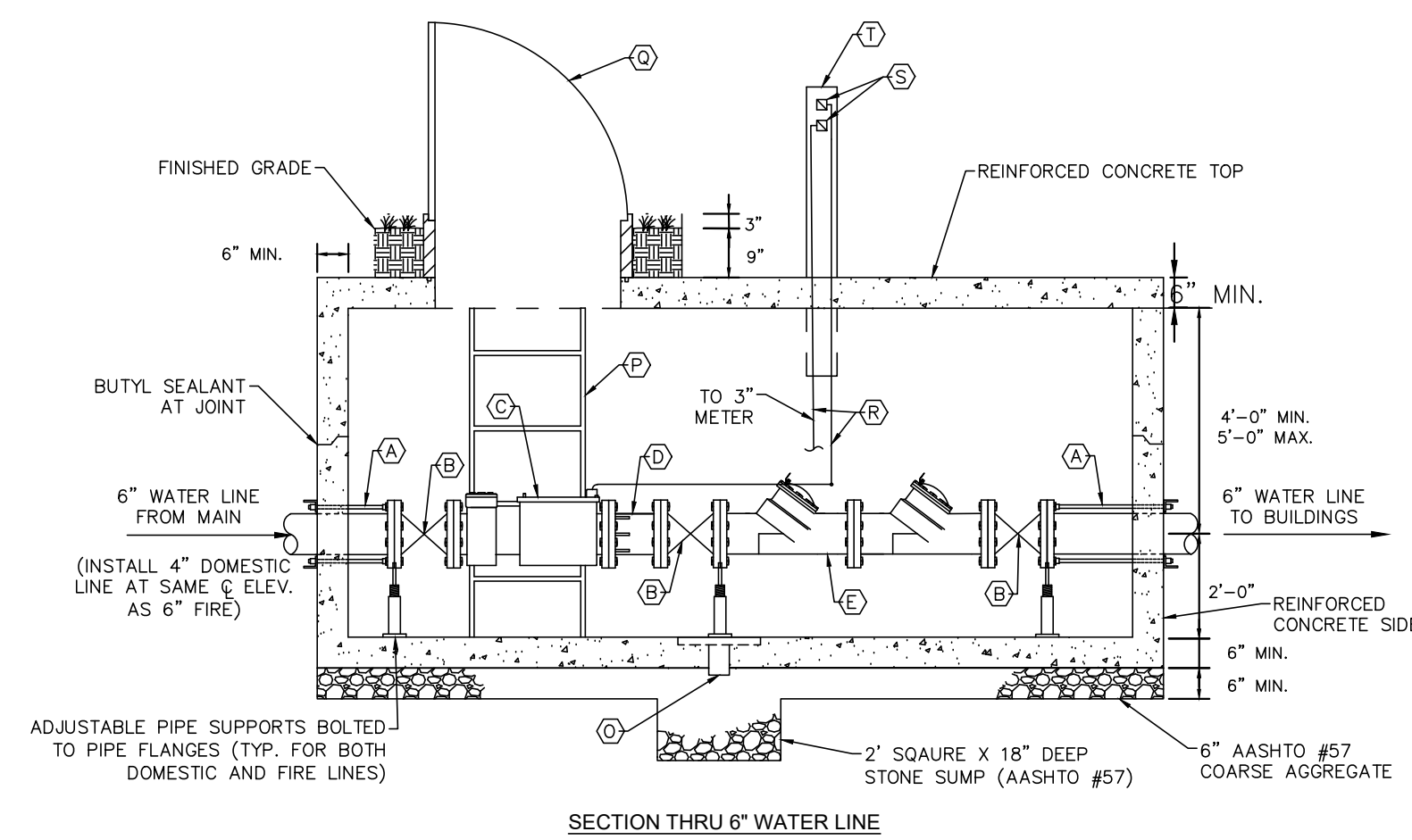
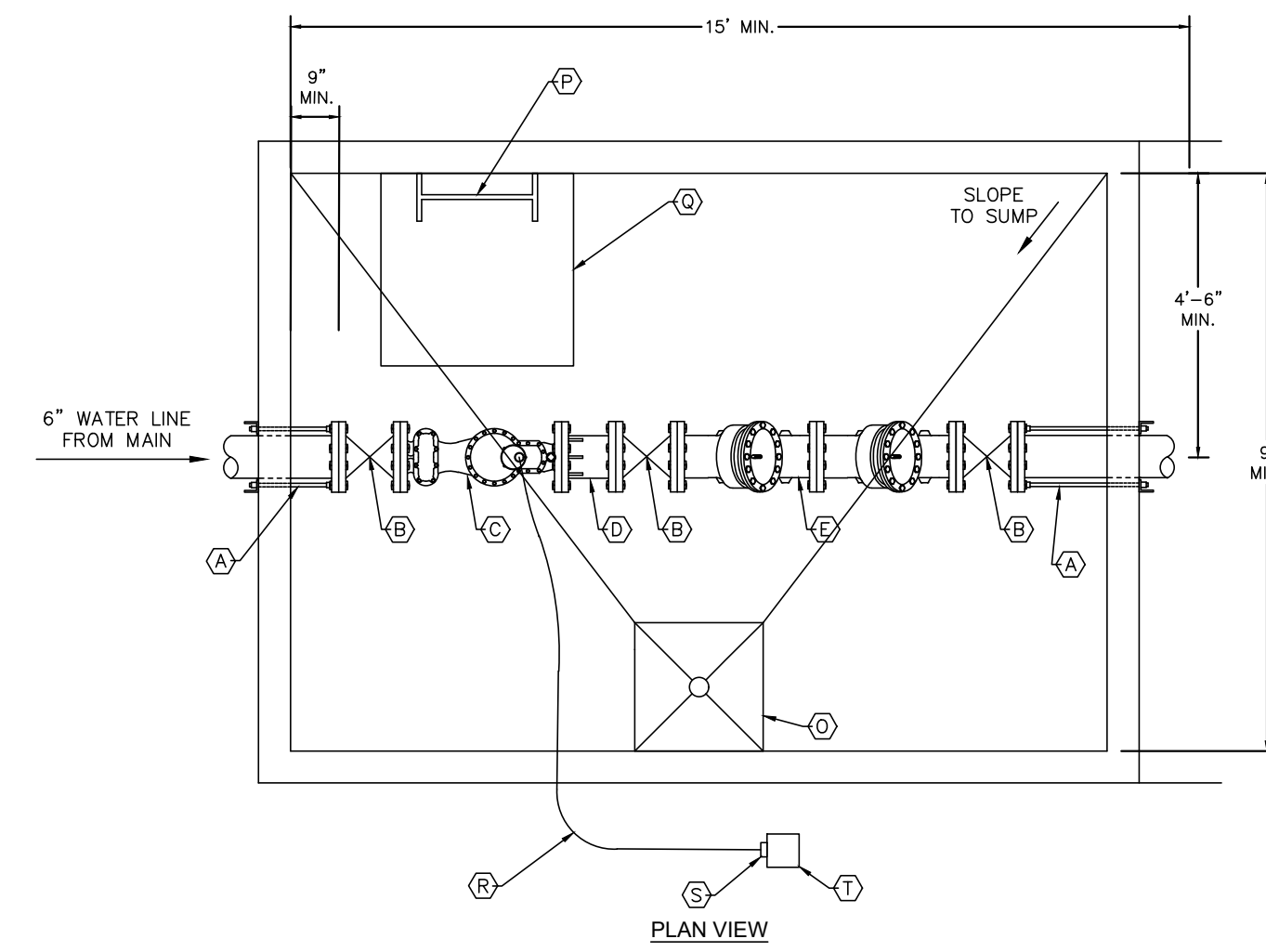


**WATER SERVICE WITH METER PIT CONNECTION DETAIL (RESIDENTIAL LOTS)**

NO SCALE

**NOTES:**

- REPLACE EXISTING WATER SERVICE LINES WITH MINIMUM 3/8" COPPER, IF EXISTING SERVICE IS LARGER DIAMETER, REPLACE WITH SAME SIZE.
- CURB STOP LOCATION NO MORE THAN 1'-0" BEHIND CURB.
- WATER LINE TAPE TO BE INSTALLED 1'-6" TO 2'-0" ABOVE PIPE.
- IF MAIN DEPTH CAN NOT BE MAINTAINED TUBE INSULATION TO BE INSTALLED ON SERVICE LINE.
- NEW SERVICE LINES - FROM CORPORATION TO CURB STOP, INCLUDING NEW CURB BOX.
- SERVICE LINES TO BE INSULATED WHEN 18" OF SEPARATION CANNOT BE MAINTAINED.
- ANY METER PITS REQUIRED FOR SERVICE LINES WILL BE AT THE AUTHORITY'S DISCRETION.
- REFER TO METER PIT DETAILS FOR ADDITIONAL INFORMATION.



**WATER METER VAULT DETAIL**

NO SCALE

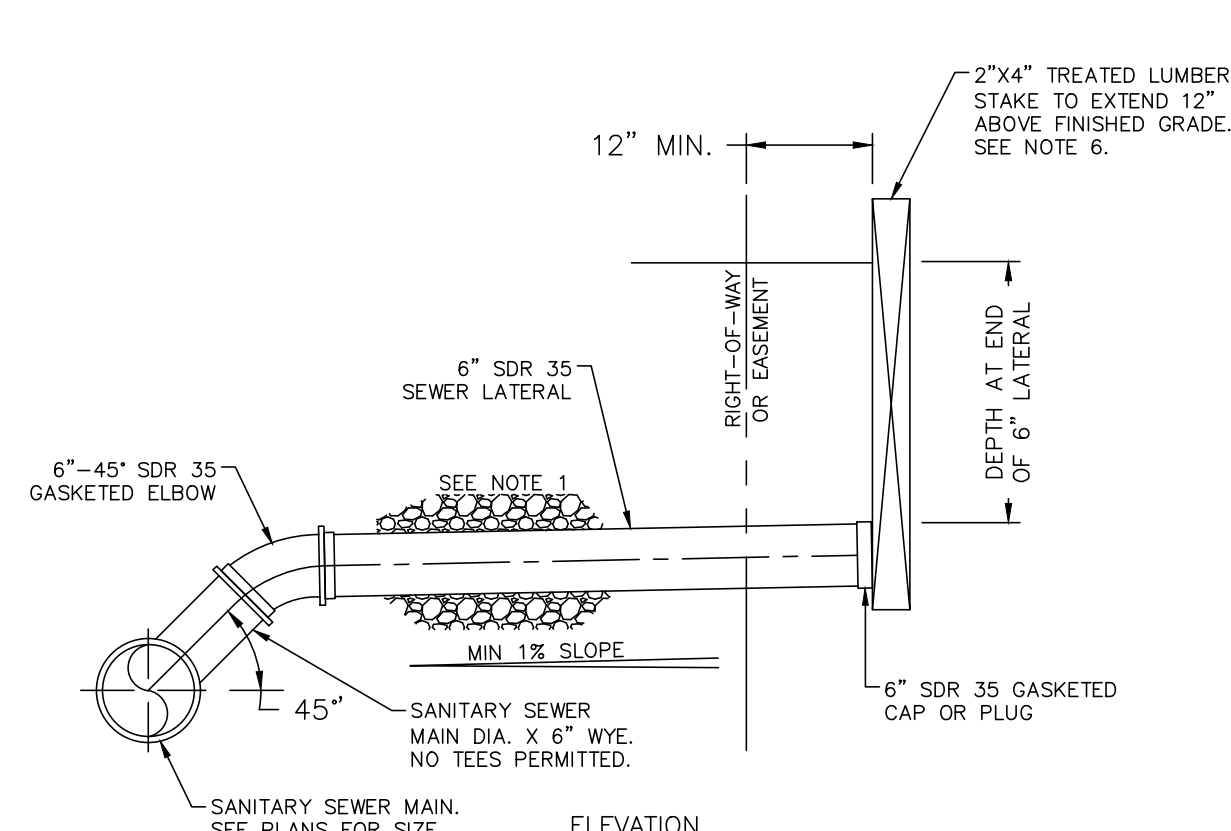
EQUIPMENT SCHEDULE VAULTS B & D	
ITEM	DESCRIPTION
(A)	5/8" TIE RODS W/3" x 3" x 3/8" REACTION ANGLE IRON
(B)	6" NRS RESILIENT SEATED, AWWA C509 GATE VALVE
(C)	4" TURBO METER W/ BUILT IN STRAINER
(D)	6" FLANGED ADAPTER BY DRESSER OR SMITH-BLAIR
(E)	6" DOUBLE CHECK VALVE BACKFLOW PREVENTER BY WATTS 709 OR CONBRACO SERIES 40-600
(F)	ALUMINUM LADDER W/BILCO SAFETY EXTENSION
(G)	3'-0" SQ. ALUM. ACCESS HATCH EQUAL TO HALLIDAY PRODUCTS SIS CENTERED OVER METER
(R)	1" CONDUIT TO REMOTE READ-OUT POST
(S)	REMOTE READOUT
(T)	4" x 4" TREATED LUMBER READOUT POST

**NOTES:**

- CONSTRUCT METERING VAULT AS SHOWN TO MINIMUM DIMENSIONS AND GENERAL CONFIGURATION.
- PROVIDE PIPE SUPPORTS, TIE RODS, ANCHORS AND THRUST BRACING AT FITTINGS AND VALVES SUFFICIENT TO ALLOW PIPING TO STAND WITH REMOVAL OF METERS, FRICTION CLAMPS ARE NOT PERMITTED FOR RESTRAINT OF PIPING SYSTEMS.
- ALL VALVES AND BACK FLOW PREVENTORS TO BE MAINTAINED BY CUSTOMER.
- TIE RODS TO BE EMBEDDED IN CONCRETE OR BOLTED TO STEEL ON PLATES ON EXTERIOR WALLS. THE AUTHORITY SHALL INSPECT BEFORE BACKFILLING. AS AN ALTERNATE, A MEGA-LUG MAY BE UTILIZED ON THE INSIDE OF THE PIT AS RESTRAINT.
- VAULT SHALL BE DESIGNED TO WITHSTAND AASHTO H20 TRAFFIC LOADING.
- SLOPE FLOOR TO SUMP USING GROUT.
- CONCRETE STRUCTURE SHALL MEET REQUIREMENTS OF ASTM C478. DESIGN SHALL COMPLY WITH ACI 318. COMPRESSIVE STRENGTH SHALL BE 4,000 PSI AT 28 DAYS MINIMUM.
- CONTRACTOR HAS OPTION TO CONSTRUCT METER VAULT USING PRECAST OR REINFORCED CAST IN PLACE CONCRETE.
- ALL METERS ABOVE 2" IN SIZE SHALL BE SECURED PRIVATELY BY THE CONTRACTOR AND ALL SPECIFICATIONS PROVIDED TO THE AUTHORITY FOR APPROVAL.

**CONSTRUCTION & WATER DETAILS**  
 For  
**PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS**  
**BRIAR RIDGE COMMONS - APARTMENTS**  
 located in  
 NORTH LEBANON TOWNSHIP  
 LEBANON County, Pennsylvania

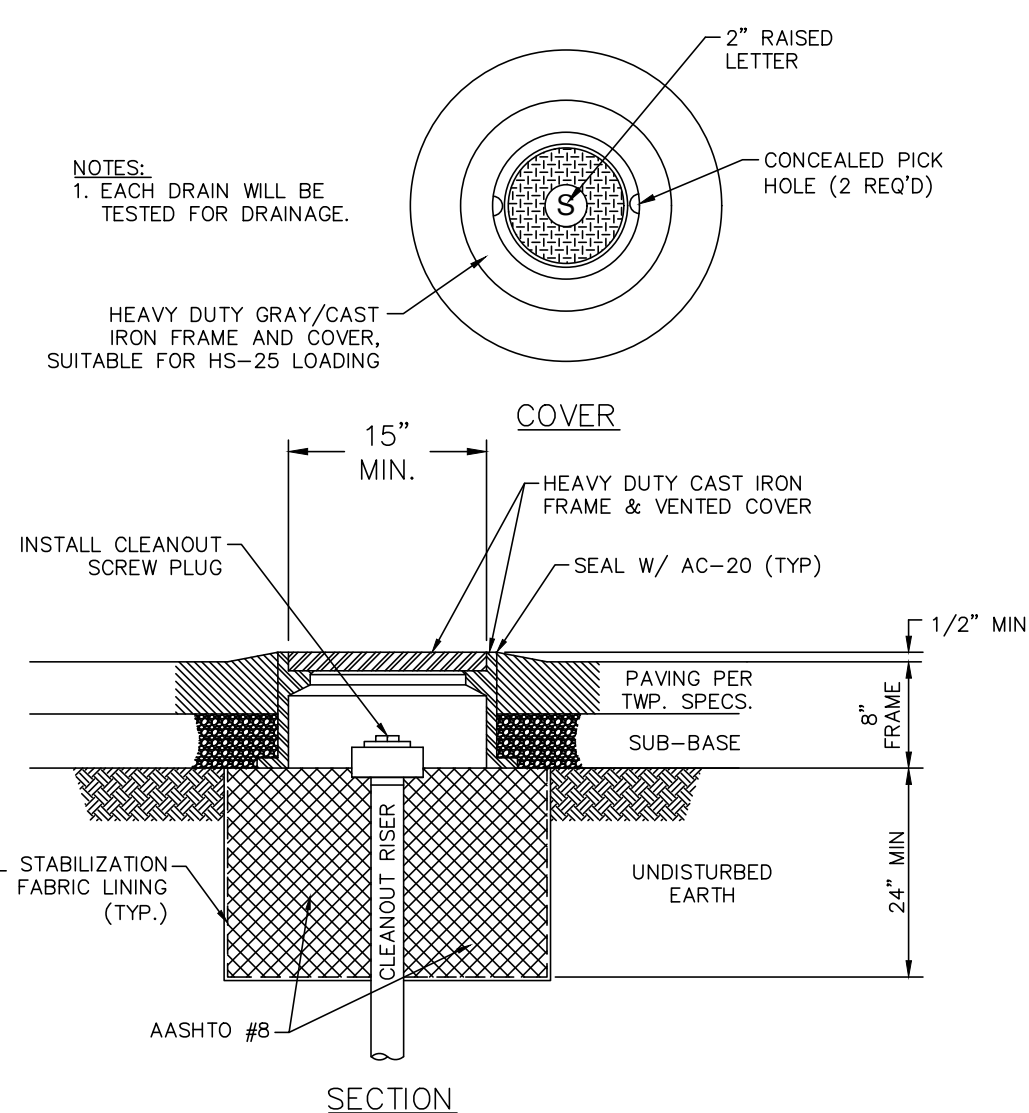
FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	AS NOTED
PROJECT #	135-19-001



- NOTES:
1. PROVIDE 6" OF AASHTO NO. 8 (1B) STONE BELOW PIPE AND 12" ABOVE PIPE. (TYPICAL ENTIRE LENGTH OF LATERAL).
  2. MINIMUM SLOPE = 1% (1/8" PER FOOT)
  3. MINIMUM DEPTH OF COVER = 4 FT
  4. DEVELOPER SHALL TEST AGAINST 6" SDR 35 GASKETED CAP OR PLUG.
  5. LATERAL TO EXTEND 12" BEYOND R.O.W. OR EASEMENT OR AS APPROVED OTHERWISE BY NLMA.
  6. LABEL STAKE AS "SEWER LATERAL". NOTE LATERAL DEPTH AT EDGE OF R.O.W. OR EASEMENT.

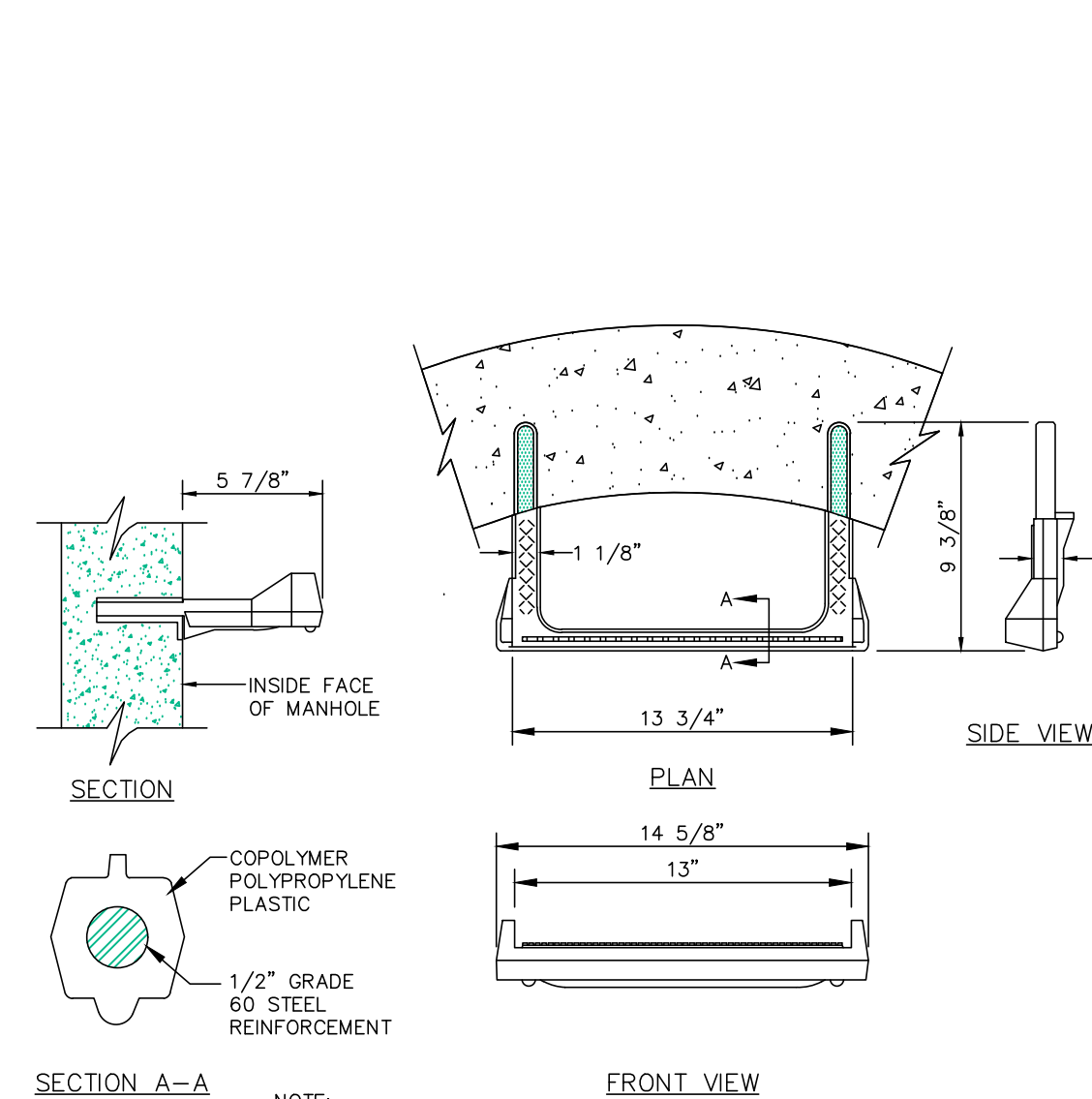
**SEWER LATERAL INSTALLATION DETAIL**

NO SCALE



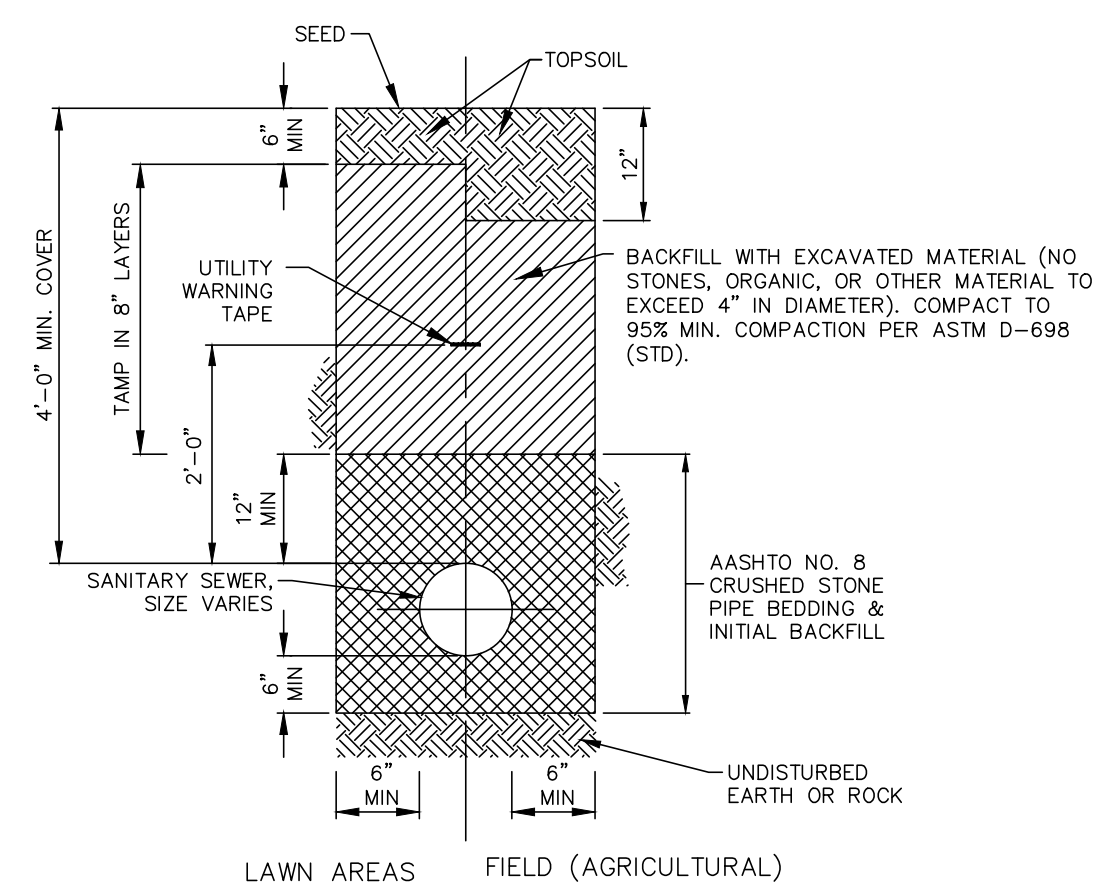
**CLEANOUTS IN PAVED AREA DETAIL**

NO SCALE



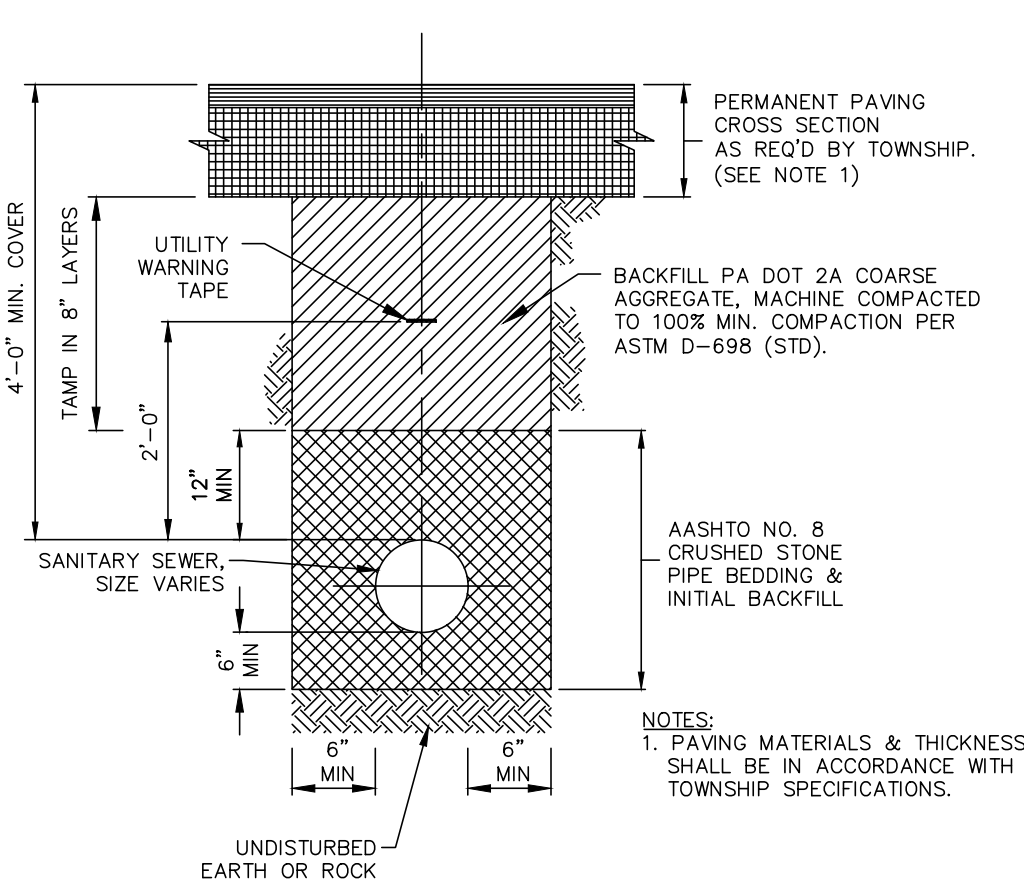
**MANHOLE STEPS DETAIL**

NO SCALE



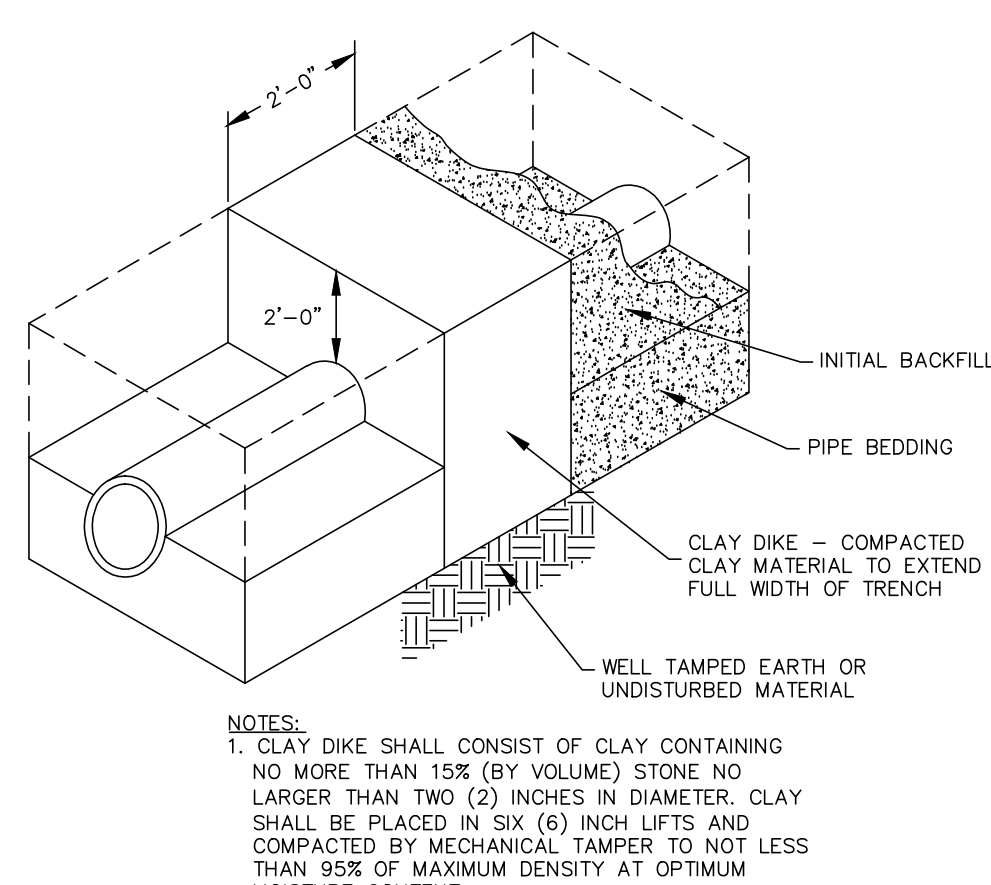
**TRENCH RESTORATION (LAWN AREAS)**

NO SCALE



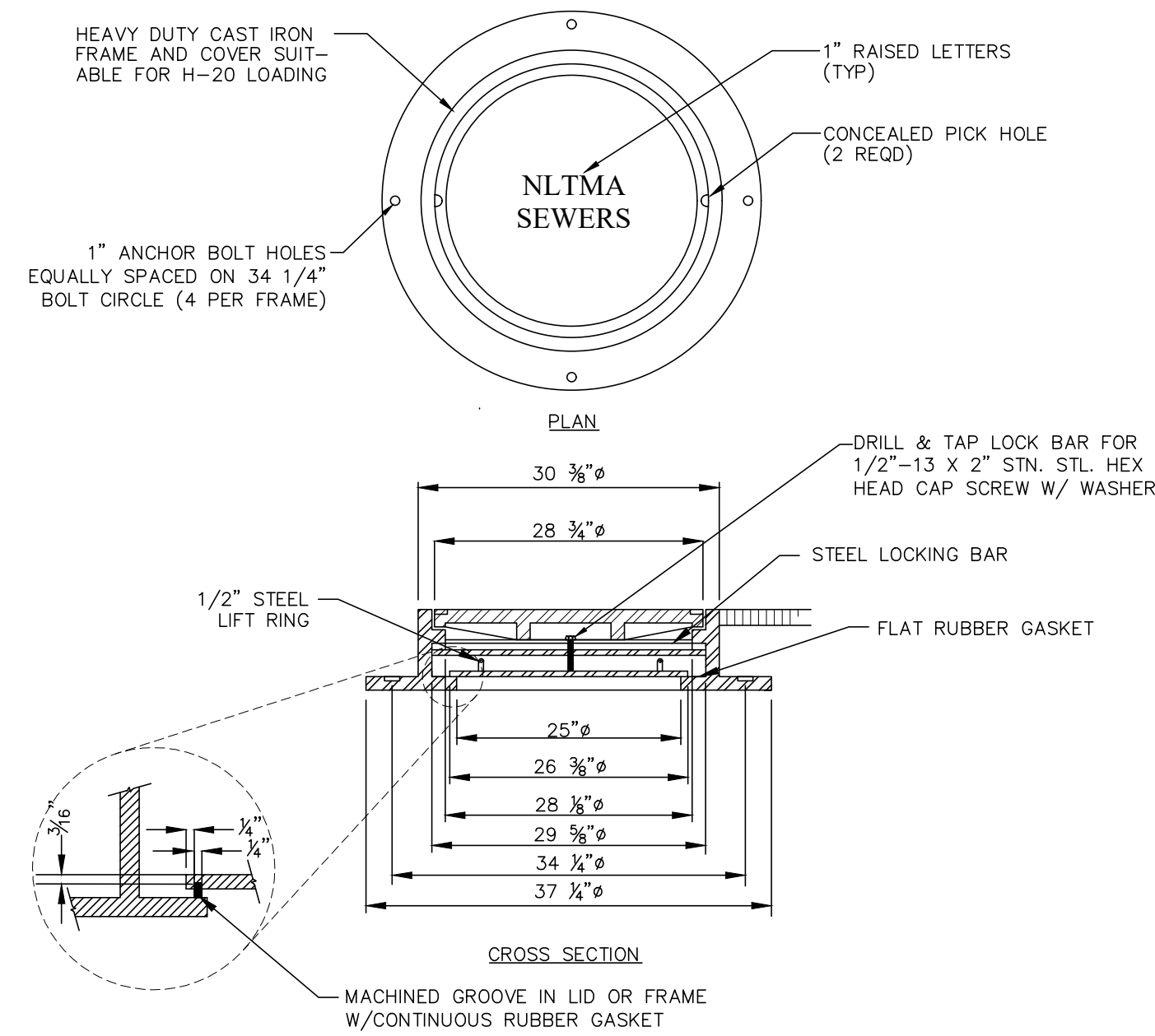
**TRENCH RESTORATION (PAVED AREAS)**

NO SCALE



**CLAY DIKE (TRENCH PLUG) DETAIL**

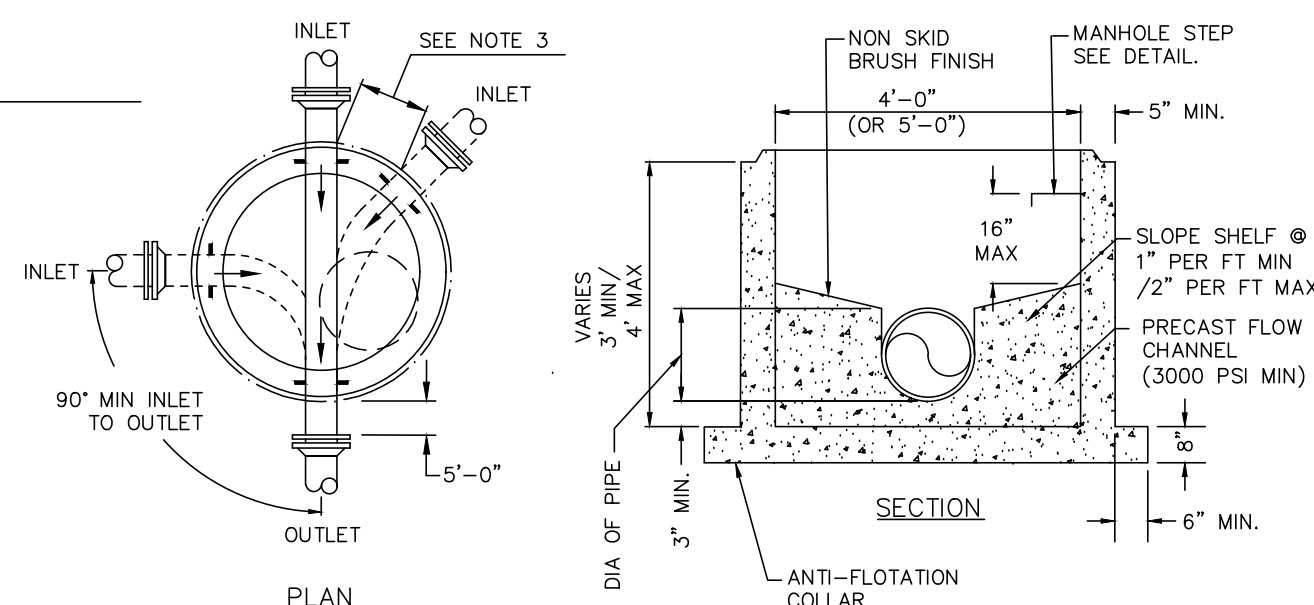
NO SCALE



- NOTES:
1. CAST IRON MEETS ASTM SPEC A-48 CLASS 35B, AASHTO HIGHWAY LOADING HS-20.
  2. APPROVED MANUFACTURER: NEENAH FOUNDRY COMPANY MODEL R-1755. NO SUBSTITUTIONS ALLOWED UNLESS OTHERWISE APPROVED BY NLMA.
  3. APPLY ANTI-SEIZE COMPOUND TO ALL THREADED SURFACES.
  4. LETTERING FOR PRIVATE MANHOLES SHALL BE "PRIVATE SEWER".

**WATERTIGHT MANHOLE FRAME AND COVER**

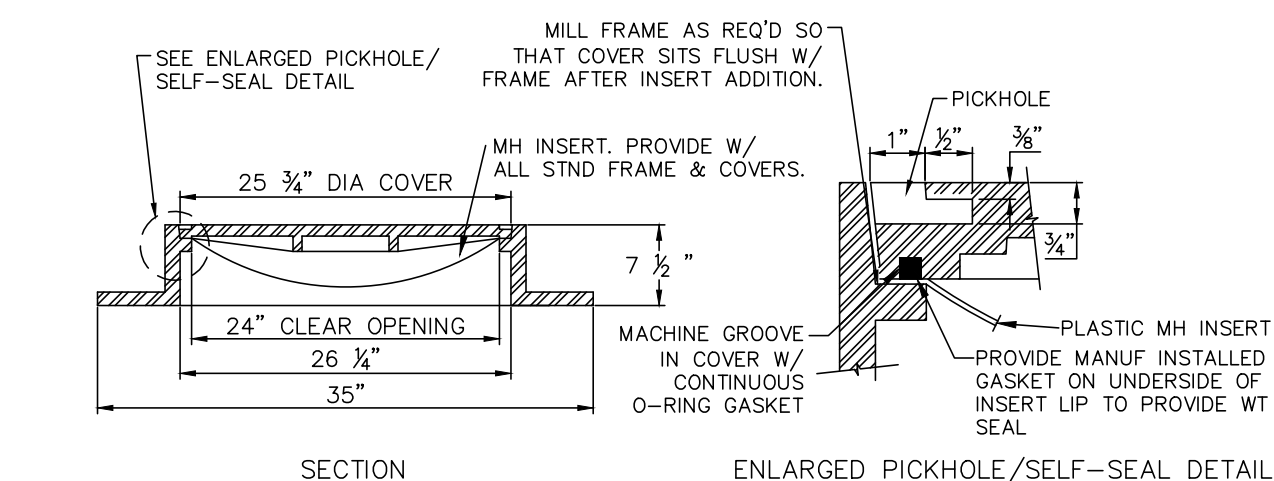
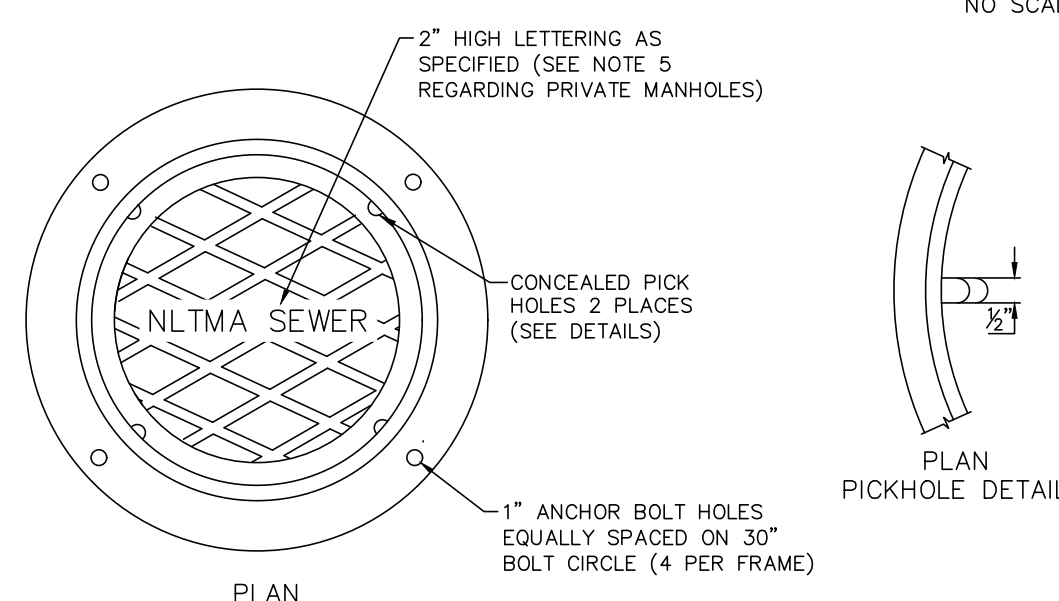
NO SCALE



- NOTES:
1. THREE INLET PIPES AND ONE OUTLET PIPE MAX INTO 4" DIA. MANHOLE.
  2. NO LATERALS INTO MANHOLES, UNLESS AUTHORIZED OTHERWISE BY NLMA.
  3. MINIMUM 12" SEPARATION FROM EDGE OF PIPE PENETRATION TO EDGE OF PIPE PENETRATION.
  4. MINIMUM CHANNEL DROP THROUGH MANHOLE: STRAIGHT THROUGH - 0.1 FEET BEND - 0.2 FEET
  5. ALL CHANNELS SHALL BE PRECAST UNLESS APPROVED OTHERWISE BY NLMA.
  6. THESE DETAILS APPLY TO PRECAST CHANNELS IN NEW MANHOLES AND FIELD-FORMED CHANNELS IN EXISTING MANHOLES.
  7. CHANNELS SHALL MATCH THE CROSS-SECTIONAL DIMENSIONS OF THE PIPES ENTERING AND EXITING THE MANHOLE. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CHANGES IN PIPE SIZE.
  8. 4"-0" DIA. UNLESS PIPING CONFIGURATION REQUIRES LARGER.
  9. MIN. DEPTH OF CHANNEL SHALL MATCH DIAMETER OF LARGEST PIPE ENTERING MANHOLE.

**PRECAST MANHOLE BASE DETAIL**

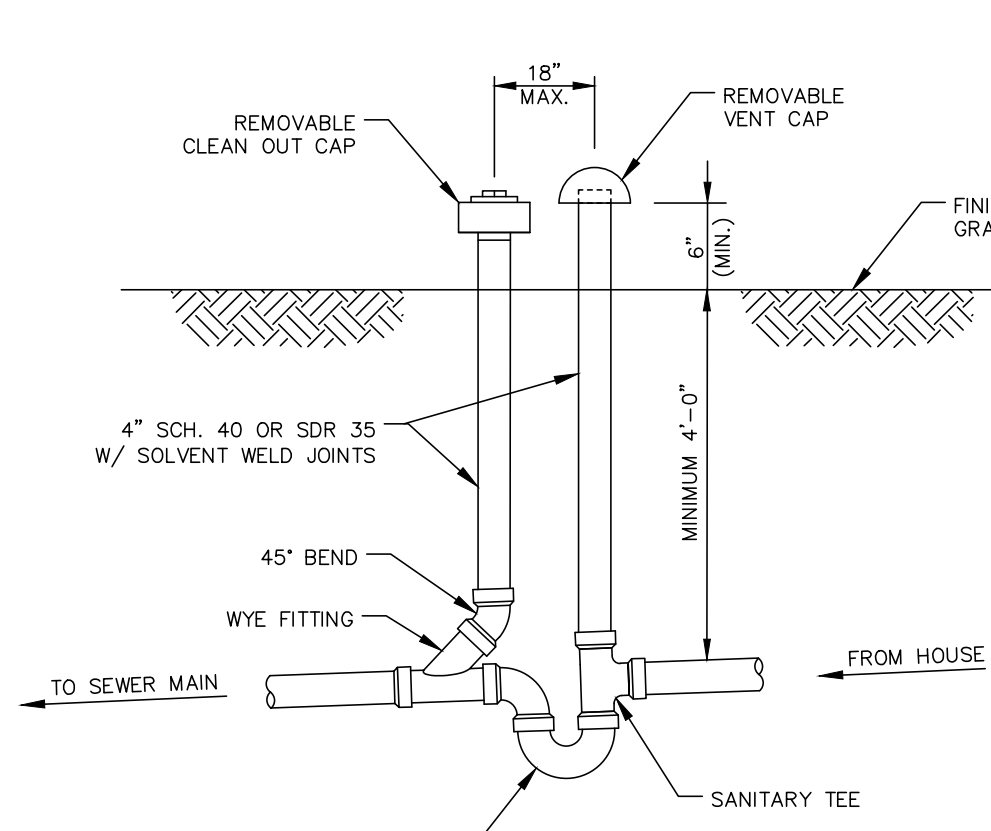
NO SCALE



- NOTES:
1. CAST IRON MEETS ASTM SPEC A-48 CLASS 35B, AASHTO HIGHWAY LOADING HS-20 EQUIVALENT TO NEENAH FOUNDRY COMPANY MODEL R-1643.
  2. LOW PROFILE FRAME AND COVERS SHALL ONLY BE USED FOLLOWING APPROVAL BY NLMA DUE TO RISER ADJUSTMENT LIMITATIONS.
  3. APPLY ANTI-SEIZE COMPOUND TO ALL THREADED SURFACES.
  4. LETTERING FOR PRIVATE MANHOLES SHALL BE "PRIVATE SEWER".

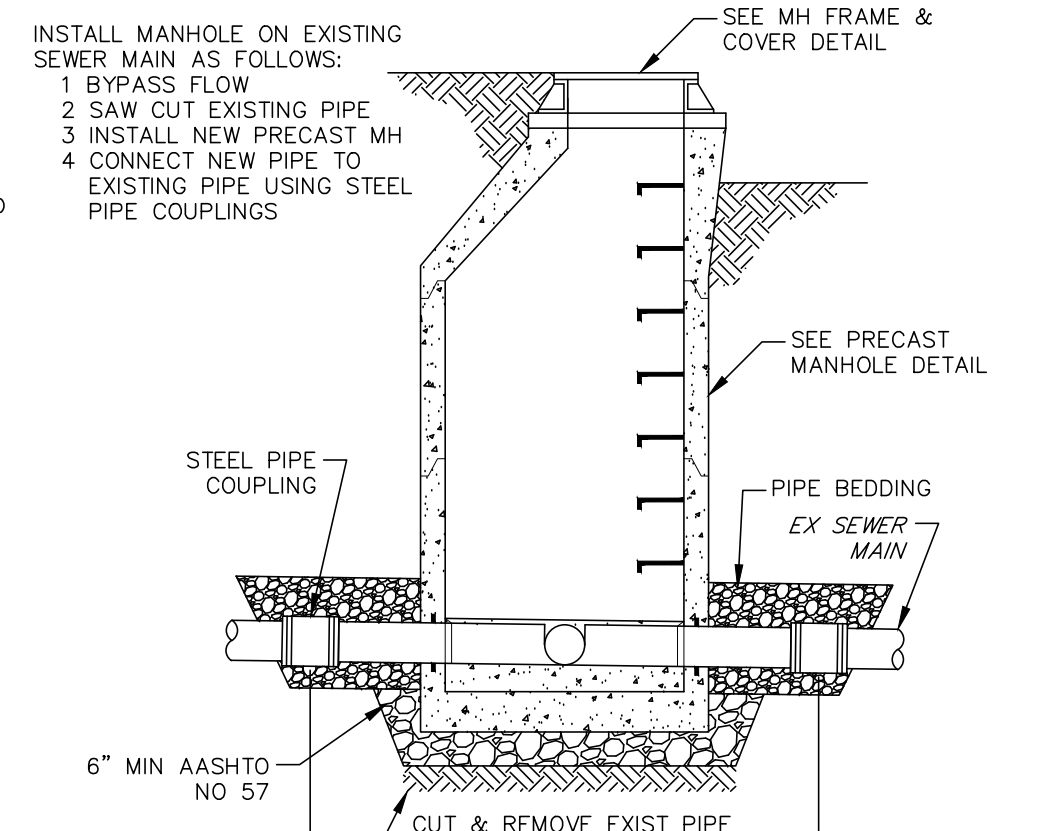
**STANDARD MANHOLE FRAME AND COVER DETAIL**

NO SCALE



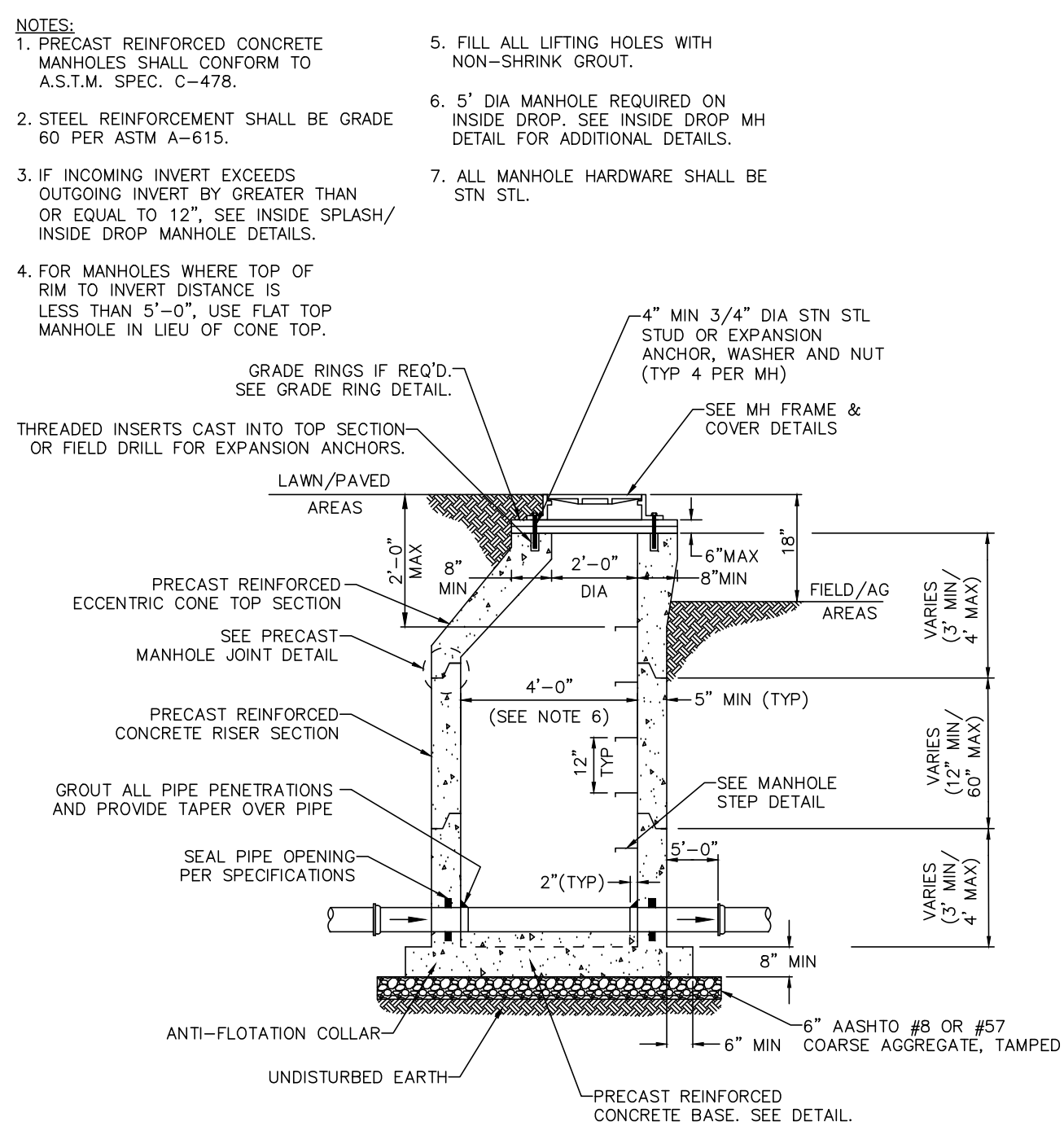
**TYPICAL TRAP & VENT ASSEMBLY**

NO SCALE



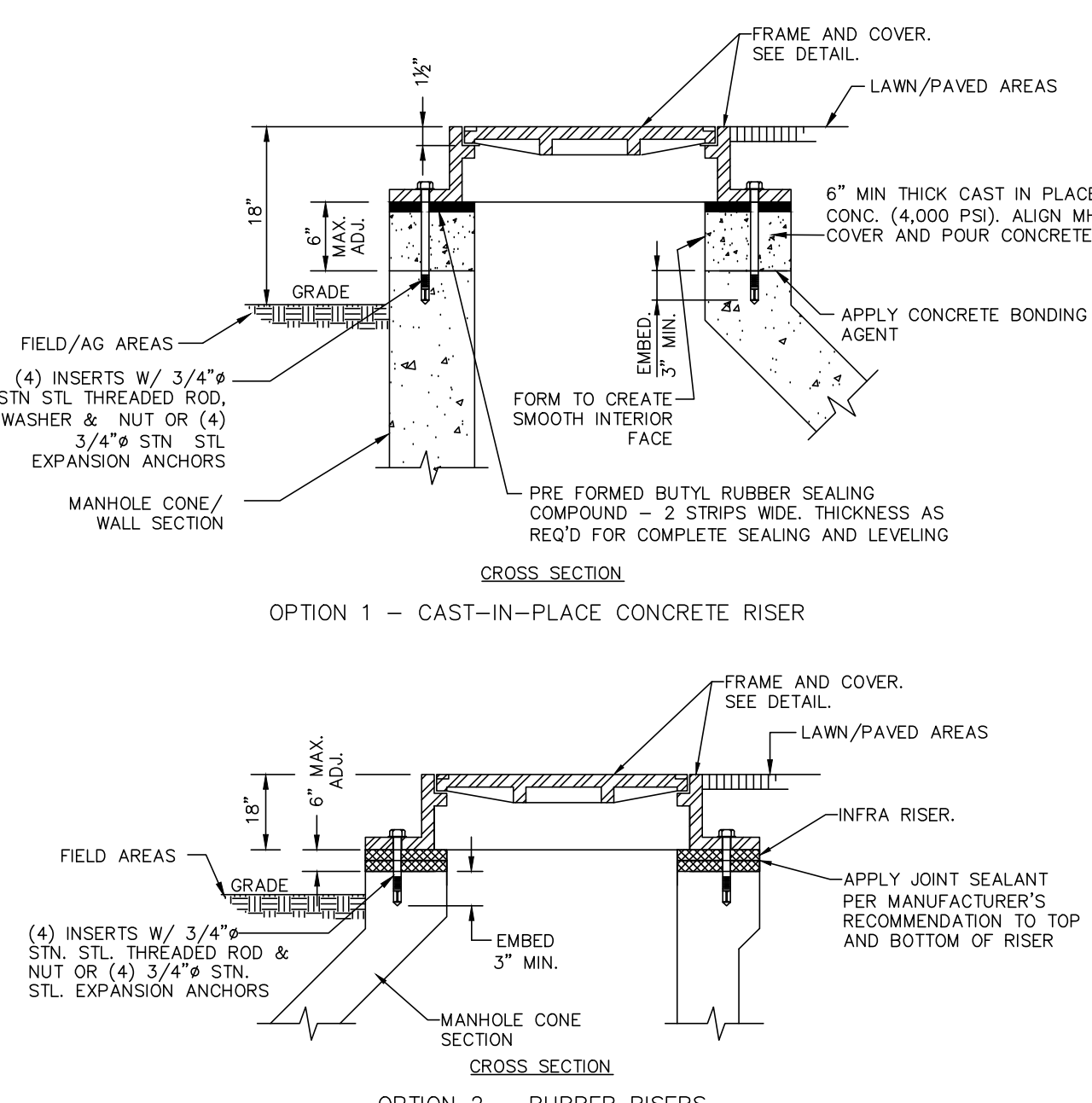
**NEW MANHOLE ON EXISTING MAIN DETAIL**

NO SCALE



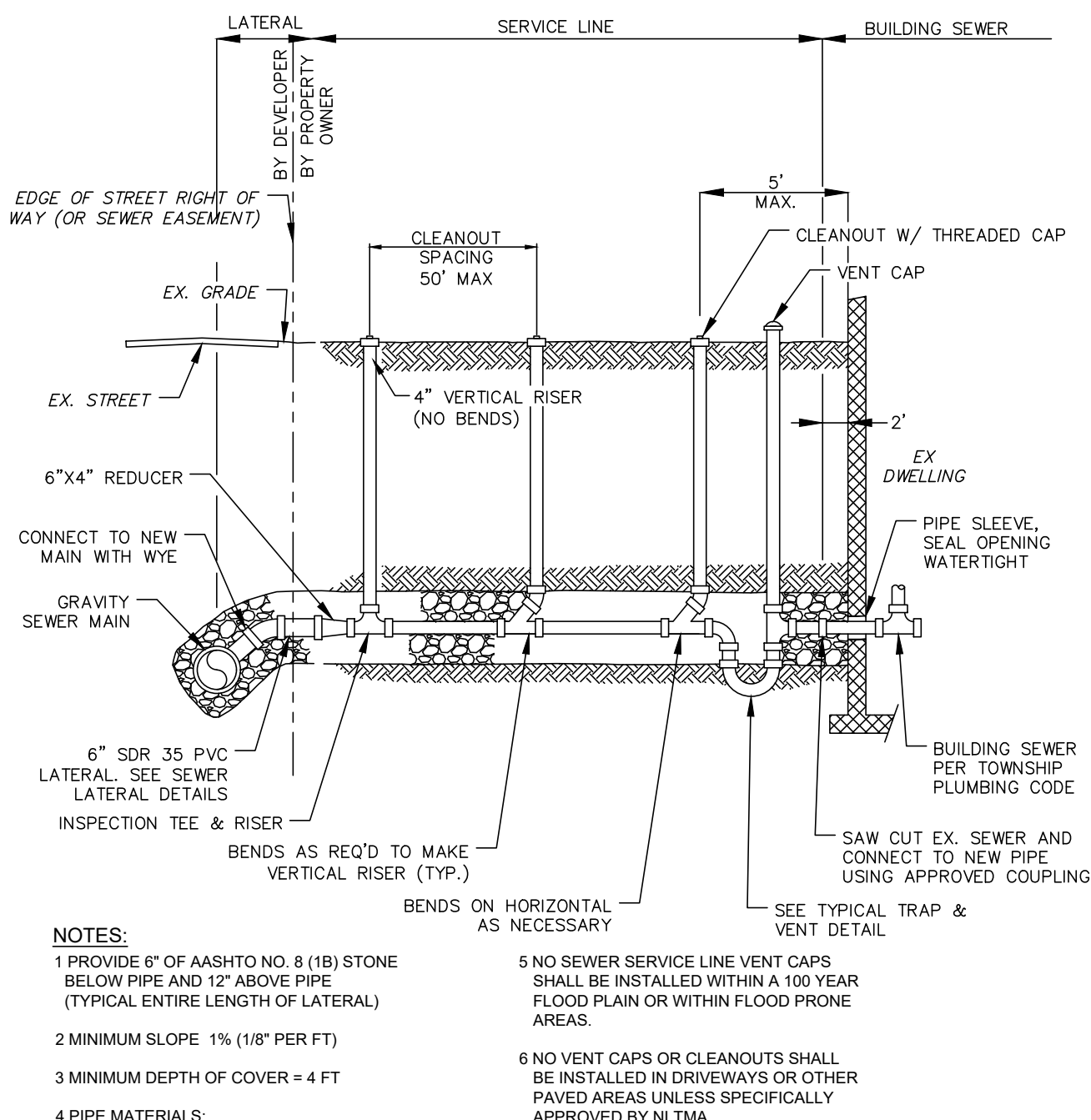
**PRECAST CONCRETE MANHOLE DETAIL**

NO SCALE



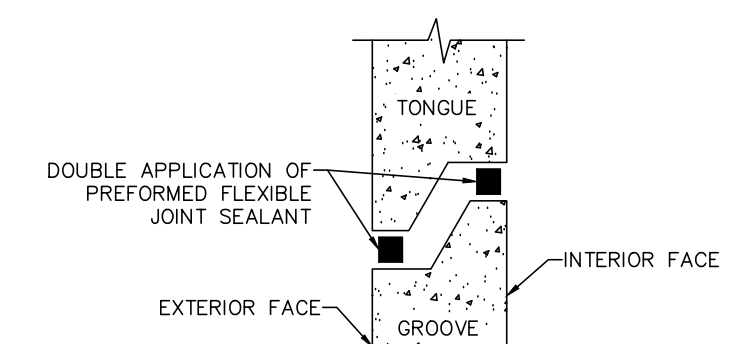
**MANHOLE GRADE RINGS DETAIL**

NO SCALE



**GRAVITY SERVICE LINE INSTALLATION DETAIL**

NO SCALE



**PRECAST MANHOLE JOINT**

NO SCALE

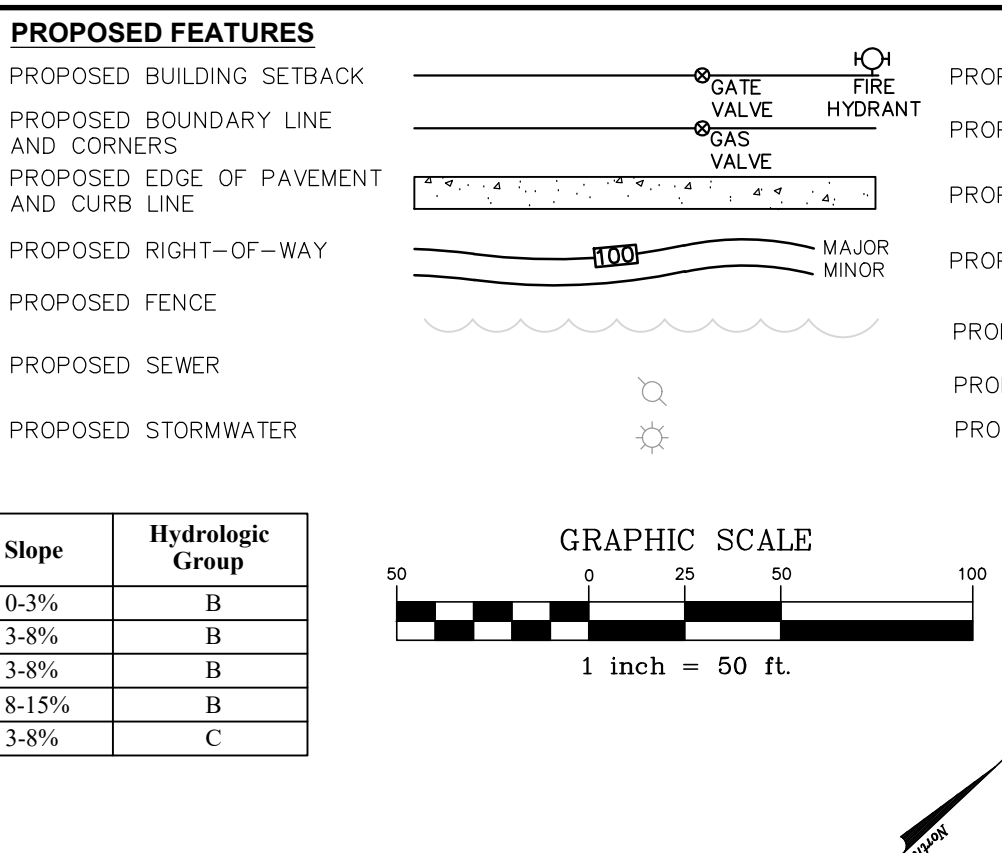
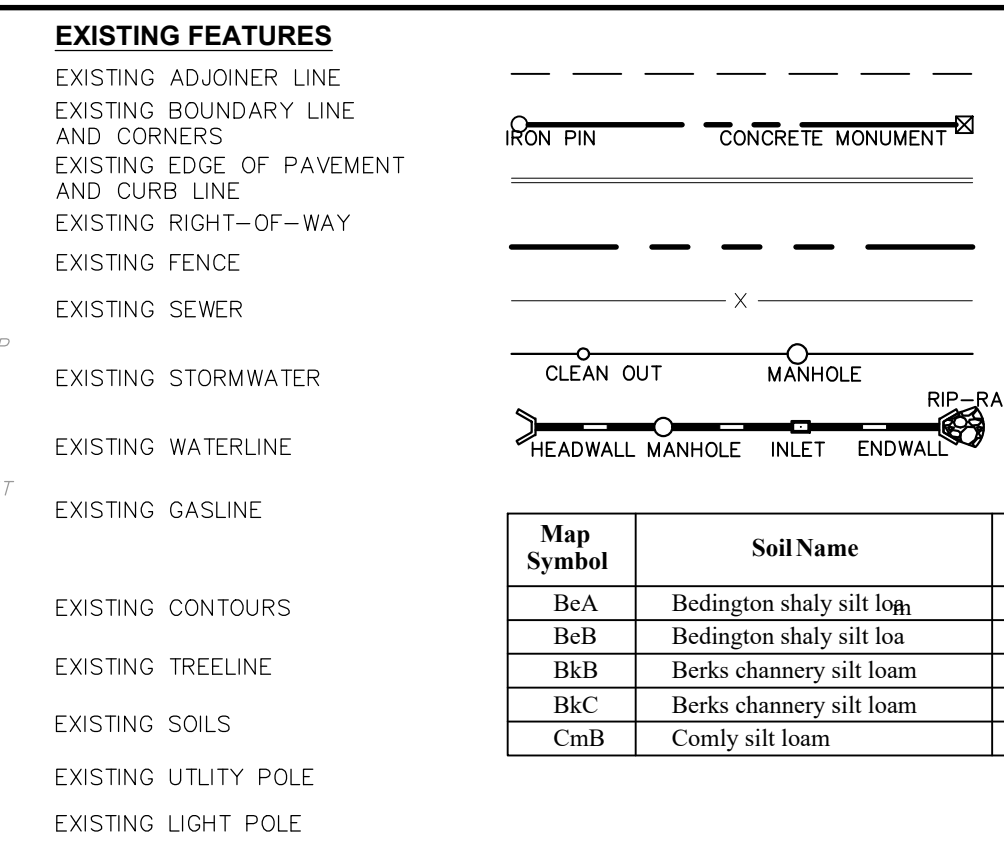
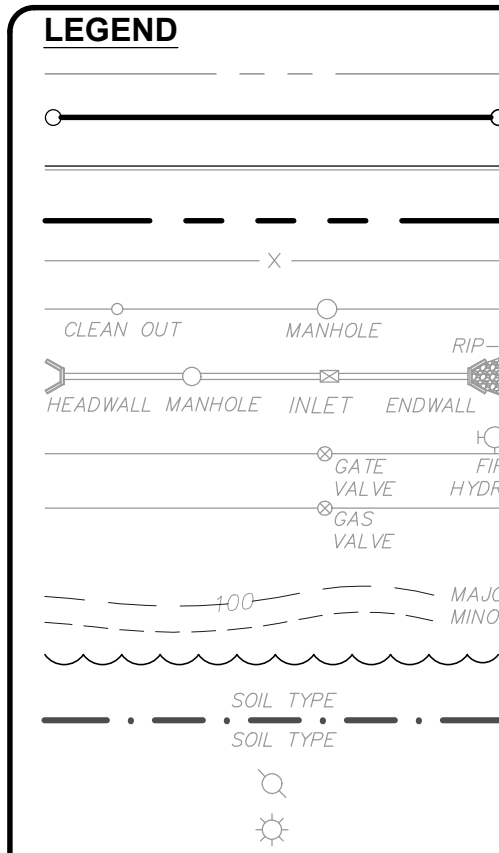
REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-3-23	5-8-23	CDS
PER LCPD LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

**SANITARY DETAILS**

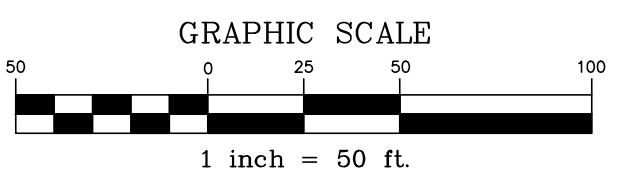
PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS  
For  
**BRIAR RIDGE COMMONS - APARTMENTS**  
located in  
NORTH LEBANON TOWNSHIP  
LEBANON County, Pennsylvania

FIELD CREW: MOD,JEC
BASE MAP: JEC
DRAWN: CDS
DESIGN: CDS
CHECKED: SAS
DATE: 3/1/23
SCALE: AS NOTED
PROJECT #135-19-001



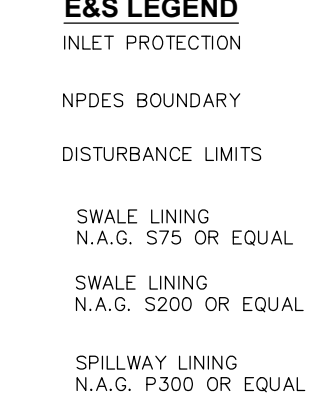


Map Symbol	Soil Name	Slope	Hydrologic Group
BeA	Bedington shaly silt loam	0-3%	B
BeB	Bedington shaly silt loam	3-8%	B
BkC	Berks channery silt loam	3-8%	B
BkC	Berks channery silt loam	8-15%	B
CmB	Comly silt loam	3-8%	C

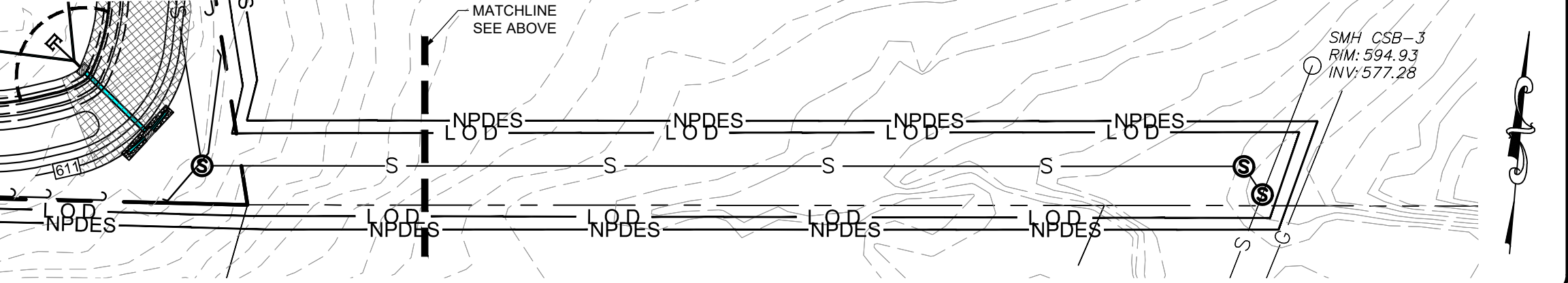


**EROSION AND SEDIMENT CONTROL LIABILITY NOTE:**  
FAILURE TO CORRECTLY INSTALL SEDIMENT CONTROL FACILITIES OR FAILURE TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE OR FAILURE TO TAKE CORRECTIVE ACTIONS TO IMMEDIATELY RESOLVE FAILURES OF SEDIMENT CONTROL FACILITIES MAY RESULT IN ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS DEFINED IN SECTION 602 OF THE CLEAN STREAMS LAW OF PENNSYLVANIA. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.

THESE PLANS INDICATE CRITICAL AREAS FOR EROSION AND SEDIMENT CONTROL PLACEMENT BUT DO NOT CRITIQUE THE CONTRACTOR FROM PROVIDING ADDITIONAL CONTROLS AS SITE CONDITIONS WARRANT. THE ENVIRONMENTAL COMPLIANCE MANAGER FOR THE PROJECT AND OR CONSERVATION DISTRICT MAY DIRECT THE CONTRACTOR TO INSTALL E&S BMPs NOT DEPICTED ON THESE DRAWINGS IN ORDER TO PROTECT DOWN GRADIENT AREAS FROM EROSION AND SEDIMENTATION DURING CONSTRUCTION.  
SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELLED OR SWEEPED INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.

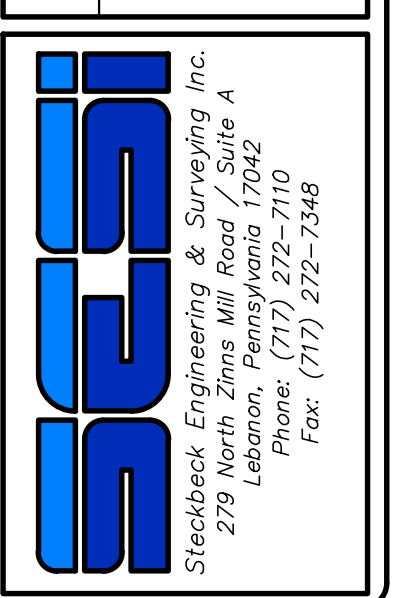


**SEWER LINE INSTALLATION NOTE:**  
PIPELINES WITH JOINTS THAT ALLOW A MANUFACTURED LENGTH OF PIPE TO BE PLACED IN THE TRENCH WITH THE PIPE JOINT ASSEMBLY MADE IN THE TRENCH REQUIRE AN OPEN PIPELINE TRENCH THAT IS ONLY SLIGHTLY LONGER THAN THE LENGTH OF PIPE BEING INSTALLED. THE TOTAL LENGTH OF EXCAVATED TRENCH OPEN AT ANY ONE TIME SHOULD NOT BE GREATER THAN THE TOTAL LENGTH OF PIPELINE/UTILITY LINE THAT CAN BE PLACED IN THE TRENCH AND BACK-FILLED IN ONE WORKING DAY. ALL PIPELINE INSTALLATIONS SHALL BE STABILIZED BY THE END OF EACH WORKING DAY. SOIL SUPPLEMENTS, SEED AND MULCH SHALL BE APPLIED WITHIN 5 DAYS AFTER THE PIPELINE/UTILITY IS INSTALLED. ANY EXCAVATED MATERIAL FROM THE TRENCH SHALL BE PLACED ON THE UP-SLOPE SIDE OF THE TRENCH. FINISHED GRADE OVER THE UTILITY LINE SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS.



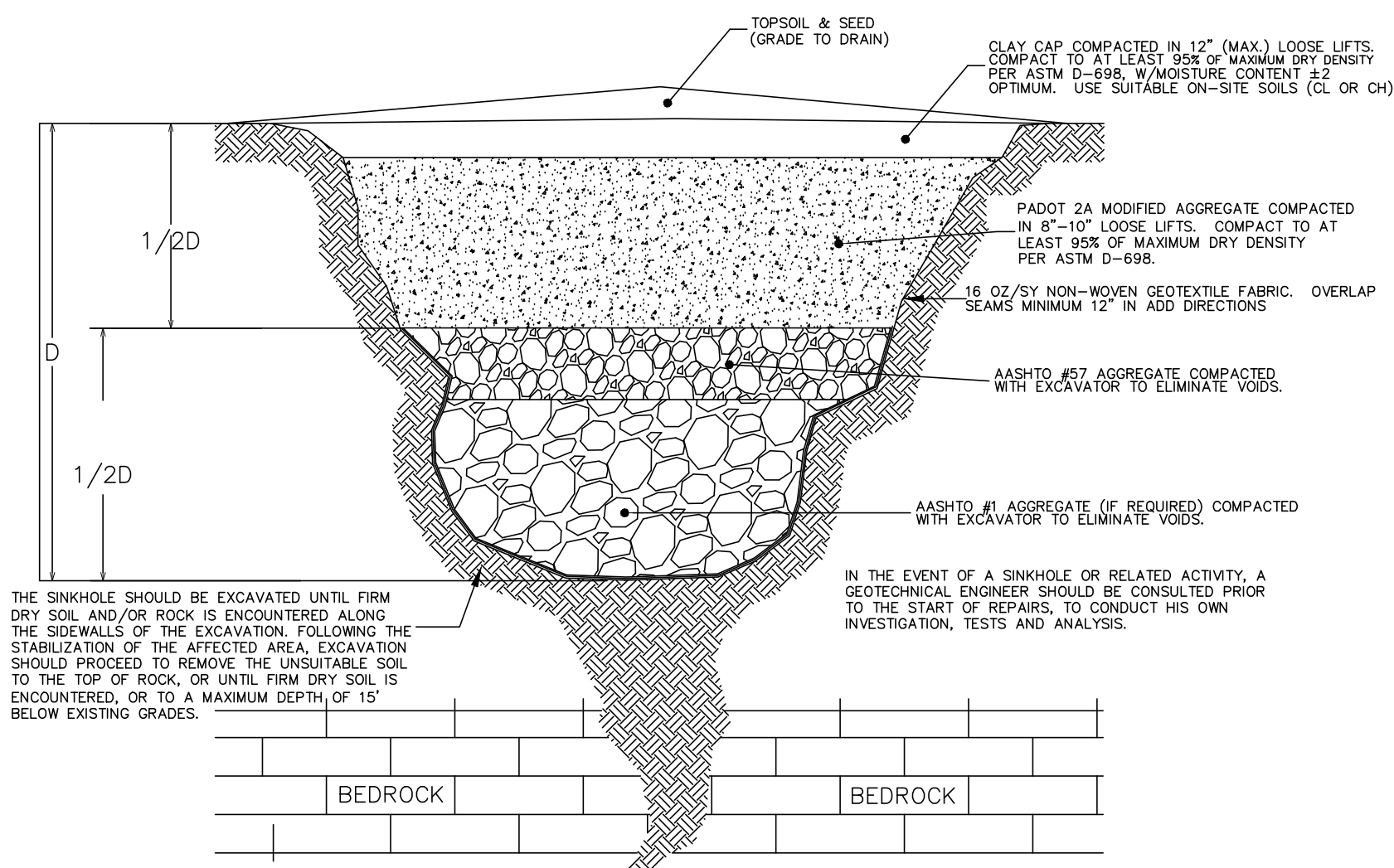
REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-3-23	5-8-23	CDS
PER LCPD LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

**EROSION & SEDIMENTATION POLLUTION CONTROL PLAN**  
PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS  
FOR  
**BRIAR RIDGE COMMONS - APARTMENTS**  
NORTH LEBANON TOWNSHIP  
LEBANON COUNTY, PENNSYLVANIA

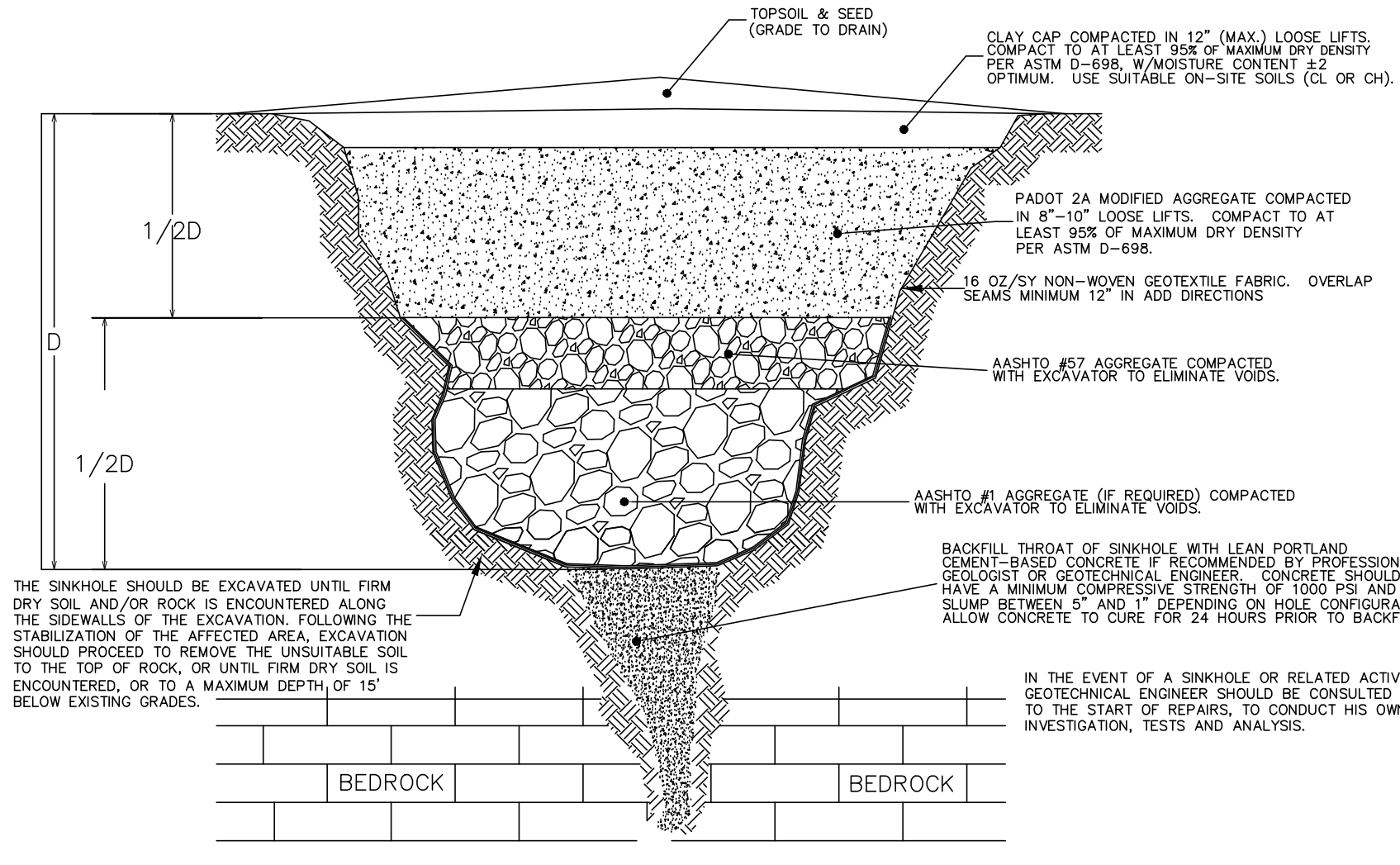


FIELD CREW:	MOD/JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	1"=50'
PROJECT #	135-19-001

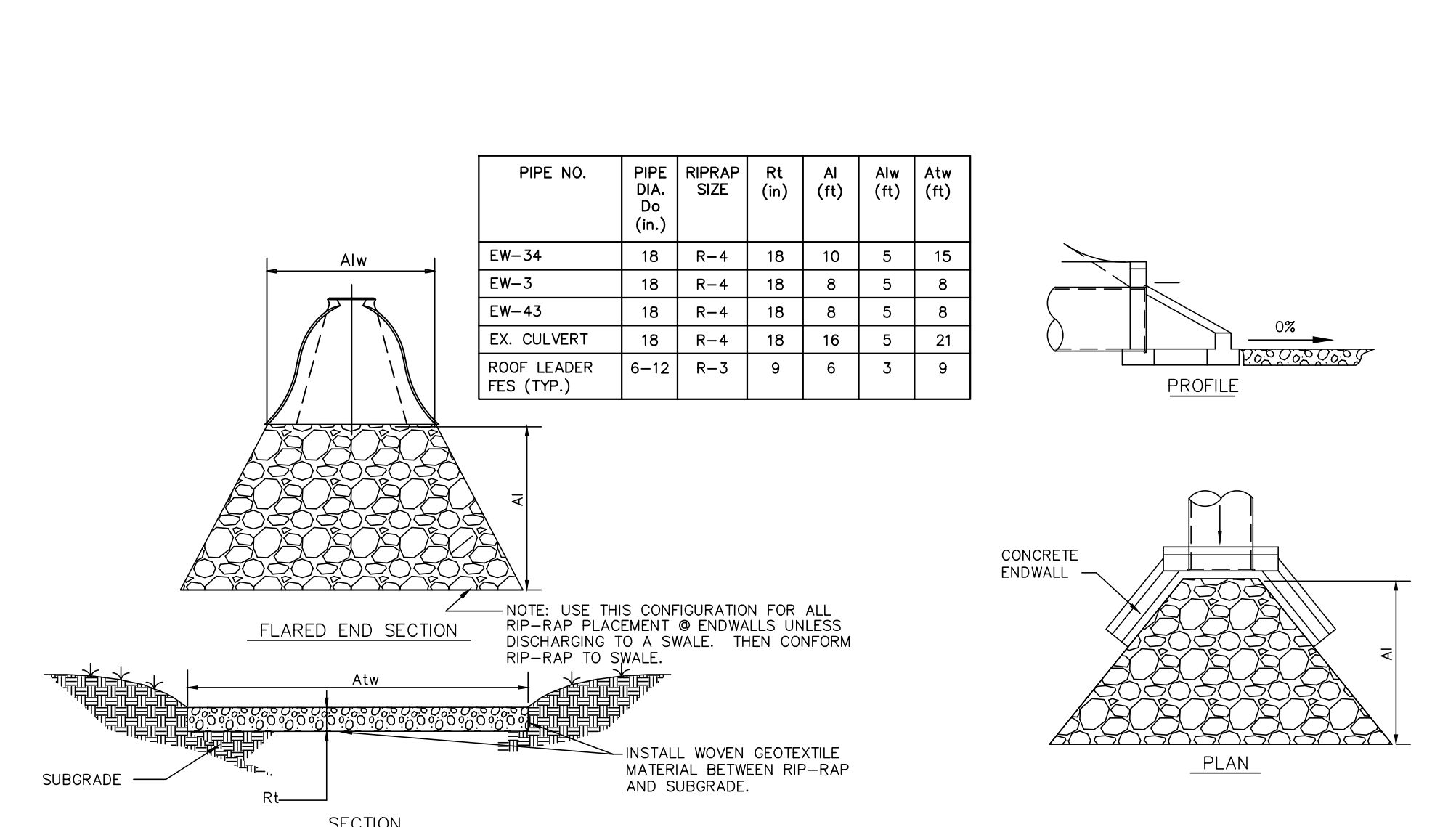




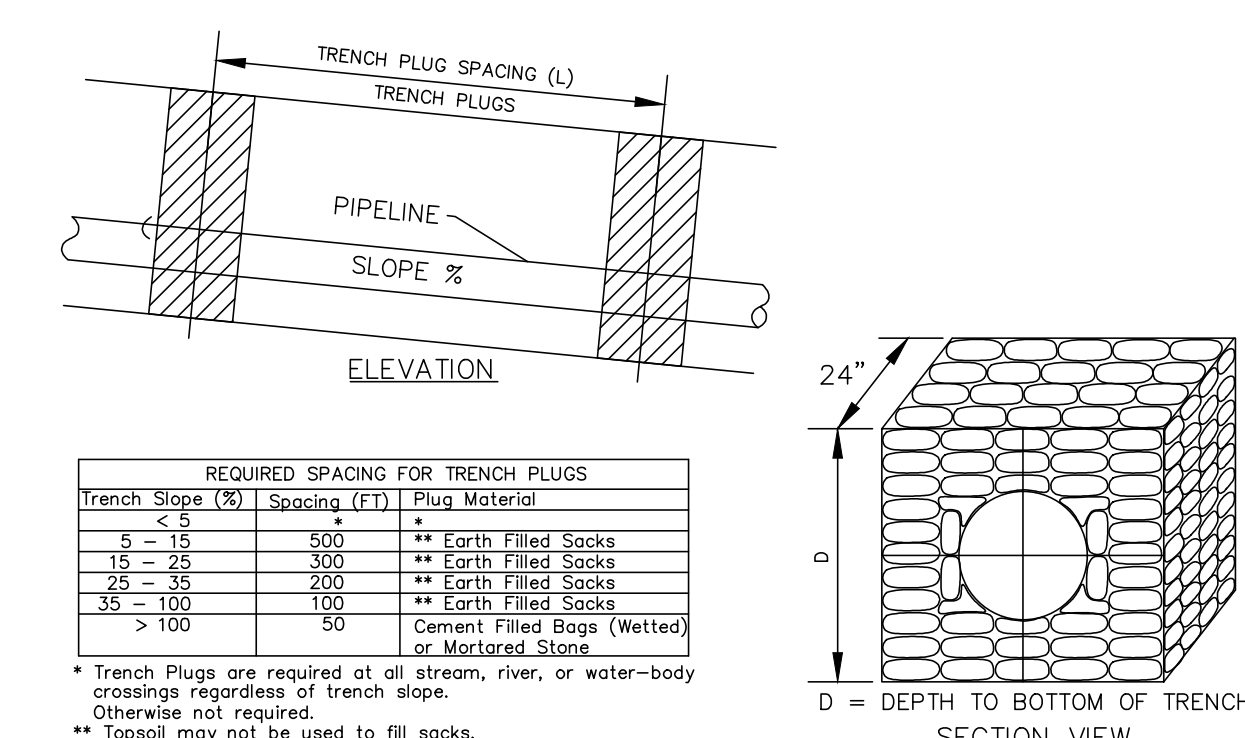
**SINKHOLE REPAIR DETAIL-BEDROCK THROAT NOT ENCOUNTERED**  
NO SCALE



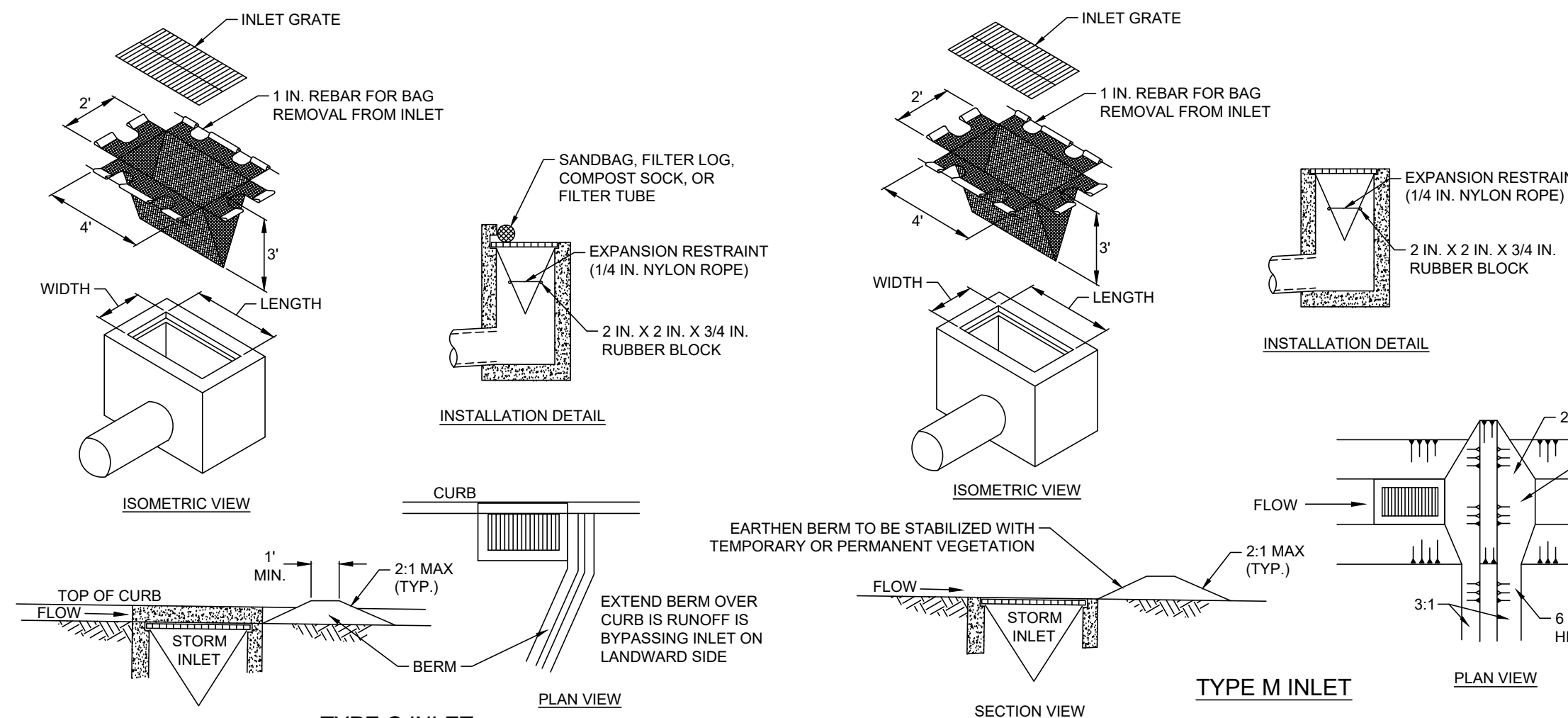
**SINKHOLE REPAIR DETAIL-BEDROCK THROAT ENCOUNTERED**  
NO SCALE



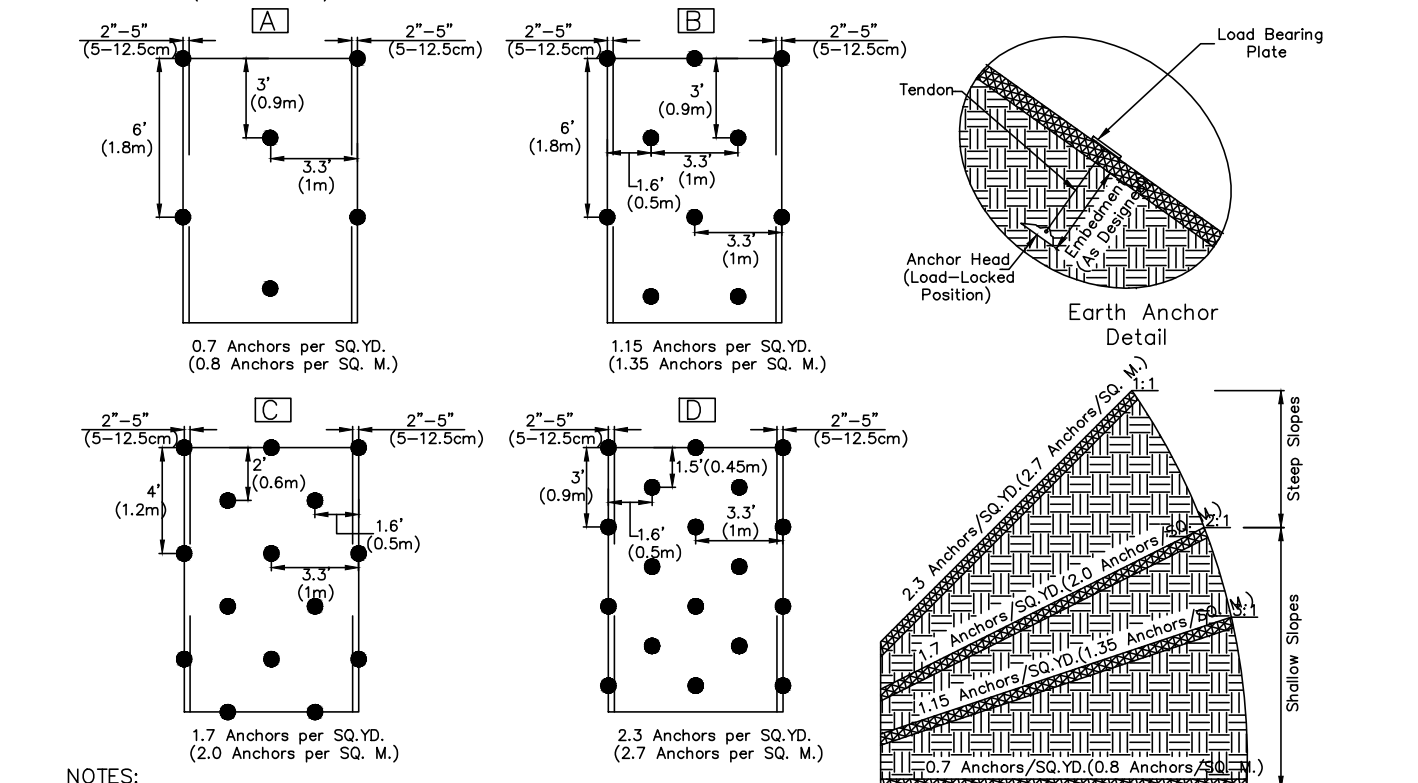
**FLARED END SECTION/ENDWALL RIP RAP DETAIL**  
NO SCALE



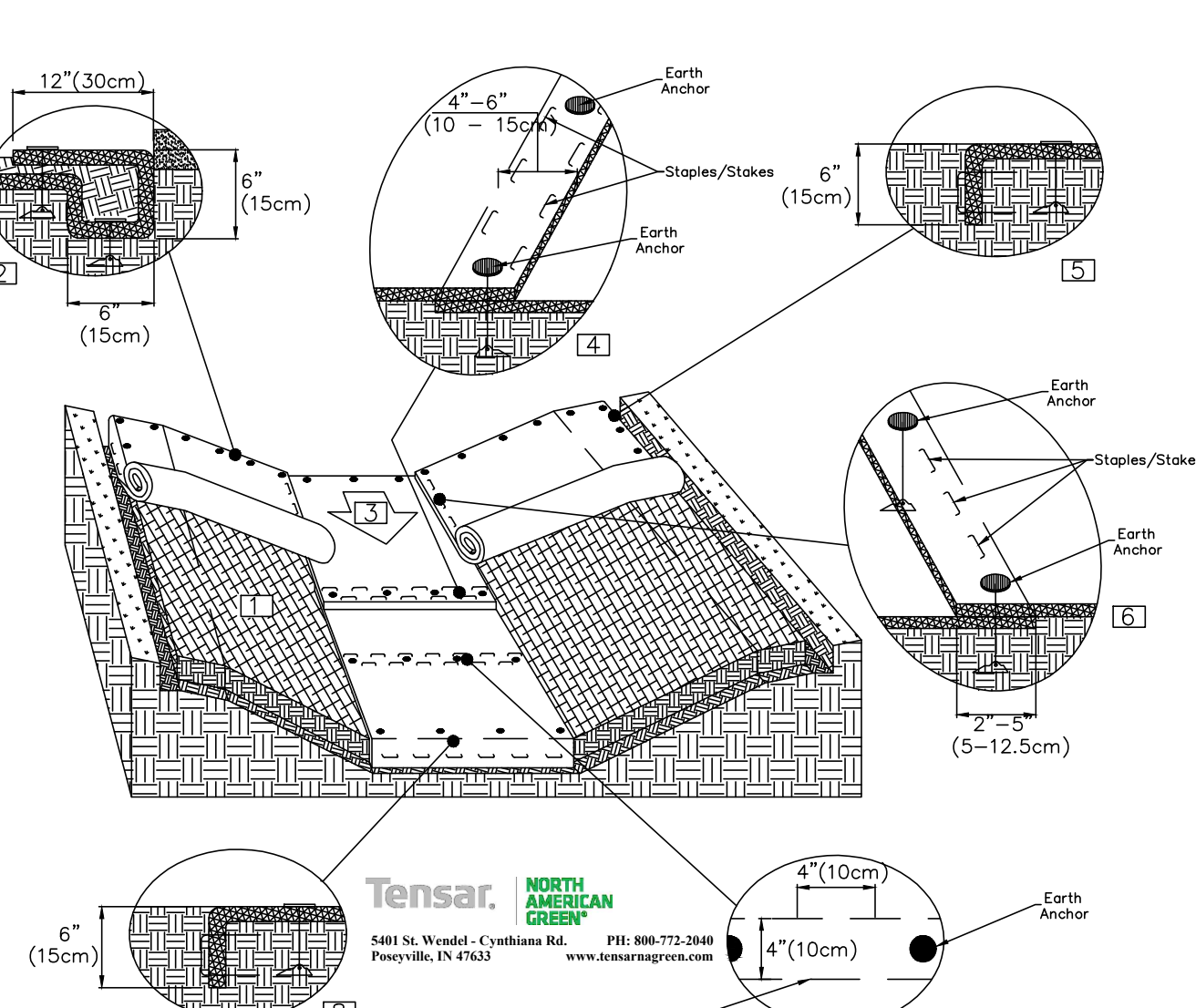
**TYPICAL TRENCH PLUG INSTALLATION**  
NO SCALE



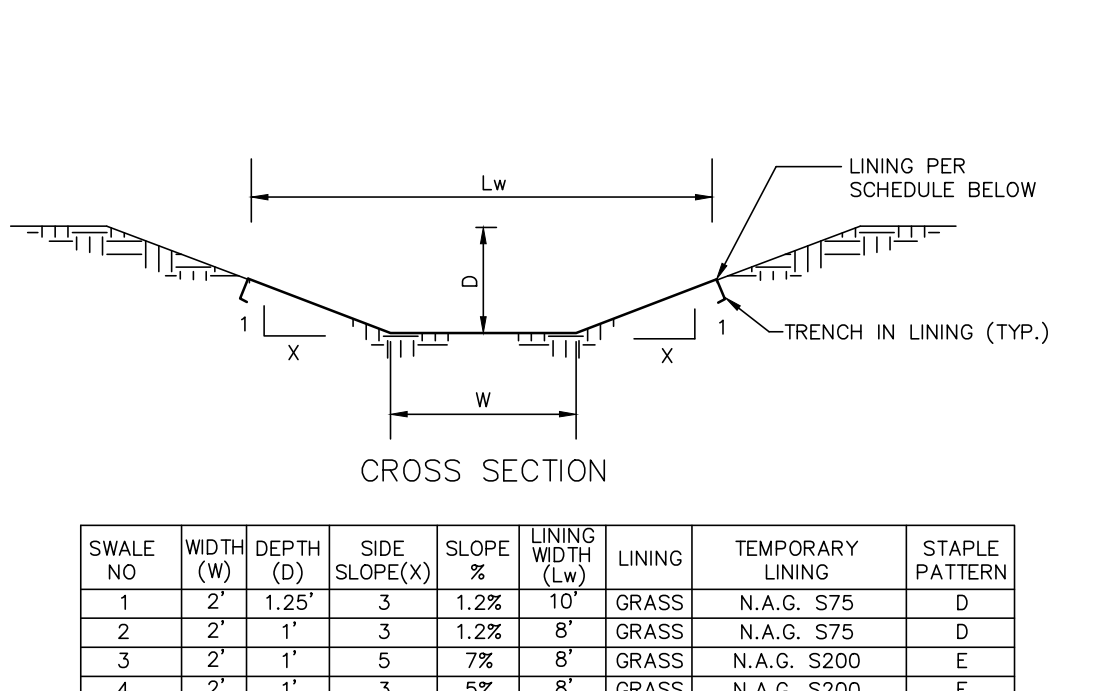
**FILTER BAG INLET PROTECTION DETAIL - TYPE M & C INLETS**  
NO SCALE



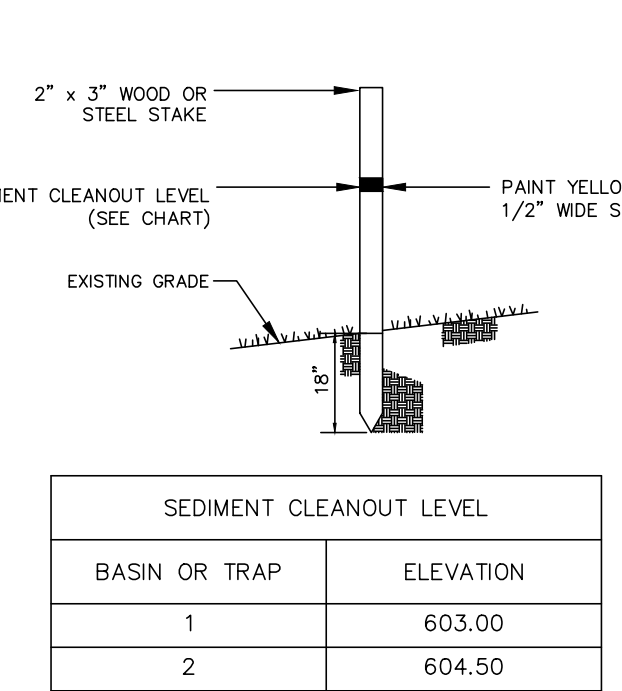
**CHANNEL INSTALLATION EARTH ANCHOR DETAIL**  
NO SCALE



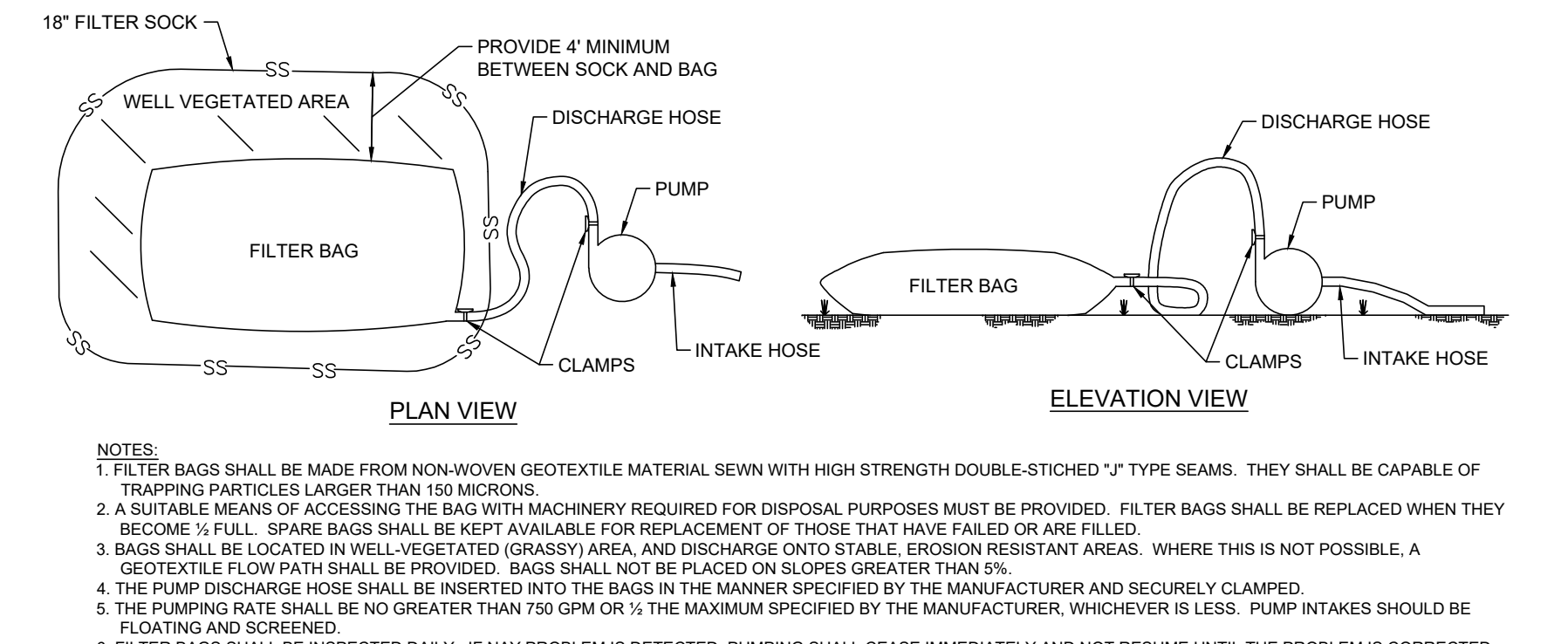
**CHANNEL INSTALLATION EARTH ANCHOR DETAIL**  
NO SCALE



**STORMSWALE SWALE DETAIL**  
NO SCALE



**CLEANOUT STAKE DETAIL**  
NO SCALE



**PUMPED WATER FILTER BAG**  
NO SCALE

OPEN, SUNNY LOCATIONS AND WELL-DRAINED SOILS					
SPECIES	PERCENTAGE	APP. RATE*	FERTILIZER**	SEED DATES	
KENTUCKY BLUEGRASS	100%	2-3		MARCH 15-JUNE 15 & AUGUST 30-OCTOBER 15	
KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	80-90% 10-20%	3-4			
KENTUCKY BLUEGRASS FINE FESCUE PERENNIAL RYEGRASS	40-60% 30-40% 10-20%	3-4	N-P <sub>2</sub> O <sub>5</sub> -K <sub>2</sub> O		
TURF-TYPE TALL FESCUE	100%	6-8			
TURF-TYPE PEREN. RYEGRASS	100%	4-5			

MODERATE TO PARTIAL SHADE					
SPECIES	PERCENTAGE	APP. RATE*	FERTILIZER**	SEED DATES	
FINE FESCUE	40-50%	4		MARCH 15-JUNE 15 & AUGUST 30-OCTOBER 15	
KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	40-50% 10-20%	4			
FINE FESCUE	100%	4-5	N-P <sub>2</sub> O <sub>5</sub> -K <sub>2</sub> O		
TURF-TYPE TALL FESCUE	100%	6-8			

HEAVY SHADE, WELL-DRAINED SOILS					
SPECIES	PERCENTAGE	APP. RATE*	FERTILIZER**	SEED DATES	
FINE FESCUE	100%	4-5	N-P <sub>2</sub> O <sub>5</sub> -K <sub>2</sub> O	MARCH 15-JUNE 15 & AUGUST 30-OCTOBER 15	

HEAVY SHADE, POORLY-DRAINED SOILS					
SPECIES	PERCENTAGE	APP. RATE*	FERTILIZER**	SEED DATES	
ROUGH BLUEGRASS	100%	2-3	N-P <sub>2</sub> O <sub>5</sub> -K <sub>2</sub> O	MARCH 15-JUNE 15 & AUGUST 30-OCTOBER 15	

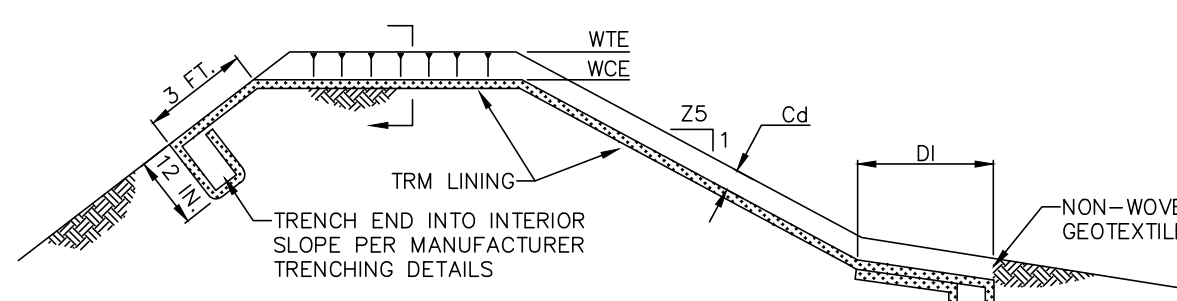
  

MRC BASIN BOTTOM					
MIX	MANUFACTURER	APP. RATE	FERTILIZER	SEED DATES	
RETENTION BASIN FLOOR MIX - LOW MAINTENANCE (ERMM-120)	ERNST CONSERVATION SEEDS, INC. 8884 PINE PIKE MEADVILLE, PA 16335			PER MANUFACTURER'S SPECIFICATIONS & RECOMMENDATIONS	

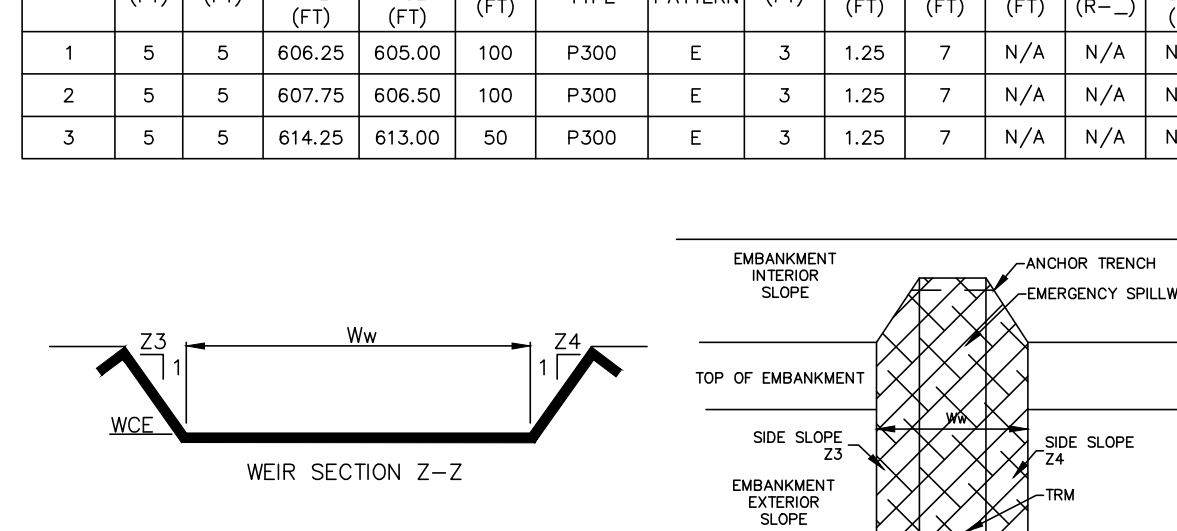
**SEEDING SPECIFICATIONS**  
NOT TO SCALE

STEEP SLOPES					
SPECIES	PERCENTAGE	APP. RATE*	FERTILIZER**	SEED DATES	
BROOKSOT TREFLO BROWN WITCH TALL FESCUE	98% 1-2% 1-2%	10 20 30		MARCH 15-JUNE 15 & AUGUST 30-OCTOBER 15	

**SEEDING SPECIFICATIONS**  
NOT TO SCALE



**BASIN EMERGENCY SPILLWAY DETAIL**  
NO SCALE



**BASIN EMERGENCY SPILLWAY DETAIL**  
NO SCALE

DATE	BY
5-8-23	CDS
5-12-23	CDS
5-12-23	CDS
6-28-23	CDS
8-4-23	CDS

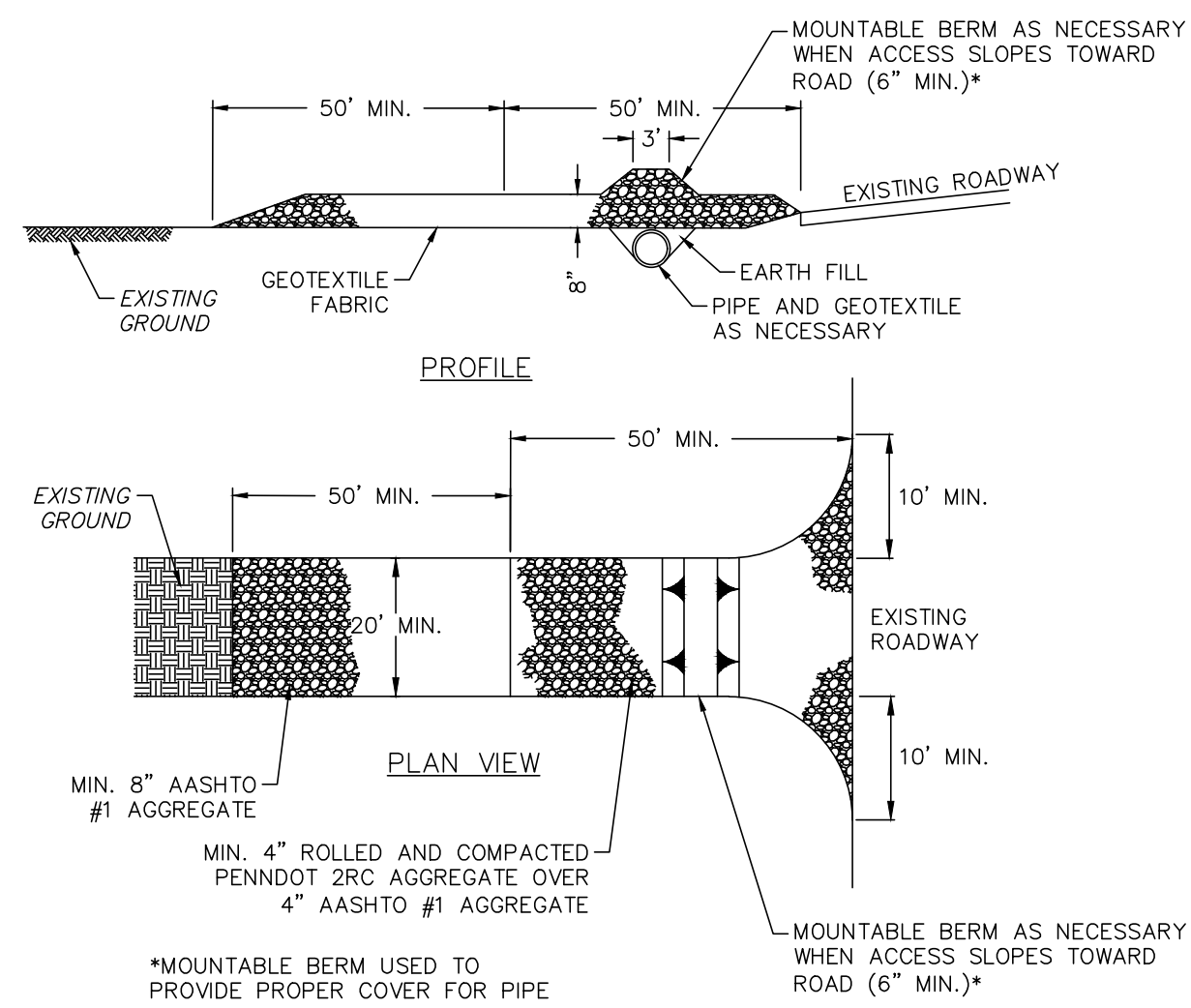
REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-33-23	4-33-23	CDS
PER LCPD LETTER DATED 4-4-23	4-4-23	CDS
PER COLA COMMENTS DATED 3-31-23	3-31-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-6-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	7-13-23	CDS

**EROSION & SEDIMENTATION POLLUTION CONTROL DETAILS**  
**PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS**  
for  
**BRIAR RIDGE COMMONS - APARTMENTS**  
located in  
NORTH LEBANON TOWNSHIP  
LEBANON County, Pennsylvania

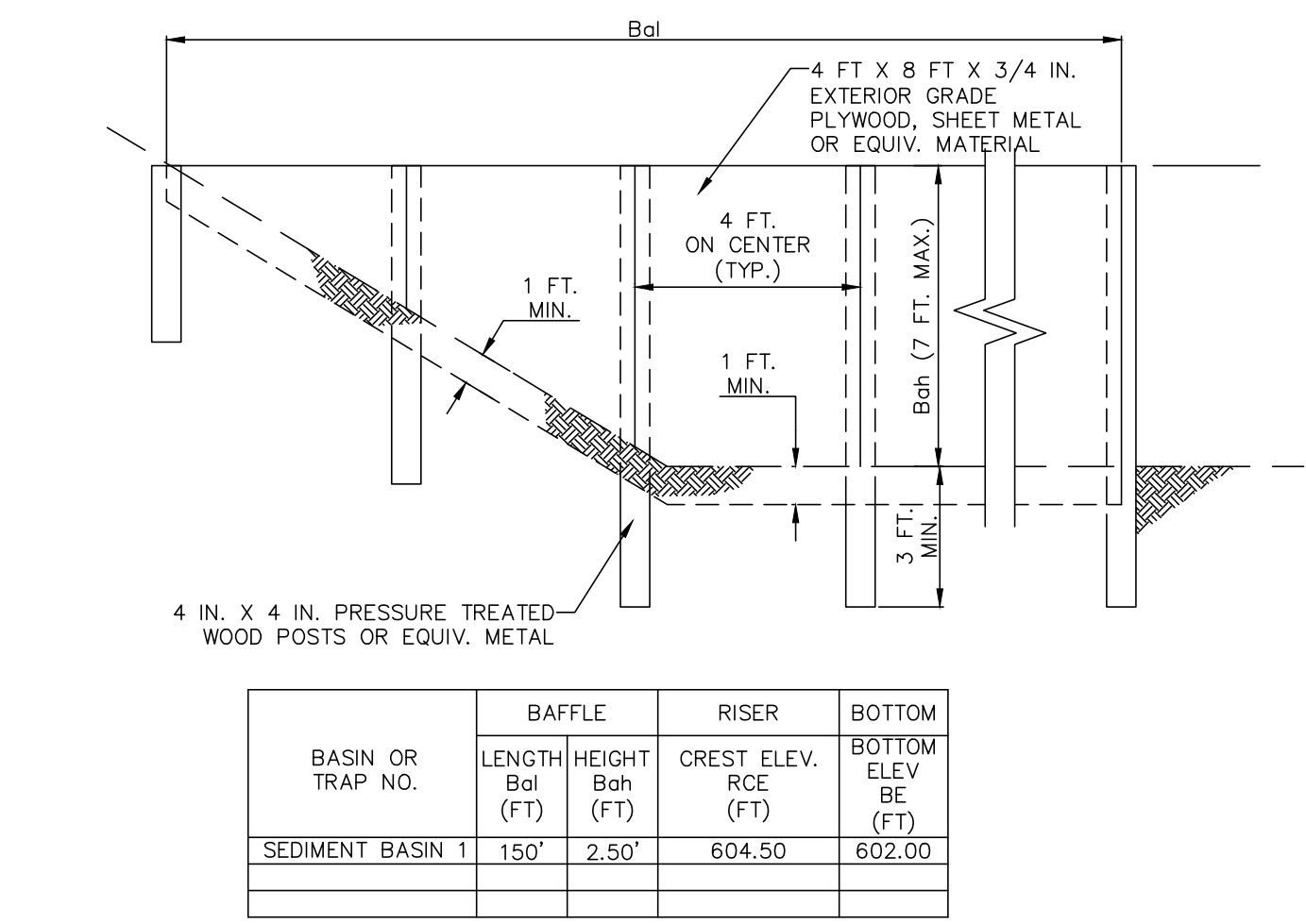
**is**  
Stredbeck Engineering & Surveying Inc.  
279 Lebanon, Pennsylvania 17042  
Phone: (717) 272-7110  
Fax: (717) 272-7348

FIELD CREW: MOD,JEC  
BASE MAP: JEC  
DRAWN: CDS  
DESIGN: CDS  
CHECKED: SAS  
DATE: 3/1/23

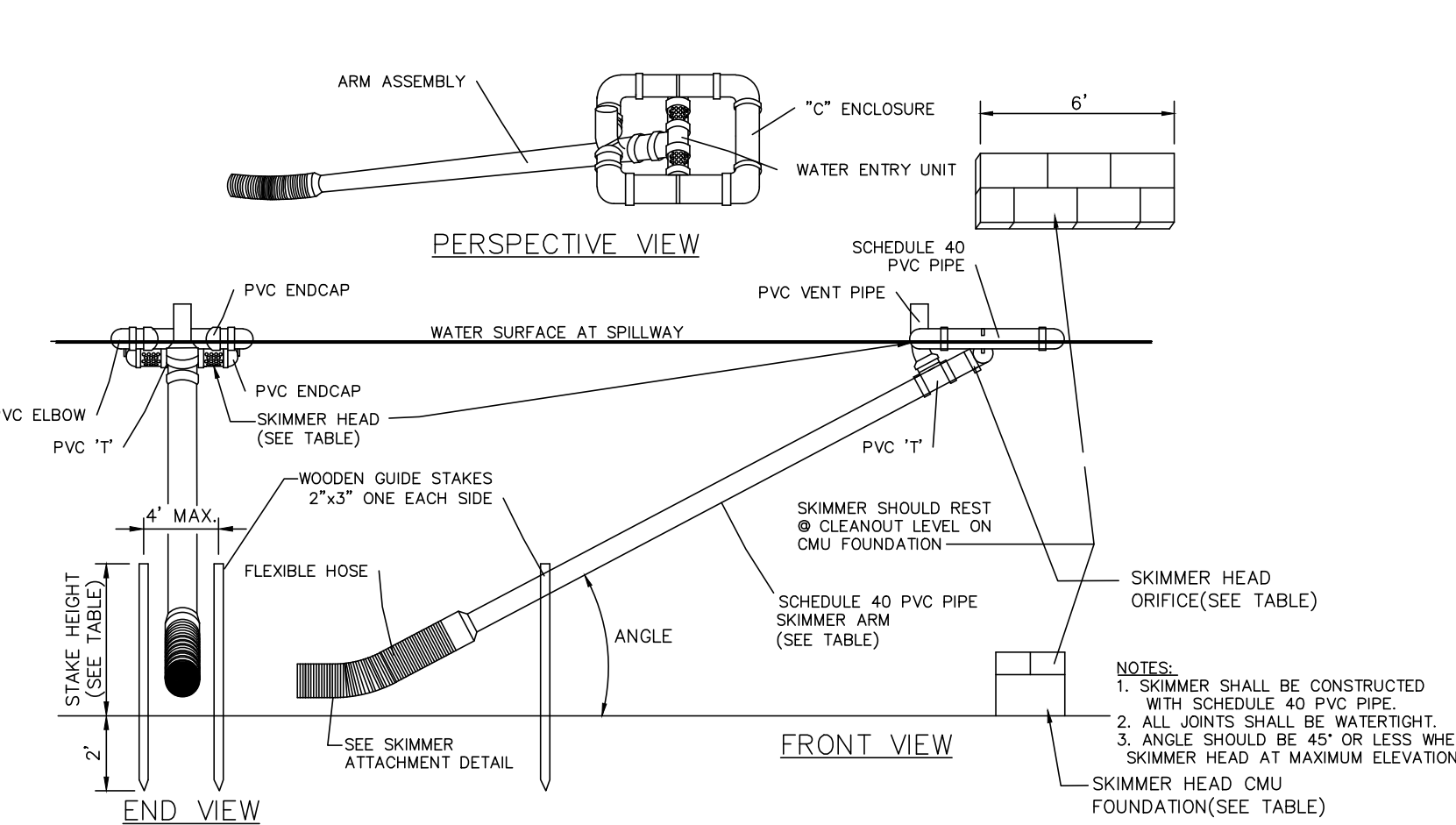
SCALE: 1"=50'  
PROJECT #135-19-001  
**27**  
27 OF 28 SHEETS



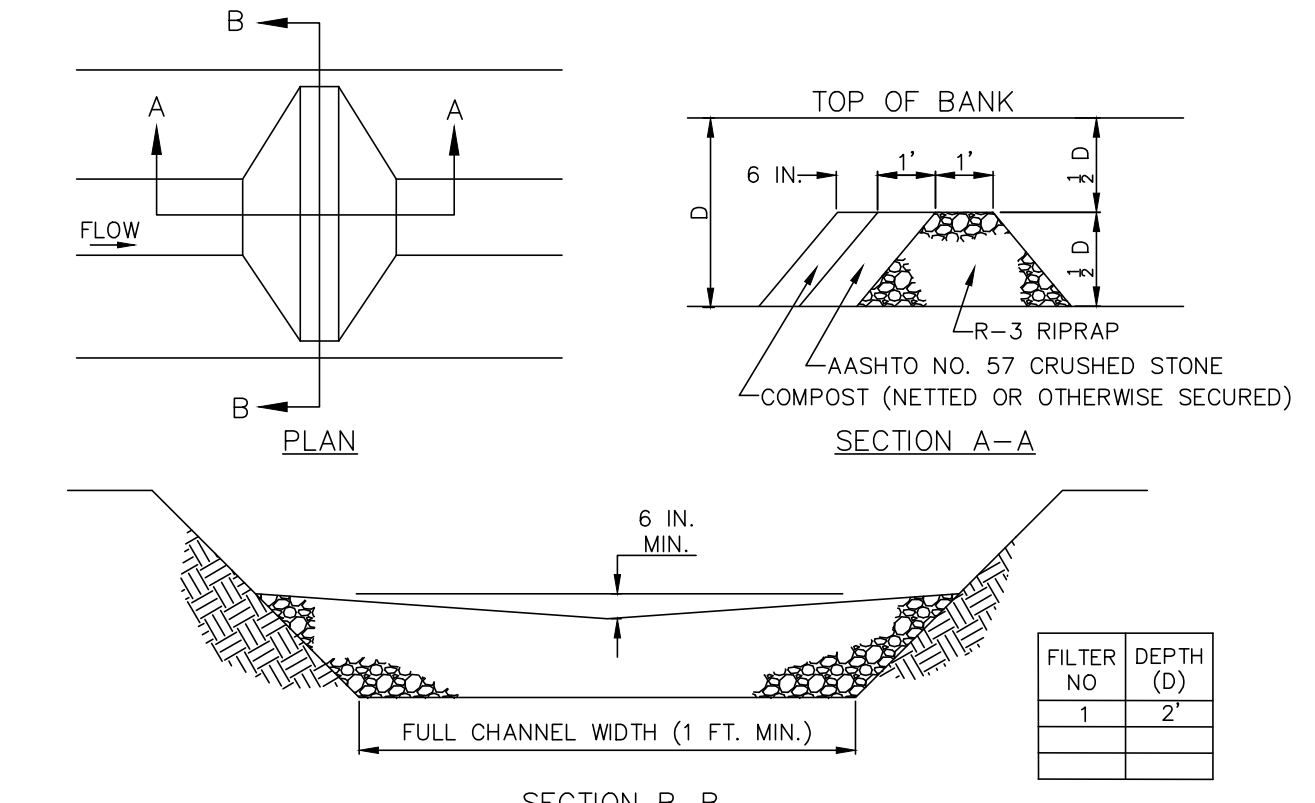
- ALTERNATIVE ROCK CONSTRUCTION ENTRANCE**  
NO SCALE
- NOTES:  
 1. REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.  
 2. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.  
 3. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY THE MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.  
 4. MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK, WASHING ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.



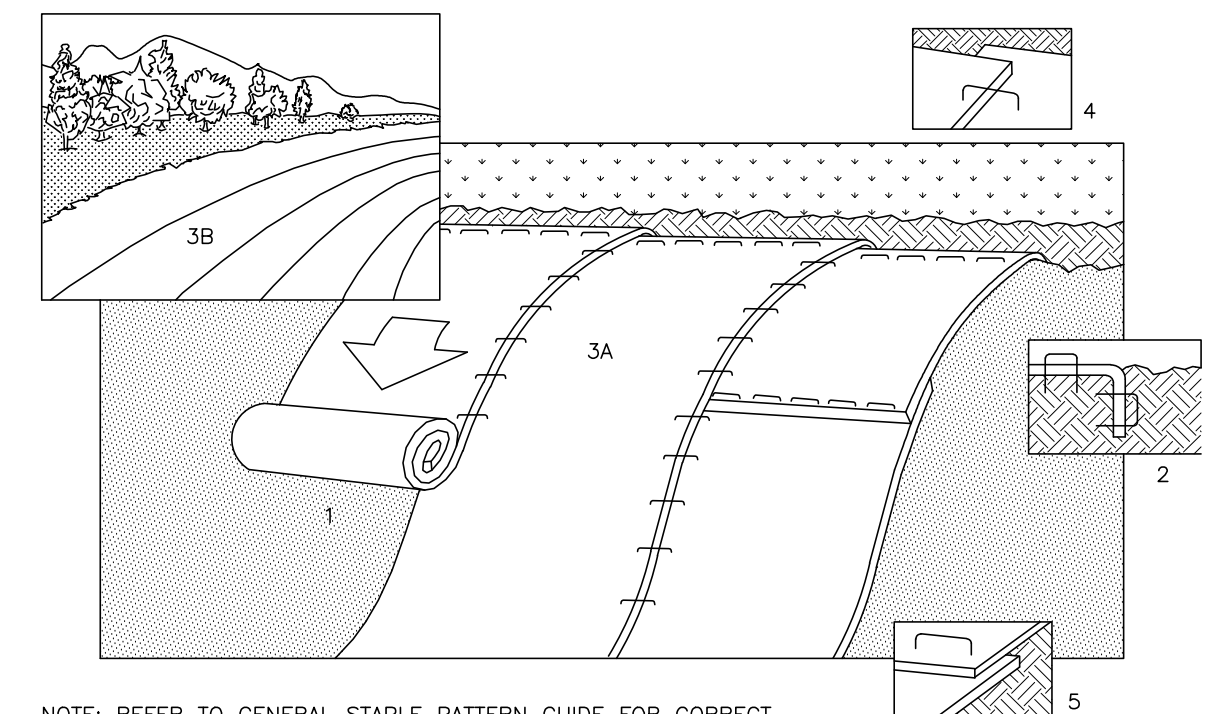
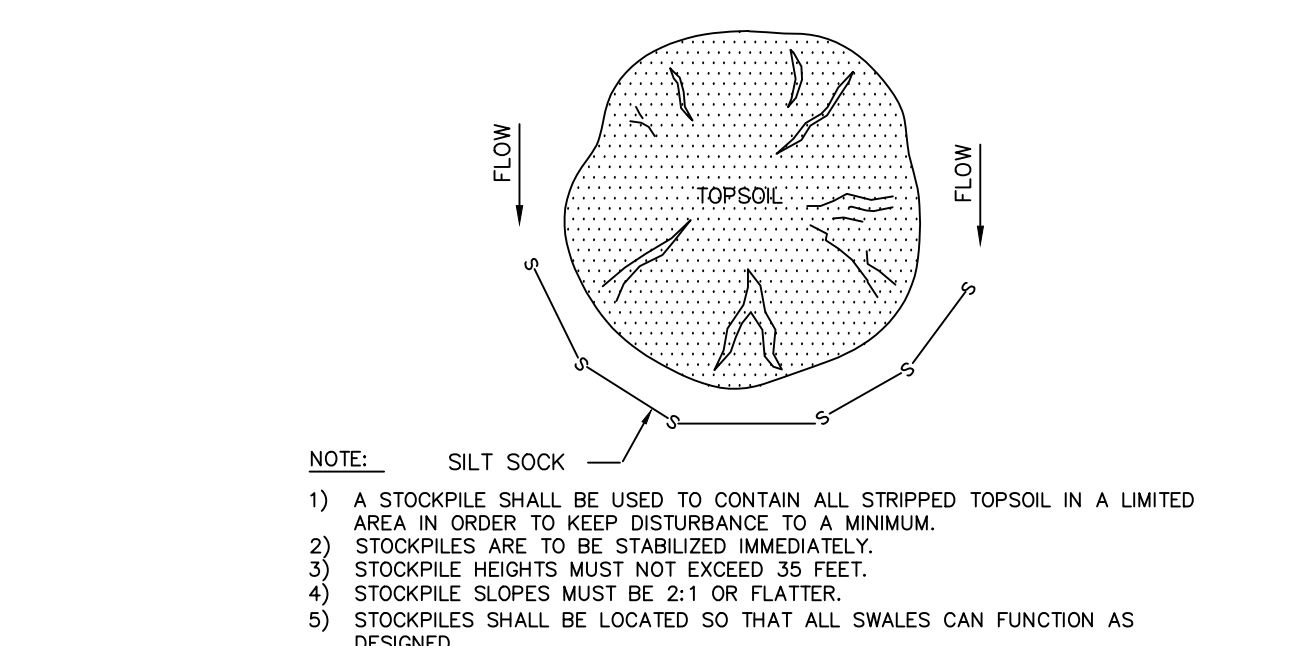
- SEDIMENT BASIN BAFFLE DETAIL**  
NO SCALE
- NOTES:  
 SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION.  
 AN ACCEPTABLE ALTERNATIVE IS TO INSTALL THE SAME HEIGHT WITH SUPER SILT FENCE OR COMPOST FILTER SOCK AT THE BAFFLE LOCATION.  
 IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.  
 BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.  
 SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.  
 DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION.  
 BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.



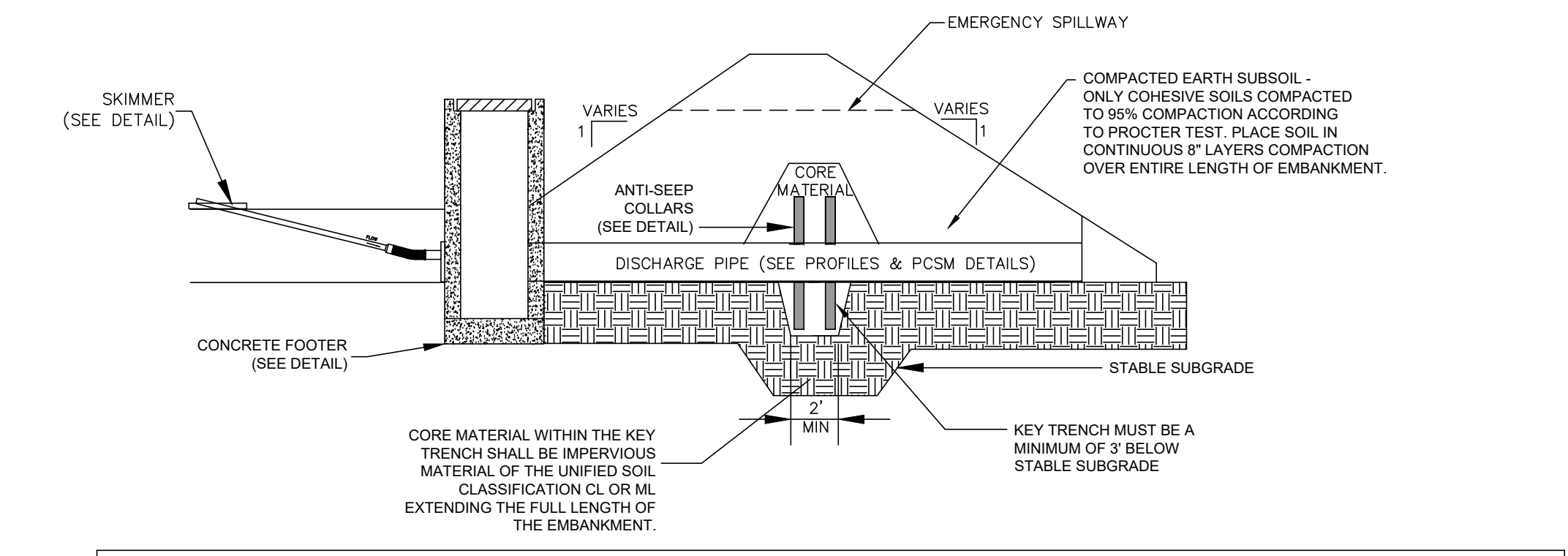
- E&S SKIMMER OUTLET DETAIL**  
NO SCALE
- NOTES:  
 1. SKIMMER SHALL BE CONSTRUCTED WITH SCHEDULE 40 PVC PIPE.  
 2. ALL JOINTS SHALL BE WATERTIGHT.  
 3. ANGLE SHOULD BE 45° OR LESS WHEN SKIMMER HEAD AT MAXIMUM ELEVATION.  
 SKIMMER HEAD CMU FOUNDATION (SEE TABLE)
- SKIMMER SHALL BE MANUFACTURED BY THE FOLLOWING:  
 1. J.W. FARLOTH & SON, INC.  
 PO BOX 789  
 HILLSBOROUGH, NORTH CAROLINA  
 PHONE: 919-732-1244  
 FAX: 919-732-1266  
 2. OR APPROVED EQUAL



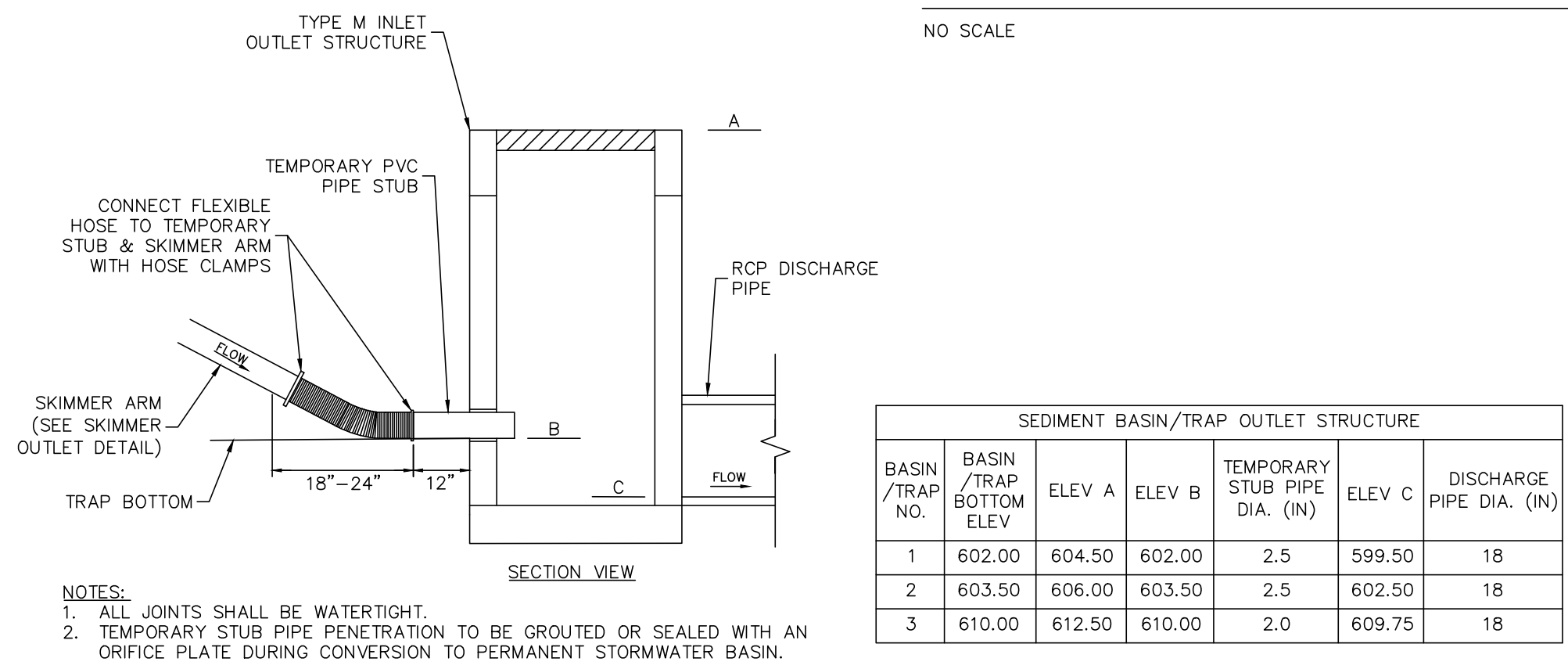
- ROCK FILTER**  
NO SCALE
- NOTES:  
 SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS. IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.



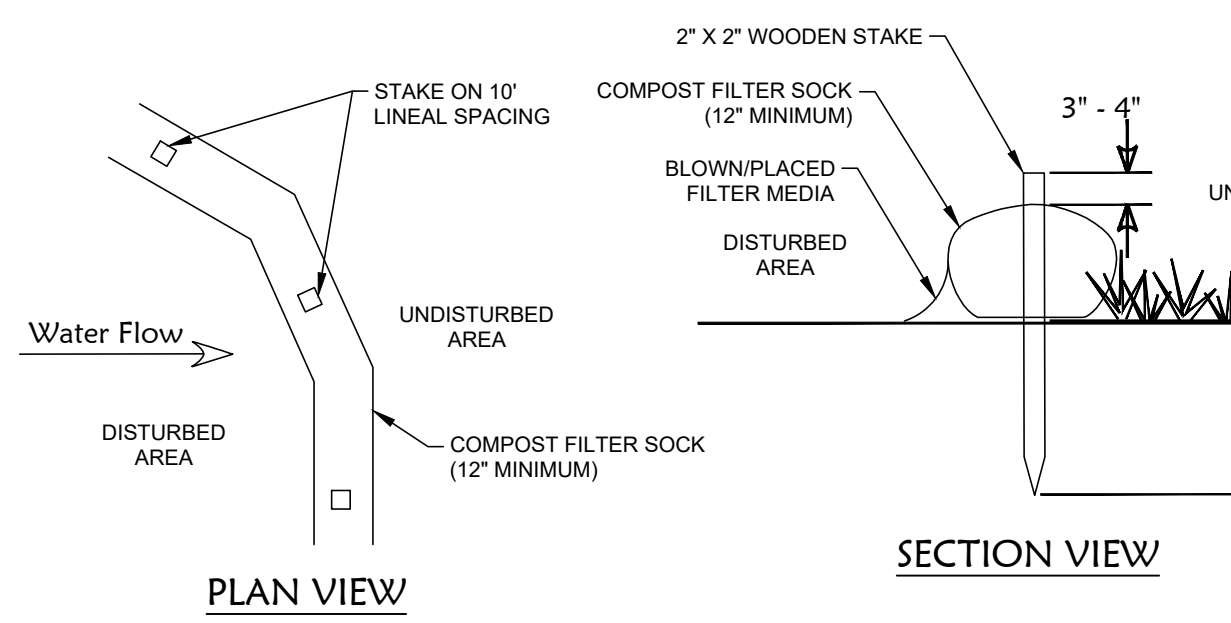
- SLOPE MATTING INSTALLATION DETAIL**  
NO SCALE
- NOTE: REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.



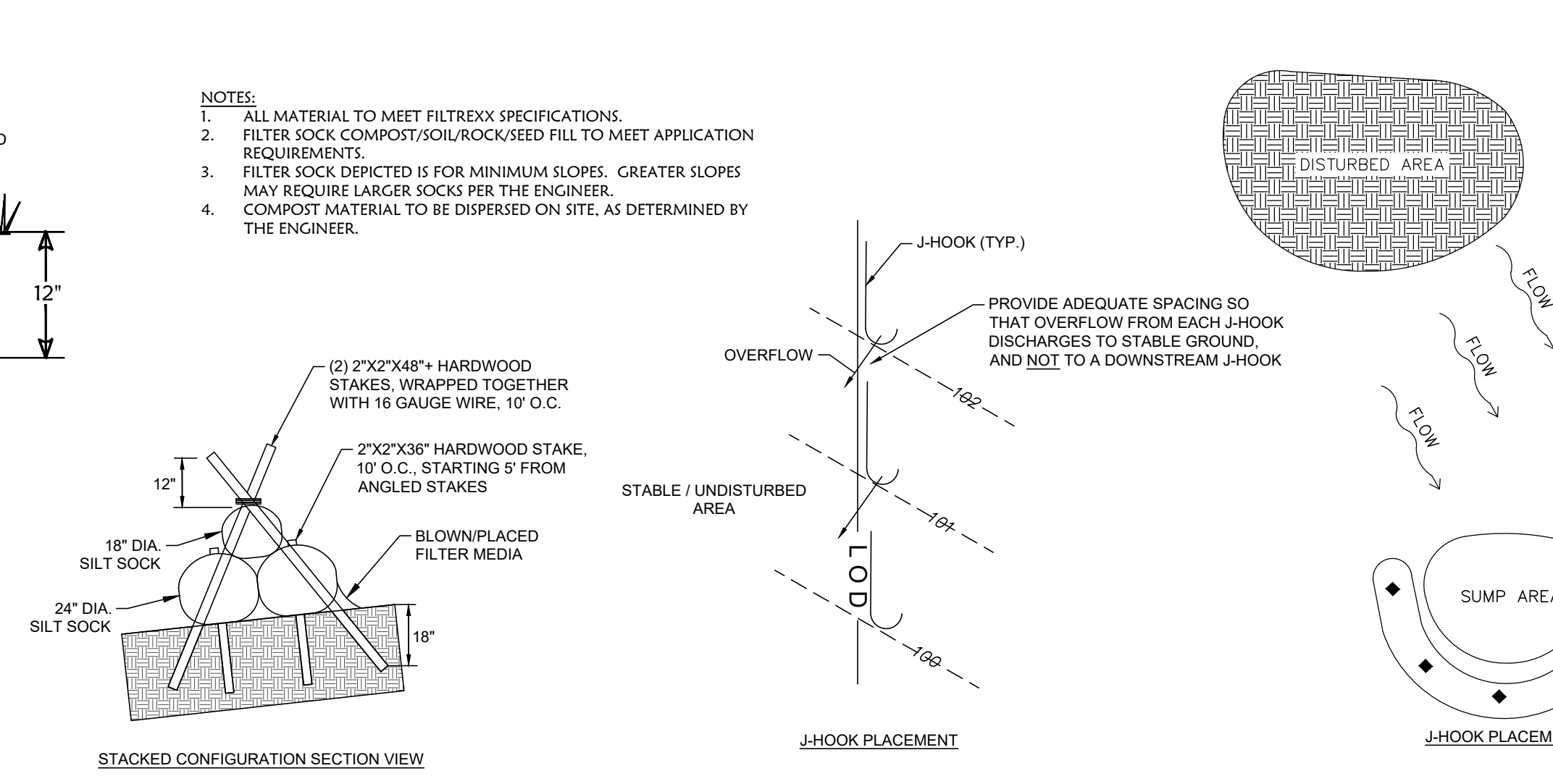
- SEDIMENT BASIN/TRAP WITH SKIMMER DETAIL**  
NO SCALE
- NOTES:  
 1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.  
 2. FILTER SOCK COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.  
 3. FILTER SOCK DEPICTED IS FOR MINIMUM SLOPES. GREATER SLOPES MAY REQUIRE LARGER SOCKS PER THE ENGINEER.  
 4. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.



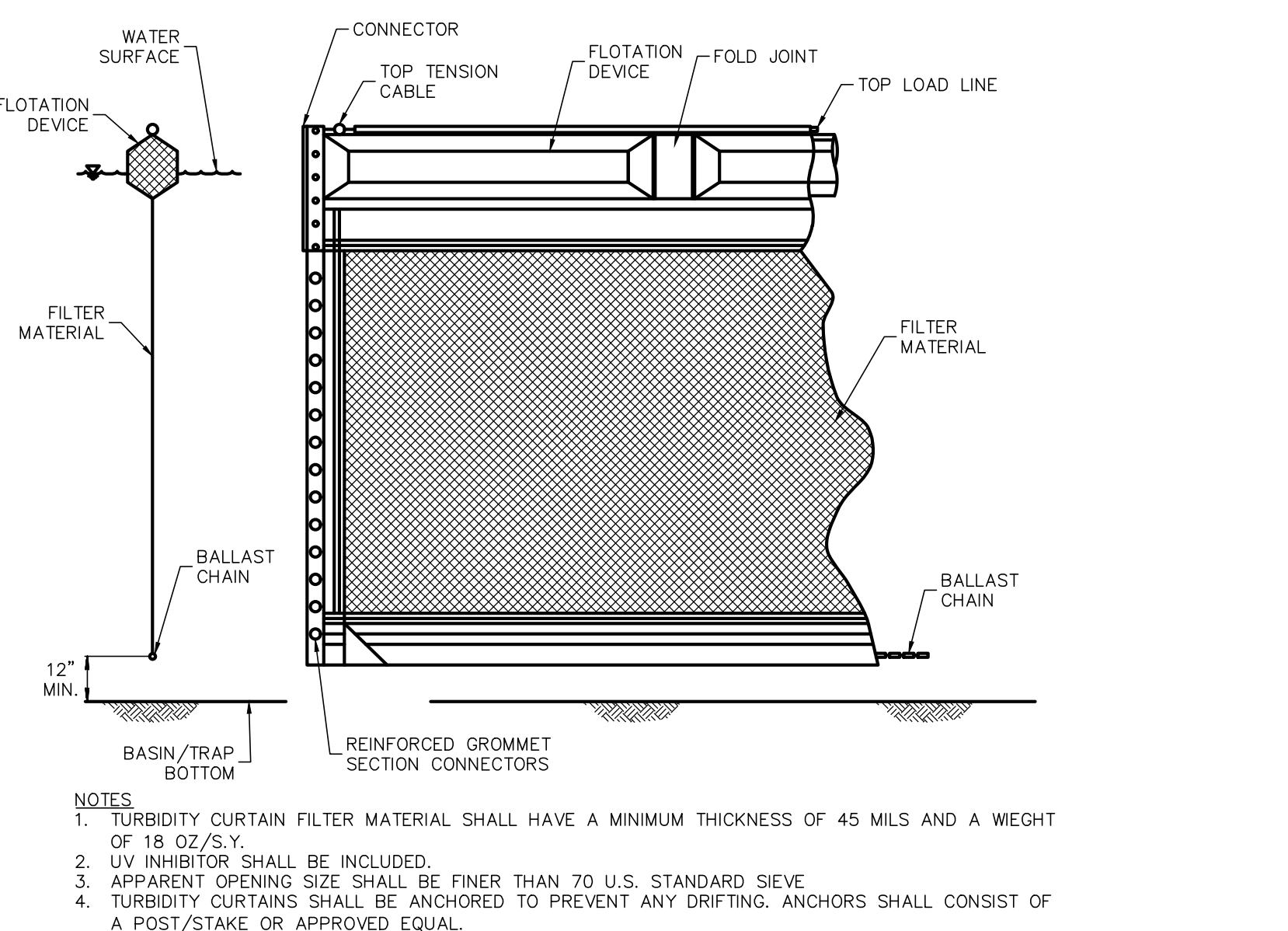
- SKIMMER ATTACHMENT - SEDIMENT BASIN/TRAP OUTLET STRUCTURE DETAIL**  
NO SCALE
- NOTES:  
 1. ALL JOINTS SHALL BE WATERTIGHT.  
 2. TEMPORARY STUB PIPE PENETRATION TO BE GROUTED OR SEALED WITH AN ORIFICE PLATE DURING CONVERSION TO PERMANENT STORMWATER BASIN.



- COMPOST FILTER SOCK DETAIL**  
NO SCALE
- COMPOST FILTER SOCK MAINTENANCE NOTES:  
 1. THE CONTRACTOR SHALL MAINTAIN THE FILTER SOCK IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE INSPECTED WEEKLY.  
 2. IF THE FILTER SOCK HAS BEEN DAMAGED, IT SHALL BE REPAIRED, OR REPLACED IF BEYOND REPAIR.  
 3. THE CONTRACTOR SHALL REMOVE SEDIMENT AT THE BASE OF THE UPSLOPE SIDE OF THE FILTER SOCK WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE FILTER SOCK OR AS DIRECTED BY THE LEBANON COUNTY CONSERVATION DISTRICT. ALTERNATIVELY, A NEW FILTER SOCK CAN BE PLACED ON TOP OF AND SLIGHTLY BEHIND THE ORIGINAL ONE CREATING MORE SEDIMENT STORAGE CAPACITY WITHOUT SOIL DISTURBANCE.  
 4. FILTER SOCK SHALL BE MAINTAINED UNTIL DISTURBED AREA ABOVE THE DEVICE HAS BEEN PERMANENTLY STABILIZED AND CONSTRUCTION ACTIVITY HAS CEASED.  
 5. THE FILTERMEDIA WILL BE DISPERSED ON SITE ONCE DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED. CONSTRUCTION ACTIVITY HAS CEASED, OR AS DETERMINED BY THE LEBANON COUNTY CONSERVATION DISTRICT.  
 6. FOR LONG-TERM SEDIMENT AND POLLUTION CONTROL APPLICATION, FILTER SOCK CAN BE SEEDED AT THE TIME OF INSTALLATION TO CREATE A VEGETATIVE FILTERING SYSTEM FOR PROLONGED AND INCREASED FILTRATION OF SEDIMENT AND SOLUBLE POLLUTANTS (CONTAINED VEGETATIVE FILTER STRIP). THE APPROPRIATE SEED MIX SHALL BE DETERMINED BY THE DESIGN PROFESSIONAL.



- J-HOOK PLACEMENT**
- NOTE: PROVIDE ADEQUATE SPACING SO THAT OVERFLOW FROM EACH J-HOOK DISCHARGES TO STABLE GROUND, AND NOT TO A DOWNSTREAM J-HOOK

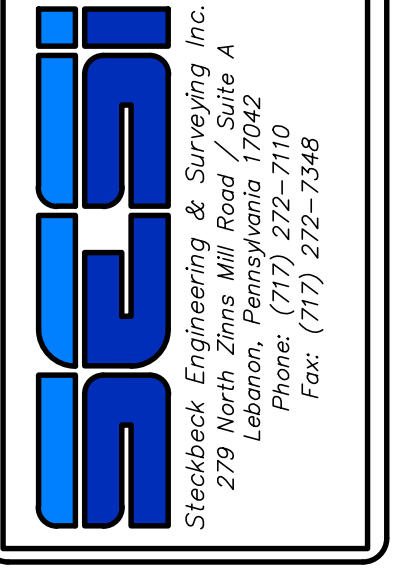


- TURBIDITY CURTAIN DETAIL**  
NO SCALE



REVISION	DATE	BY
PER ARRO COMMENT LETTER DATED 4-3-23	5-8-23	CDS
PER LPOD LETTER DATED 4-4-23	5-12-23	CDS
PER COLA COMMENTS DATED 3-31-23	5-12-23	CDS
PER ARRO COMMENT LETTER DATED 6-6-23	6-28-23	CDS
PER ARRO COMMENT LETTER DATED 7-13-23	8-4-23	CDS

**EROSION & SEDIMENTATION POLLUTION CONTROL DETAILS**  
 For  
**PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLANS**  
**BRIAR RIDGE COMMONS - APARTMENTS**  
 located in  
 NORTH LEBANON TOWNSHIP  
 LEBANON County, Pennsylvania



FIELD CREW:	MOD, JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/1/23
SCALE:	1"=50'
PROJECT #	135-19-001