

# FAIRFIELD I-77 DEVELOPMENT SITE, E&SC PLAN - INITIAL PHASE

## LUCK STONE CORPORATION

FAIRFIELD COUNTY, SOUTH CAROLINA

MARCH 23, 2021

### SITE DATA

PARCEL ID(S): 166-00-00-018-000,  
166-00-00-028-000,  
166-00-00-030-000

SITE ADDRESS: SC HIGHWAY 34  
RIDGEWAY, SOUTH CAROLINA

SITE ACREAGE: 416 AC.

EXISTING ZONING: R2

PROPOSED USE: AGGREGATE MINE OPERATIONS

LATITUDE: 34°18'52.92"N (34.3147°)

LONGITUDE: -81°11'10.92"W (-81.0197°)

RIVER BASIN: LAKE WATEREE-CATAWBA RIVER

RECEIVING WATERBODY: DUTCHMANS CREEK

OWNER: LUCK STONE CORPORATION

ADDRESS: 515 STONE MILL DRIVE (PO BOX 29682)  
RICHMOND, VIRGINIA 23242  
(804) 784-6300

PHONE NO.: (804) 784-6300

CONTACT NAME: BRUCE SMITH

CONTACT E-MAIL ADDRESS: brucesmith@luckcompanies.com

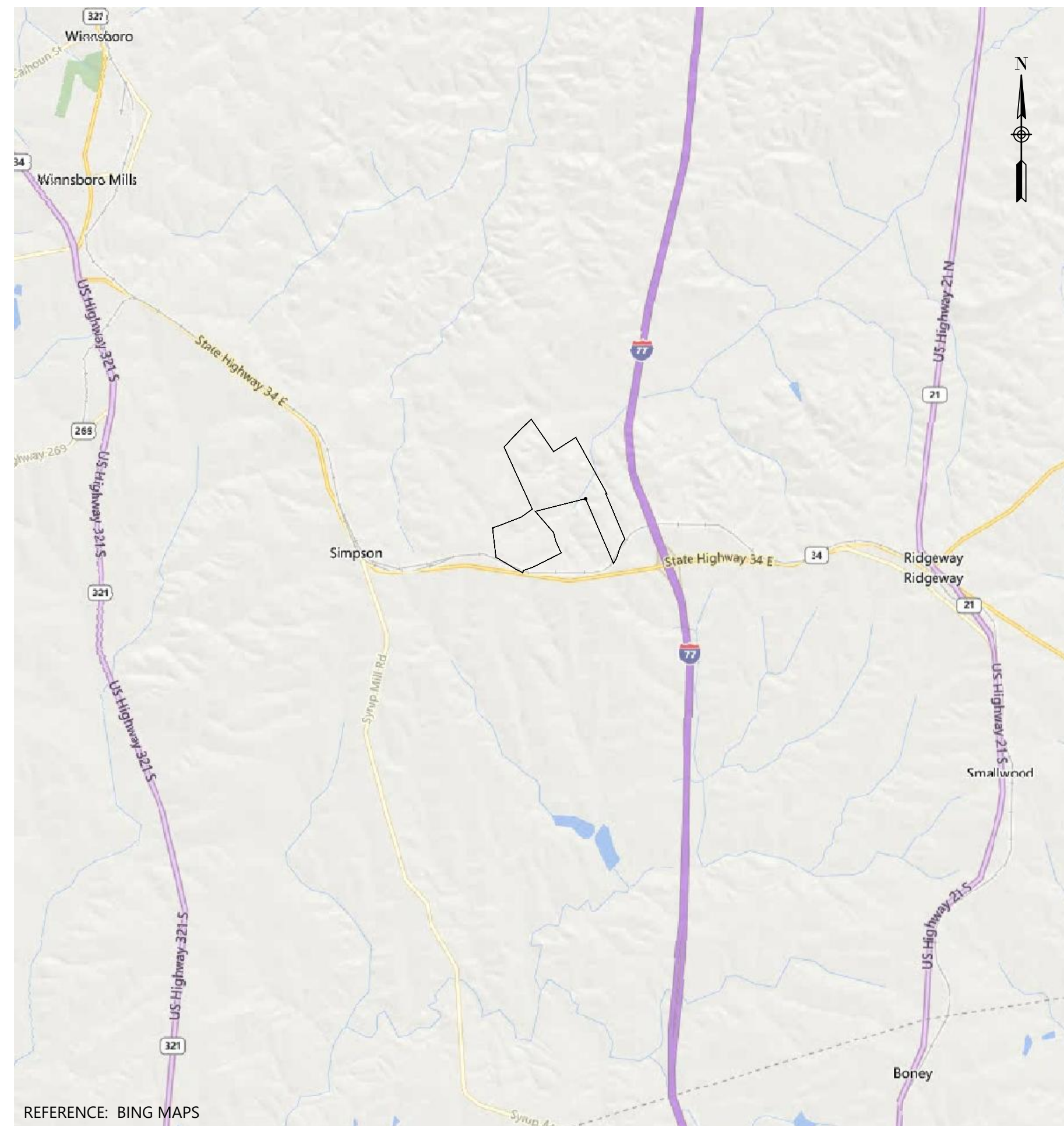
PROJECT REPRESENTATIVE: S&ME INC.

ADDRESS: 2016 ARSLEY TOWN BLVD. SUITE 2-A  
CHARLOTTE, NC 28273  
(704)523-4726

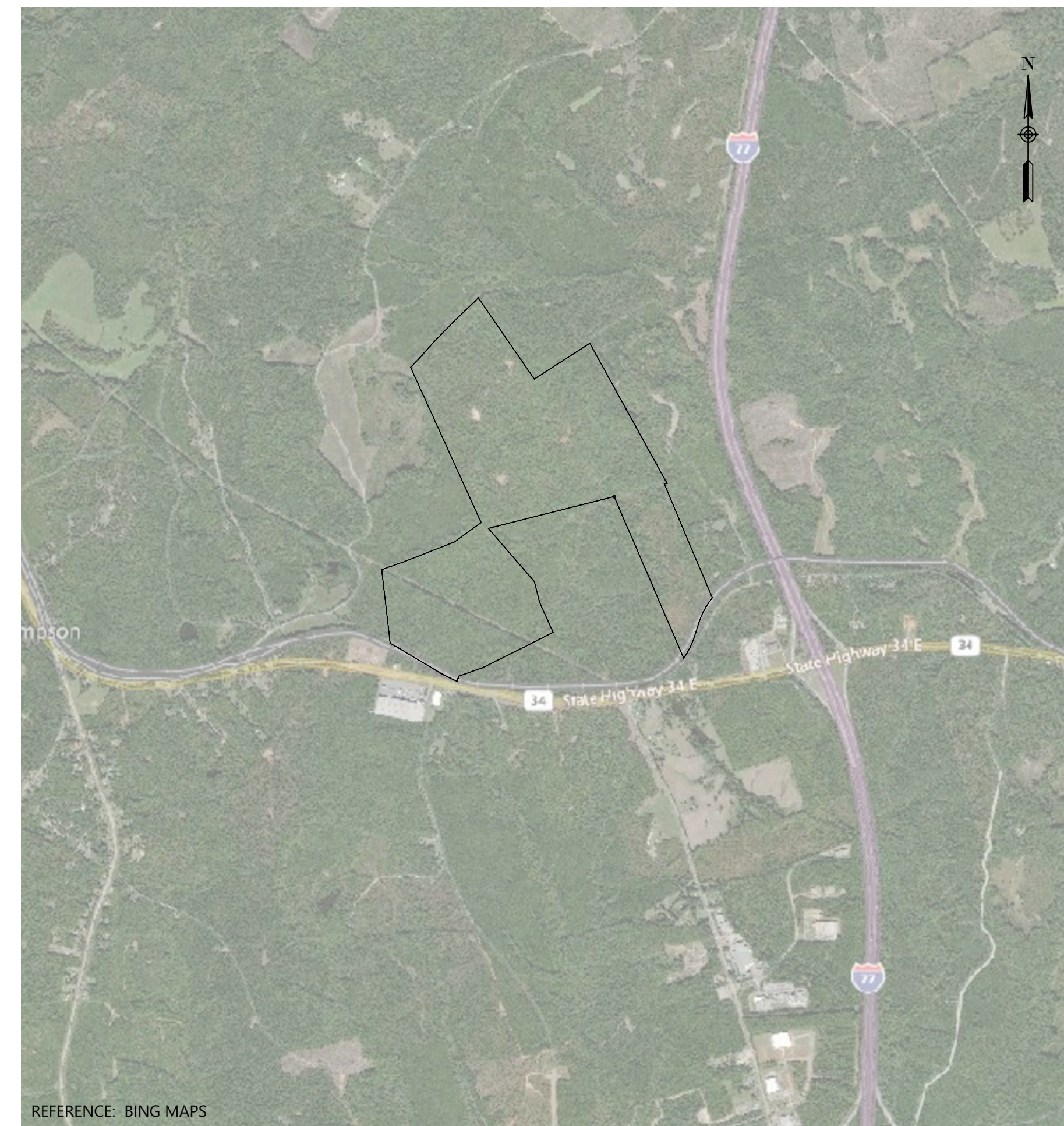
PHONE NO.: (704)523-4726

CONTACT NAME: CHRISTOPHER J.L. STAHL

CONTACT E-MAIL ADDRESS: cstahl@smeinc.com



VICINITY MAP  
SCALE: 1" = 5,000'



SITE LOCATION  
SCALE: 1" = 2,000'

### DRAWINGS

NUMBER	TITLE
0	COVER SHEET
1	EXISTING CONDITIONS PLAN
2	OVERALL SITE PLAN
3	DETAILS (SHEET 1 OF 4)
4	DETAILS (SHEET 2 OF 4)
5	DETAILS (SHEET 3 OF 4)
6	DETAILS (SHEET 4 OF 4)

PREPARED FOR

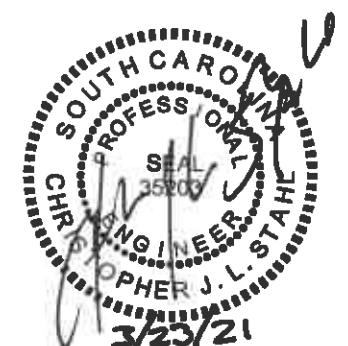


515 STONE MILL DRIVE  
RICHMOND, VIRGINIA 23242  
(804) 784-6300

CIVIL ENGINEER



2016 ARSLEY TOWN BLVD.  
SUITE 2-A  
CHARLOTTE, NC 28273  
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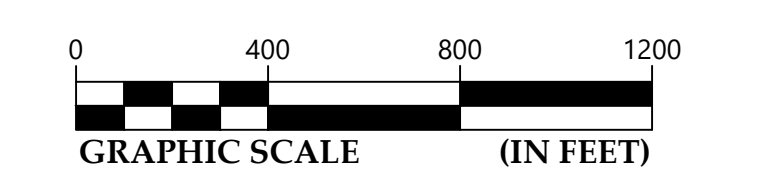


DRAWING PATH: R:\CADD\at\Cherokee\2017\LUCK STONE ALT. 1-77\DWG\EG&C\EXISTING SITE CONDITIONS.dwg



EXISTING OVERHEAD POWERLINE  
 EXISTING 70' POWERLINE R/W  
 RR R/W  
 2180-FT.  
 TOWN OF WINNSBORO WATER SUPPLY TOWER  
 TOWN OF RIDGEWAY PUBLIC WATER SUPPLY WELL  
 PUBLIC WATER WELL PROTECTION ZONE

- LEGEND**
- EXISTING GRADE CONTOUR (5 FEET)
  - EXISTING GRADE CONTOUR (25 FEET)
  - PROPERTY LINE
  - PERMIT BOUNDARY
  - STREAMS
  - WETLANDS



9751 SOUTHERN PINE BLVD  
 CHARLOTTE, NC 28273  
 (704) 523-4726

ENGINEERING FIRM  
 LICENSE NUMBER: F-0176



NO.	DATE	DESCRIPTION	BY	CHK	APV
1	3-23-21	REVISED INITIAL PROCESS PLAN			

**EXISTING CONDITIONS PLAN**

FAIRFIELD 1-77 DEVELOPMENT SITE, EG&C PLAN - INITIAL PHASE  
 LUCK STONE CORPORATION  
 FAIRFIELD COUNTY, SOUTH CAROLINA

PROJECT NUMBER  
**210730C**  
 DRAWING NUMBER

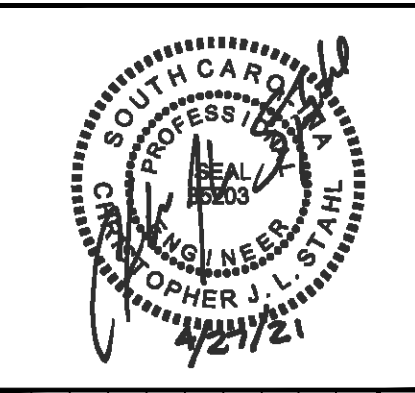




9751 SOUTHERN PINE BLVD  
 CHARLOTTE, NC 28273  
 (704) 523-4726  
 ENGINEERING FIRM  
 LICENSE NUMBER: F-0176



DRAWING PATH: R:\CADD\at\Cherokee\2017\07\DWG\EG&C\OVERALL SITE DEVELOPMENT.dwg



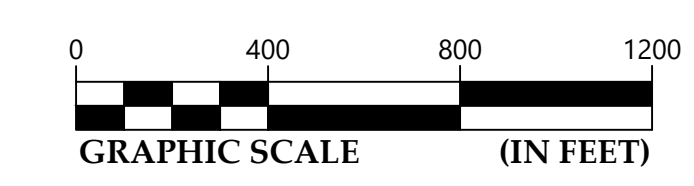
NO.	DATE	BY	CHK	APV	DESCRIPTION
1	4-27-21	CJS			ADDED OUTFALLS
2	3-23-21	CJS			REVISED INITIAL PROCESS PLAN

**LEGEND**

- EXISTING GRADE CONTOUR (5 FEET)
- EXISTING GRADE CONTOUR (25 FEET)
- - - PROPERTY LINE
- - - PERMIT BOUNDARY
- STREAMS
- WETLANDS
- 50-FT. BUFFER
- BERM/OVERBURDEN STORAGE
- ACCESS/HAUL ROAD
- BLASTING LIMIT
- PERIMETER CHANNEL
- SEDIMENT BASIN
- PRELIMINARY LOCATION OF OUTFALL AND PLUNGE POOL

**GENERAL NOTE:**

- SWPPP WILL PROVIDE DETAILED STORMWATER CONTROL DEVICES TO ADDRESS STORMWATER POLLUTANTS DURING CONSTRUCTION AND OPERATIONS.



**OVERALL SITE PLAN**

FAIRFIELD-177 DEVELOPMENT SITE, E&SC PLAN - INITIAL PHASE  
 LUCK STONE CORPORATION  
 FAIRFIELD COUNTY, SOUTH CAROLINA

PROJECT NUMBER  
**210730C**

DRAWING NUMBER  
**2 6**

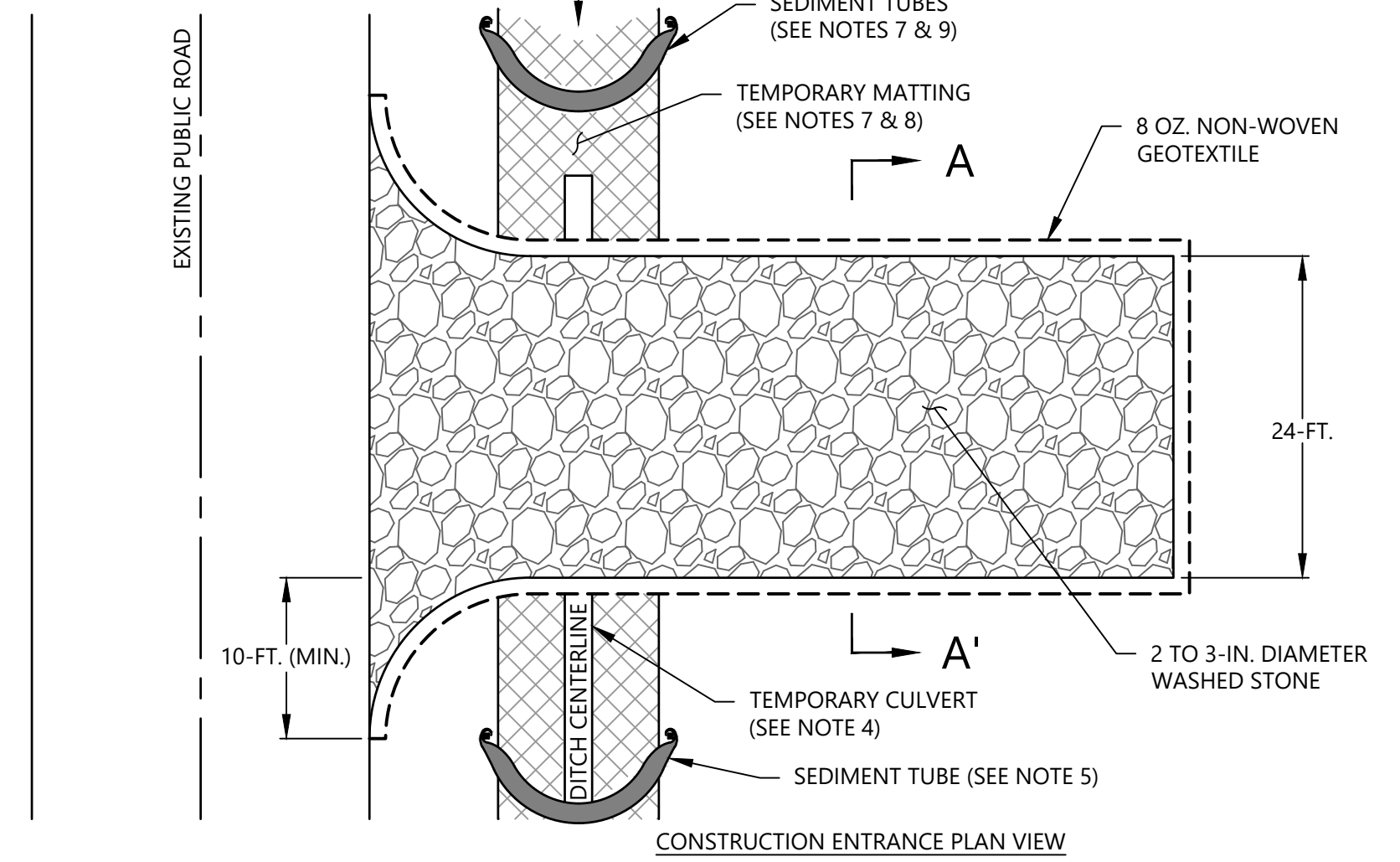
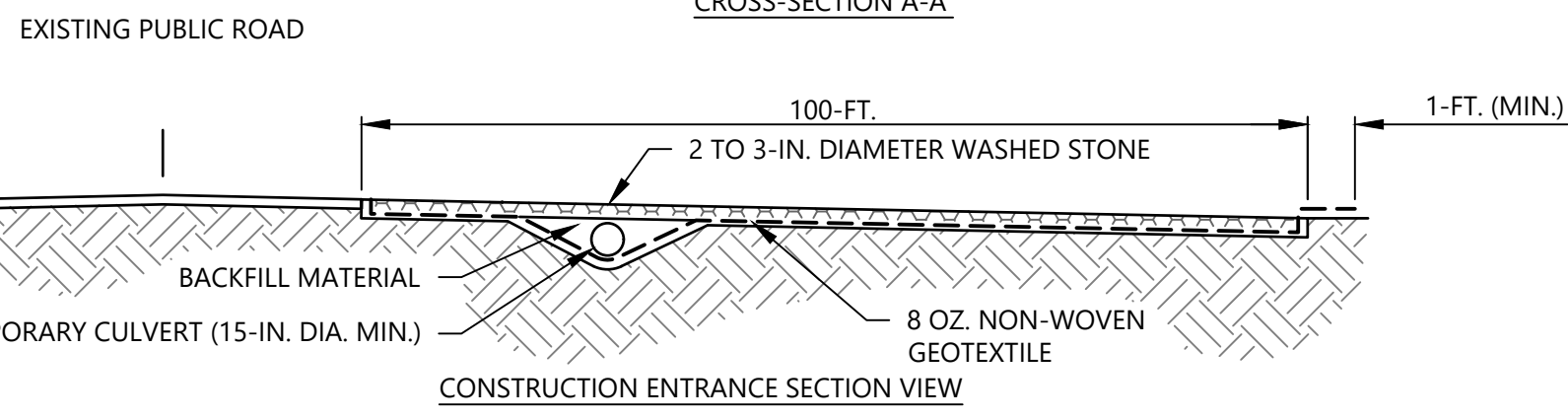
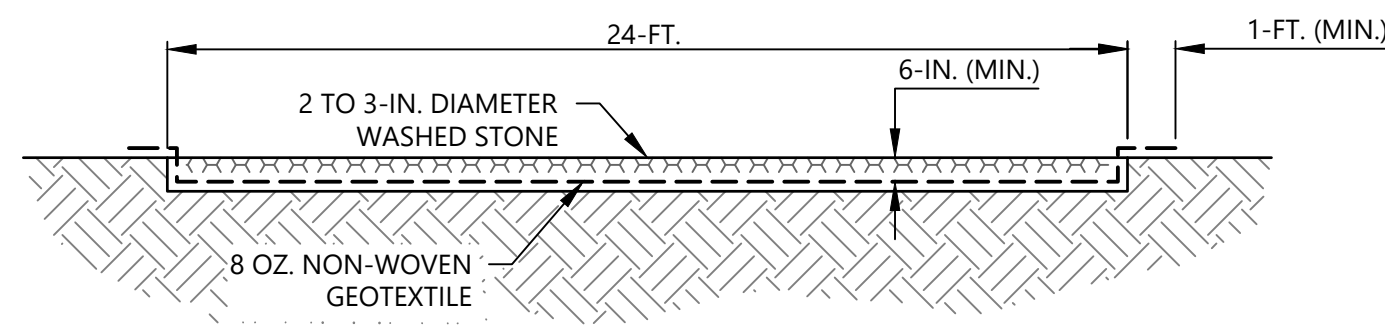




NO.	DATE	REVISION	INITIAL	PROCESS	PLANT	DESCRIPTION
3-23-21						

DETAILS (SHEET 1 OF 4)  
FAIRFIELD-177 DEVELOPMENT SITE, E&SC PLAN - INITIAL PHASE  
LUCK STONE CORPORATION  
FAIRFIELD COUNTY, SOUTH CAROLINA

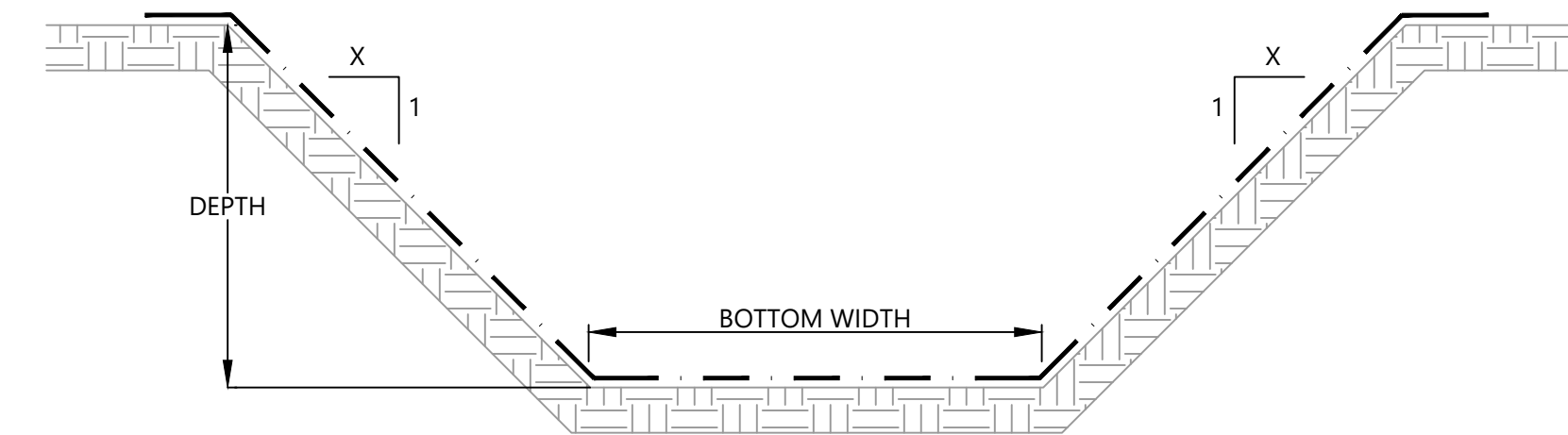
PROJECT NUMBER	210730C
DRAWING NUMBER	



1  
3 CONSTRUCTION ENTRANCE  
SCALE: N.T.S.

TEMPORARY CONSTRUCTION ENTRANCE NOTES

- PHASE 1 E&SC
1. DUE TO SITE CONSTRAINTS THE WIDTH AND LENGTH MAY BE ADJUSTED BASED ON CONDITIONS IN THE FIELD.
  2. APPROPRIATE SIGNAGE WILL BE POSTED ALONG THE ROAD TO INFORM THE GENERAL PUBLIC OF POTENTIAL CONSTRUCTION TRAFFIC PER REQUIREMENTS.
  3. STOCKPILE TOPSOIL FROM CONSTRUCTION ENTRANCE INSTALLATION. USE TOPSOIL FOR BACKFILL AFTER REMOVAL OF CONSTRUCTION ENTRANCE DURING FINAL CLEANUP.
  4. THE NEAREST UPSTREAM AND DOWNSTREAM CULVERT DIAMETER(S) WILL BE OBSERVED AT EACH LOCATION A CONSTRUCTION ENTRANCE IS TO BE INSTALLED WITHIN A ROADSIDE SWALE/DITCH. DIAMETER OF TEMPORARY CULVERT SHALL BE THE LARGER OF EITHER THE CULVERT, BUT NO LESS THAN 15-IN. IN DIAMETER. CONTRACTOR SHALL FIELD VERIFY AND DETERMINE APPROPRIATE CULVERT TO BE USED.
  5. INSTALL SEDIMENT TUBE IN SWALE/DITCH AT UPSTREAM AND DOWNSTREAM LOCATIONS OF LIMITS OF DISTURBANCE.
- PHASE 2 E&SC & CONSTRUCTION
6. MAINTAIN CONSTRUCTION ENTRANCE IN ACCORDANCE WITH MAINTENANCE NOTES BELOW.
- PHASE 3 E&SC
7. THE CONSTRUCTION ENTRANCE AND CULVERT (IF PRESENT), WILL BE REMOVED WHEN CONSTRUCTION ACTIVITIES CEASE ON THE PROJECT. THE REMOVED STONE AND SEDIMENT FROM THE ENTRANCE WILL BE HAUL OFF-SITE AND DISPOSED OF PROPERLY.
  8. UPON REMOVAL OF THE CONSTRUCTION ENTRANCE, THE CONTRACTOR SHALL BRING THE AREA TO ORIGINAL GRADE AND STABILIZE IT. IF A TEMPORARY CULVERT WAS UTILIZED IN CONJUNCTION WITH THE CONSTRUCTION ENTRANCE, THE CONTRACTOR SHALL INSTALL TEMPORARY MATTING AND SEDIMENT TUBE WITHIN ROADSIDE SWALE/DITCH.
  9. TEMPORARY MATTING SHALL BE NORTH AMERICAN GREEN BIONET SC150BN OR ENGINEER APPROVED EQUIVALENT.
  10. INSTALL THREE SEDIMENT TUBE IN EACH IMPACTED SWALE/DITCH; UPSTREAM, DOWNSTREAM, AND MIDDLE OF INTERSECTION OF SWALE/DITCH AND LIMITS OF DISTURBANCE. SEDIMENT TUBE SHALL BE 12-INCH (NOMINAL) STRAW WATTLE FOR CHANNELS LESS THAN 3 FEET IN DEPTH AND FOR CHANNELS GREATER THAN 3 FEET IN DEPTH, A 24-INCH WATTLE SHOULD BE USED.
- TEMPORARY CONSTRUCTION ENTRANCE MAINTENANCE
1. INSPECT AT LEAST ONCE EVERY CALENDAR WEEK AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5-IN. OR GREATER IN 24 HOURS.
  2. THE ENTRANCE WILL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO EXISTING ROADWAYS. SEDIMENT TRACKED, SPILLED, DROPPED OR OTHERWISE DEPOSITED ONTO ROADWAYS WILL BE SWEEP UP AS SOON AS PRACTICAL AND PLACED BACK WITHIN THE APPROVED DISTURBED AREA.
  3. IF EXCESS SEDIMENT HAS CLOGGED THE STONE, THE ENTRANCE WILL BE TOPRESSED WITH NEW STONE AS NEEDED. REPLACEMENT OF THE STONE MAY BECOME NECESSARY WHEN THE STONE BECOMES ENTIRELY FILLED WITH SEDIMENT AND MUD.

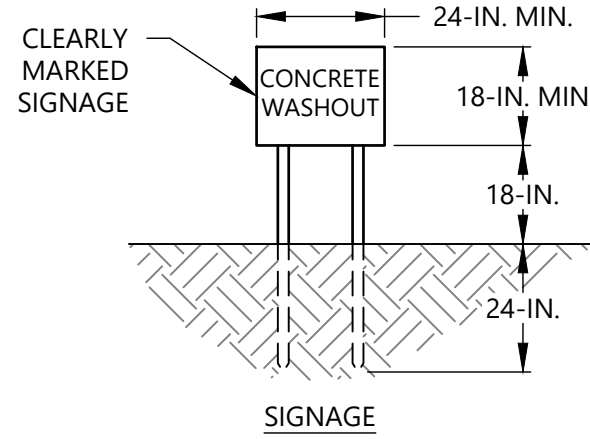
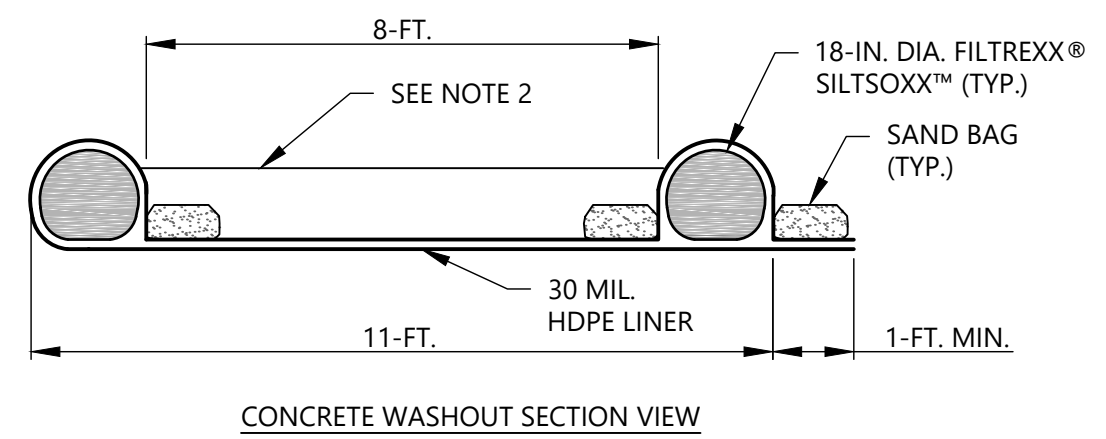


CHANNEL NOTES:

1. SEE PLAN SHEETS FOR CHANNEL LOCATION.
2. DIMENSIONING AND STABILIZATION MATTING ( NORTH AMERICAN GREEN S75 BN, SC 150BN OR P300 OR APPROVED EQUIVALENT) WILL BE DEFINED IN THE SWPPP FOR THE FACILITY.
3. SWPPP WILL PROVIDE DETAILED CHANNEL DESIGN.

CHANNEL SUMMARY TABLE						
CHANNEL ID	AVERAGE CHANNEL SLOPE (FT./FT.)	BOTTOM WIDTH (FT.)	LEFT SLOPE (XH:1V)	RIGHT SLOPE (XH:1V)	CHANNEL DEPTH (FT.)	CHANNEL MATTING
TYP.	0.0200	4	2	2	2	SC 150BN

2  
3 TYPICAL CHANNEL  
SCALE: N.T.S.

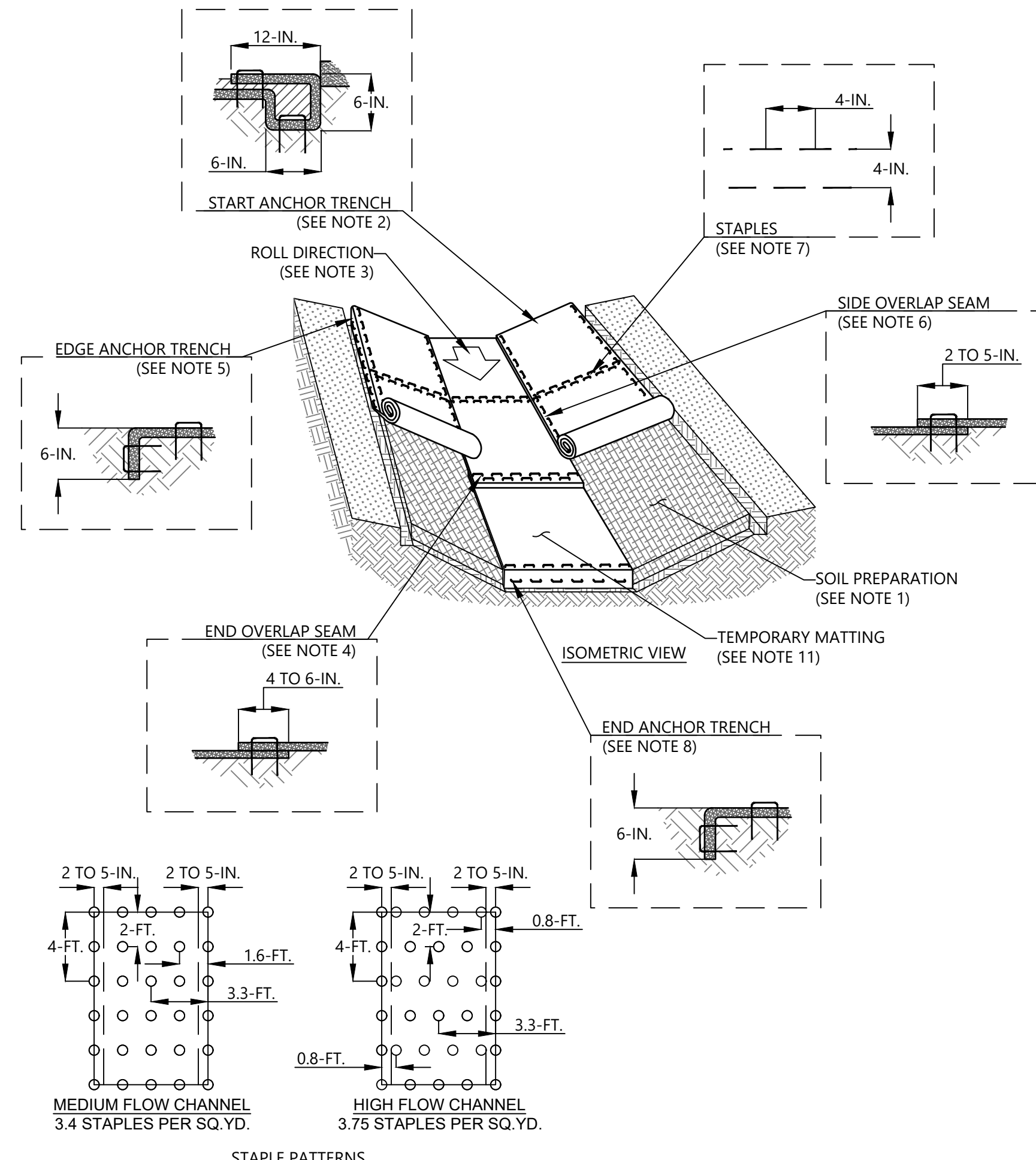


8. DO NOT USE CONCRETE WASHOUTS FOR DEWATERING OR STORING DEFECTIVE CURB OR SIDEWALK SECTIONS. STORMWATER ACCUMULATED WITHIN THE WASHOUT MAY NOT BE PUMPED INTO OR DISCHARGED TO THE STORM DRAIN SYSTEM OR RECEIVING SURFACE WATERS. LIQUID WASTE MUST BE PUMPED OUT AND REMOVED FROM PROJECT.
9. LOCATE WASHOUTS AT LEAST 50-FT. FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS IT CAN BE SHOWN THAT NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE. AT A MINIMUM, INSTALL PROTECTION OF STORM DRAIN INLET(S) CLOSEST TO THE WASHOUT WHICH COULD RECEIVE SPILLS OR OVERFLOW.
10. LOCATE WASHOUTS IN AN EASILY ACCESSIBLE AREA, ON LEVEL GROUND AND INSTALL A STONE ENTRANCE PAD IN FRONT OF THE WASHOUT. ADDITIONAL CONTROLS MAY BE REQUIRED BY THE APPROVING AUTHORITY.
11. INSTALL AT LEAST ONE SIGN DIRECTING CONCRETE TRUCKS TO THE WASHOUT WITHIN THE PROJECT LIMITS. POST SIGNAGE ON THE WASHOUT ITSELF TO IDENTIFY THIS LOCATION.
12. REMOVE LEAVINGS FROM THE WASHOUT WHEN AT APPROXIMATELY 2/3 CAPACITY TO LIMIT OVERFLOW EVENTS. REPLACE THE HDPE LINER, SAND BAGS OR OTHER TEMPORARY STRUCTURAL COMPONENTS WHEN NO LONGER FUNCTIONAL. WHEN UTILIZING ALTERNATIVE OR PROPRIETARY PRODUCTS, FOLLOW MANUFACTURER'S INSTRUCTIONS.
13. AT THE COMPLETION OF THE CONCRETE WORK, REMOVE REMAINING LEAVINGS AND DISPOSE IN AN APPROVED DISPOSAL FACILITY. STABILIZE ANY DISTURBANCE CAUSED BY REMOVAL OF WASHOUT.

CONCRETE WASHOUT NOTES:

1. ACTUAL LOCATION DETERMINED IN FIELD
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 2/3 OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 6-IN. OF FREEBOARD.
3. CONCRETE WASHOUT STRUCTURES REQUIRING ADDITIONAL CAPACITY SHALL INCLUDE EXCAVATED PIT BENEATH HDPE LINER OF WASHOUT RETENTION AREA. DEPTH OF PIT VARIES DEPENDING ON REQUIRED CAPACITY.
4. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.
5. DO NOT DISCHARGE CONCRETE OR CEMENT SLURRY FROM THE SITE.
6. DISPOSE OF, OR RECYCLE SETTLED, HARDENED CONCRETE RESIDUE IN ACCORDANCE WITH LOCAL AND STATE SOLID WASTE REGULATIONS AND AT AN APPROVED FACILITY.
7. MANAGE WASHOUT FROM MORTAR MIXERS IN ACCORDANCE WITH THE ABOVE ITEM AND IN ADDITION PLACE THE MIXER AND ASSOCIATED MATERIALS ON IMPERVIOUS BARRIER AND WITHIN LOT PERIMETER SILT FENCE.
8. INSTALL TEMPORARY CONCRETE WASHOUTS PER LOCAL REQUIREMENTS, WHERE APPLICABLE. IF AN ALTERNATE METHOD OR PRODUCT IS TO BE USED, CONTACT YOUR APPROVAL AUTHORITY FOR REVIEW AND APPROVAL. IF LOCAL STANDARD DETAILS ARE NOT AVAILABLE, USE ONE OF THE TWO TYPES OF TEMPORARY CONCRETE WASHOUTS PROVIDED ON THIS DETAIL.

3  
3 CONCRETE WASHOUT  
SCALE: N.T.S.



TEMPORARY MATTING NOTES

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (REPCS), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE REPCS IN A 6-INCH DEEP BY 6-IN. WIDE TRENCH WITH APPROXIMATELY 12-IN. OF REPCS EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. USE SHOREMAX MAT AT THE CHANNEL/CULVERT OUTLET AS SUPPLEMENTAL SCOUR PROTECTION AS NEEDED. ANCHOR THE REPCS WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12-IN. APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12-IN. PORTION OF REPCS BACK OVER THE SEED AND COMPACTED SOIL. SECURE REPCS OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12-IN. APART ACROSS THE WIDTH OF THE CHANNEL.
3. ROLL CENTER REPCS IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. REPCS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL REPCS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. PLACE CONSECUTIVE REPCS END-OVER-END (SHINGLE STYLE) WITH A 4 TO 6-IN. OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4-IN. APART AND 4-INCH ON CENTER TO SECURE REPCS.
5. FULL LENGTH EDGE OF REPCS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12-IN. APART IN A 6-IN. DEEP X 6-IN. WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT REPCS MUST BE OVERLAPPED APPROXIMATELY 2 TO 5-IN. (DEPENDING ON REPCS TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40-FT. INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4-IN. APART AND 4-IN. ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE REPCS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12-IN. APART IN A 6-IN. DEEP BY 6-IN. WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
9. HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
10. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6-IN. MAY BE NECESSARY TO PROPERLY SECURE THE REPCS.
11. TEMPORARY MATTING SHALL BE NORTH AMERICAN GREEN OR ENGINEER APPROVED EQUIVALENT. REFER TO PLAN VIEW DRAWINGS FOR NORTH AMERICAN GREEN'S PRODUCT NAME FOR SPECIFIC GRADE OF TEMPORARY MATTING FOR EACH ROADSIDE SWALE/DITCH.

TEMPORARY MATTING MAINTENANCE

1. REGULAR INSPECTIONS OF TEMPORARY MATTING SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION. MAKE ANY NECESSARY REPAIRS IMMEDIATELY.
2. GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED, AND EROSION MUST NOT OCCUR BENEATH THE RECP.
3. ANY AREAS OF THE RECP THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED.
4. IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED.
5. MONITOR AND REPAIR THE RECP AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.

4  
3 CHANNEL MATTING  
SCALE: N.T.S.

DRAWING PATH: R:\CADD\Detail\Channel\2017\LUCK STONE ALT. 1-177\DWG\E&SC\DETAILS (SHEET 1 OF 4).dwg

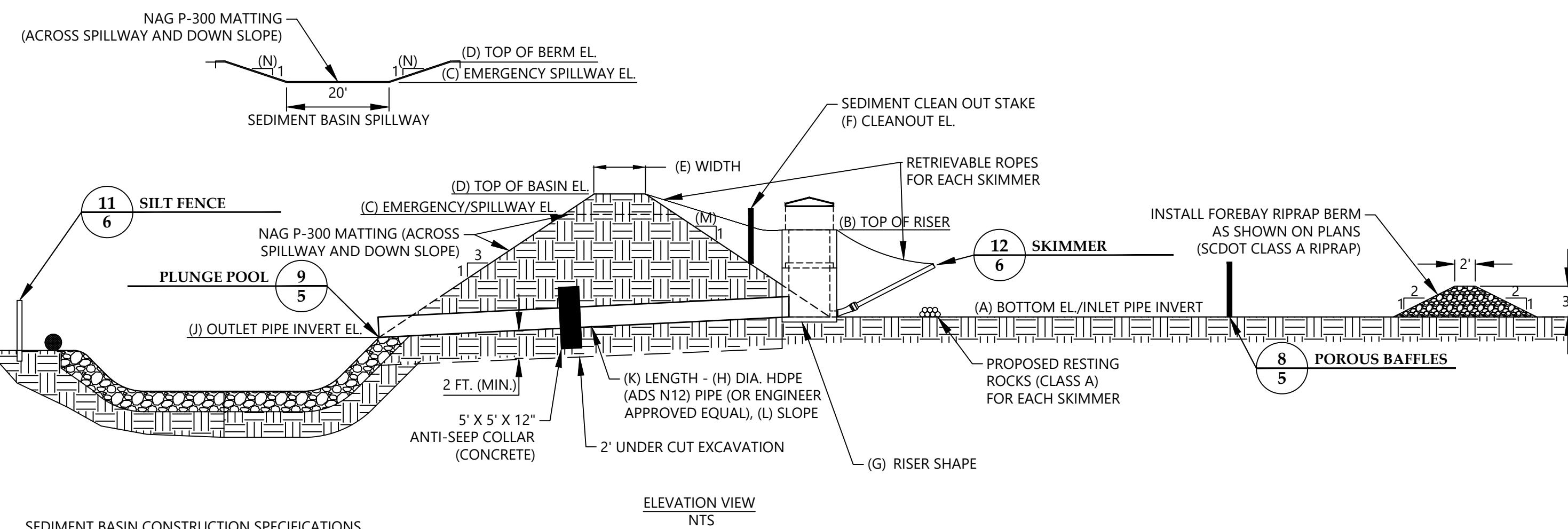


**SEDIMENTATION BASIN CONSTRUCTION SPECIFICATIONS**

- 1. BASIN PREPARATIONS:** PLACE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES PER THE PLANS. CLEAR, GRUB AND STRIP TOPSOIL FROM THE EMBANKMENT TO REMOVE VEGETATION, STUMPS, ROOTS, ORGANIC MATERIAL, TRASH, ROCK MATERIAL AND OTHER OBJECTIONABLE MATERIAL. REMOVE SEDIMENT, PERVIOUS MATERIAL, ORGANIC MATERIAL TO THE DESIGN ELEVATION AND DIMENSIONS OF THE BASIN. KEEP BASIN DRY DURING CONSTRUCTION ACTIVITIES. THE FLOOR OF THE BASIN SHALL BE GRADED TO THE FINAL ELEVATION SHOWN ON THE DRAWINGS AND GRADED BASIN SHALL BE COMPACTED WITH A MINIMUM 10-TON SMOOTH DRUM (NON-VIBRATORY) COMPACTOR AND THEN PROOF-ROLLED. PROOF-ROLL THE ENTIRE SEDIMENTATION BASIN FLOOR. THE PROOF ROLLING SHALL BE OBSERVED AND EVALUATED BY THE ENGINEER OR HIS REPRESENTATIVE.
- 2. PRINCIPAL SPILLWAY, BARREL AND SKIMMER:** CONSTRUCT THE BARREL ACCORDING TO THE BELOW TEMPORARY SEDIMENT BASIN DETAIL. SECURE ALL CONNECTIONS BETWEEN BARREL AND RISER SECTIONS BY APPROVED WATERTIGHT ASSEMBLIES. ATTACH BASIN SKIMMER TO RISER BY APPROVED WATERTIGHT ASSEMBLIES (SEE SKIMMER DETAIL 13). DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, SILT, OR CRUSHED STONE AS BACKFILL MATERIAL AROUND THE PIPE. PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4-IN. LOOSE LAYERS AND COMPACT IT AROUND THE PIPE TO 95 PERCENT OR GREATER AS THE REST OF THE EMBANKMENT FILL. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES. PLACE A MINIMUM DEPTH OF TWO FEET OF HAND COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING THE PIPE WITH COMPACTOR EQUIPMENT OR CONSTRUCTION EQUIPMENT.
- 3. EMBANKMENT CONSTRUCTION:** USE CLEAN FILL MATERIAL BROUGHT TO SITE OR EXCAVATED FROM APPROVED AREAS ON SITE. IT SHALL BE CLEAN MINERAL SOIL, FREE OF ROOTS, WOODY VEGETATION, ROCKS AND OTHER OBJECTIONABLE MATERIAL. SCARIFY AREAS AND EACH COMPACTED LIFT ON WHICH FILL IS TO BE PLACED BEFORE PLACING THE FILL. THE FILL OPTIMUM MOISTURE CONTENT SHALL BE MAINTAINED BETWEEN OPTIMUM AND THREE PERCENT ABOVE OPTIMUM. FILL SHALL BE COMPACTED NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 METHOD A. THE CONTRACTOR SHALL DEMONSTRATE SOIL DENSITY BY SOIL COMPACTION PER THE PLANS AND SPECIFICATIONS WITH A MINIMUM OF TWO DENSITY TESTS PER LIFT WITH TESTS SPACED EVENLY AND REPRESENTATIVE OF THE EMBANKMENT FILL. ONE FAILED TEST REQUIRES THAT THE LIFT BE RE-COMPACTED AND RE-TESTED AT TWO LOCATIONS UNTIL REQUIRED COMPACTION IS ACHIEVED. NO VEGETATIVE COVER MATERIAL SHALL BE PLACED ON COMPACTED FILL LAYERS BEFORE THE ENGINEER REVIEWS AND APPROVES THE DENSITY DATA FROM THE TESTING PERFORMED. THE ENGINEER MAY EVALUATE COMPACTION AND REPORT THE RESULTS TO THE CONTRACTOR. FAILED SOIL DENSITY TESTS PERFORMED BY THE ENGINEER WILL REQUIRE THAT THE COMPACTED MATERIAL BE REMOVED AND RE-INSTALLED PER THE PLANS AND SPECIFICATIONS.
- 4. OUTLET DISCHARGE:** EFFLUENT FROM THE PRINCIPAL SPILLWAY BARREL FROM THE SEDIMENT BASIN. SHALL HAVE AN ANTI-SEEP COLLAR SLIGHTLY DOWNSTREAM FROM THE DAM CENTER LINE. SHALL DISCHARGE TO A PLUNGE POOL. SEE DETAIL 10.
- 5. EMERGENCY SPILLWAY:** INSTALL THE EMERGENCY SPILLWAY IN THE UNDISTURBED SOIL. TOLERANCE TO DESIGN ELEVATIONS IS +/- 0.2 FEET; TOLERANCE TO DESIGN GRADES IS +/- 1.0 PERCENT; AND TOLERANCE FOR WIDTHS AND LENGTHS IS +/- 1.0-FT. NO DEVIATION FROM THE SPECIFIED TOLERANCES SHALL BE ALLOWED. LINE THE SPILLWAY WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC SHALL HAVE DIMENSIONS LARGE ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES SHALL BE SECURED WITH 8-IN. STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC SHALL BE ONE PIECE, TO PREVENT WATER FROM ACCESS BENEATH THE FABRIC; JOINING OR SPLICING OF SECTIONS ACROSS THE WIDTH SHALL NOT BE ALLOWED. THE LENGTH OF THE FABRIC MAY BE COMPOSED OF SECTIONS SPANNING THE ENTIRE SPILLWAY WIDTH. UPPER SECTIONS SHALL OVERLAP LOWER SECTIONS SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS (ADAPTED FROM "A MANUAL FOR DESIGNING AND MAINTAINING SKIMMER SEDIMENT BASINS" FEBRUARY, 1999 J.W. FAIRCLOTH & SON). A 6-IN. VEGETATIVE COVER SHALL BE PLACED ON TOP OF THE GEOTEXTILE FABRIC. EROSION CONTROL MATTING SHALL BE PLACED ON TOP OF THE VEGETATIVE LAYER.
- 6. INLETS:** INSTALL INLETS TO DISCHARGE WATER INTO THE FOREBAYS IN A MANNER TO PREVENT EROSION.
- 7. EROSION CONTROL:** CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM THE BARE AREAS. COMPLETE THE EMBANKMENT BEFORE ADDITIONAL UPSTREAM AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION (REFERENCES: SURFACE STABILIZATION).

**MAINTENANCE**

- CHECK SEDIMENT BASIN AFTER PERIODS OF SIGNIFICANT RUNOFF. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE DESIGN DEPTH AS MARKED BY THE SEDIMENT CLEANOUT STAKE.
- CHECK THE EMBANKMENT, SPILLWAYS AND OUTLET FOR EROSION DAMAGE AND EVALUATE THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND DEBRIS FROM THE RISER AND POOL AREA.



**SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS**

1. ASSEMBLE THE SKIMMER AS DESIGNED (SKIMMER DETAIL 13).
2. LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN. SECURE THE CONNECTIONS BETWEEN THE INLET BASIN SKIMMER FLEXIBLE JOINT TO THE RISER ORIFICE BY APPROVED WATERTIGHT ASSEMBLIES. POSITION THE SKIMMER OVER THE SUPPORT PAD. ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN FOR ACCESS TO THE SKIMMER FOR FUTURE MAINTENANCE.

**MAINTENANCE**

INSPECT THE SEDIMENTATION BASIN AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE TO ACCESS SEDIMENT BELOW FOR REMOVAL. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT LIMITED TO THE SKIMMER LOCATION OR WITHIN THE FIRST BASIN CELL. CUT OR REMOVE VEGETATION FROM THE BOTTOM OF THE BASIN THAT LIMITS OPERATION OF THE SKIMMER OR RESTRICTS ITS ABILITY TO FLOAT.

REPAIR DAMAGED BAFFLES. RE-ANCHOR BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.

REMOVE CLOGS FROM SKIMMER BY JERKING ON THE ROPE TO BOB THE SKIMMER, OR PULL THE SKIMMER TO ONE SIDE OF THE BASIN AND REMOVE THE DEBRIS. CHECK THE ORIFICE INSIDE THE SKIMMER FOR DEBRIS. IF PRESENT, REMOVE THE DEBRIS. IF THE SKIMMER ARM OR BARREL IS CLOGGED, REMOVE THE ORIFICE AND FLUSH WITH WATER TO RESTORE FLOW, OR USE A PLUMBERS SNAKE TO REMOVE THE CLOG. REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.

CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER, RISER, AND POOL AREAS.

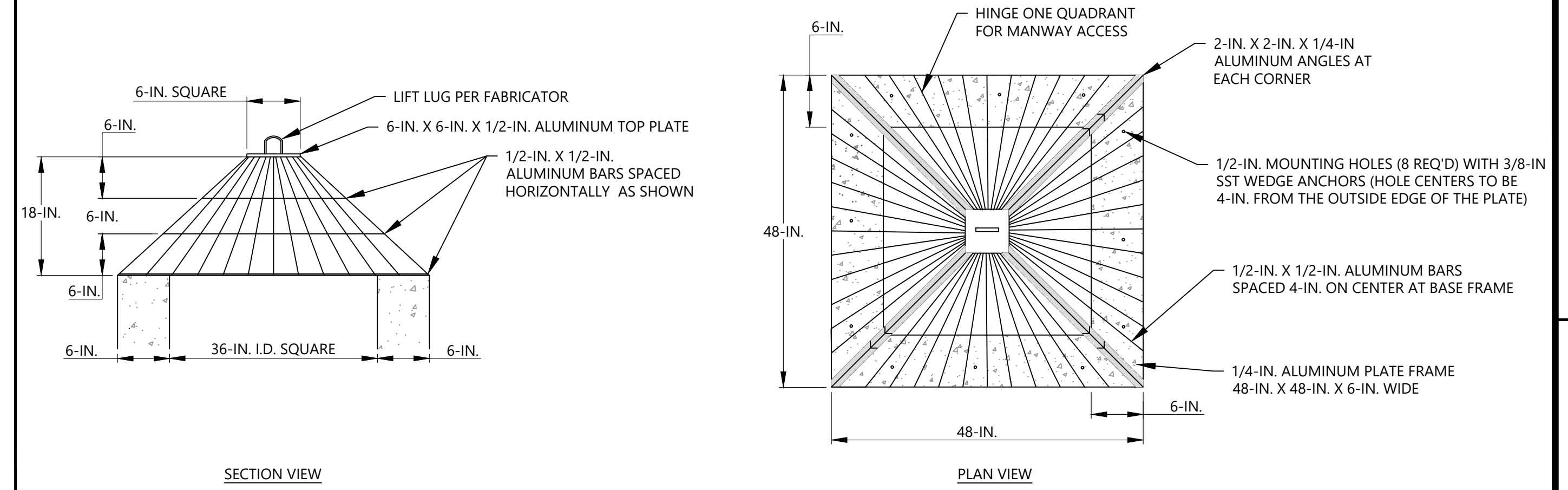
FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. PREVENT ICE FROM CLOGGING THE SKIMMER.

AFTER ALL SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED; REMOVE THE SKIMMER, BAFFLES, 30 MIL LINER, STAINLESS STEEL STRAP, HYDRAULIC TAPE, AND ALL UNSTABLE SEDIMENT IN THE BASINS.

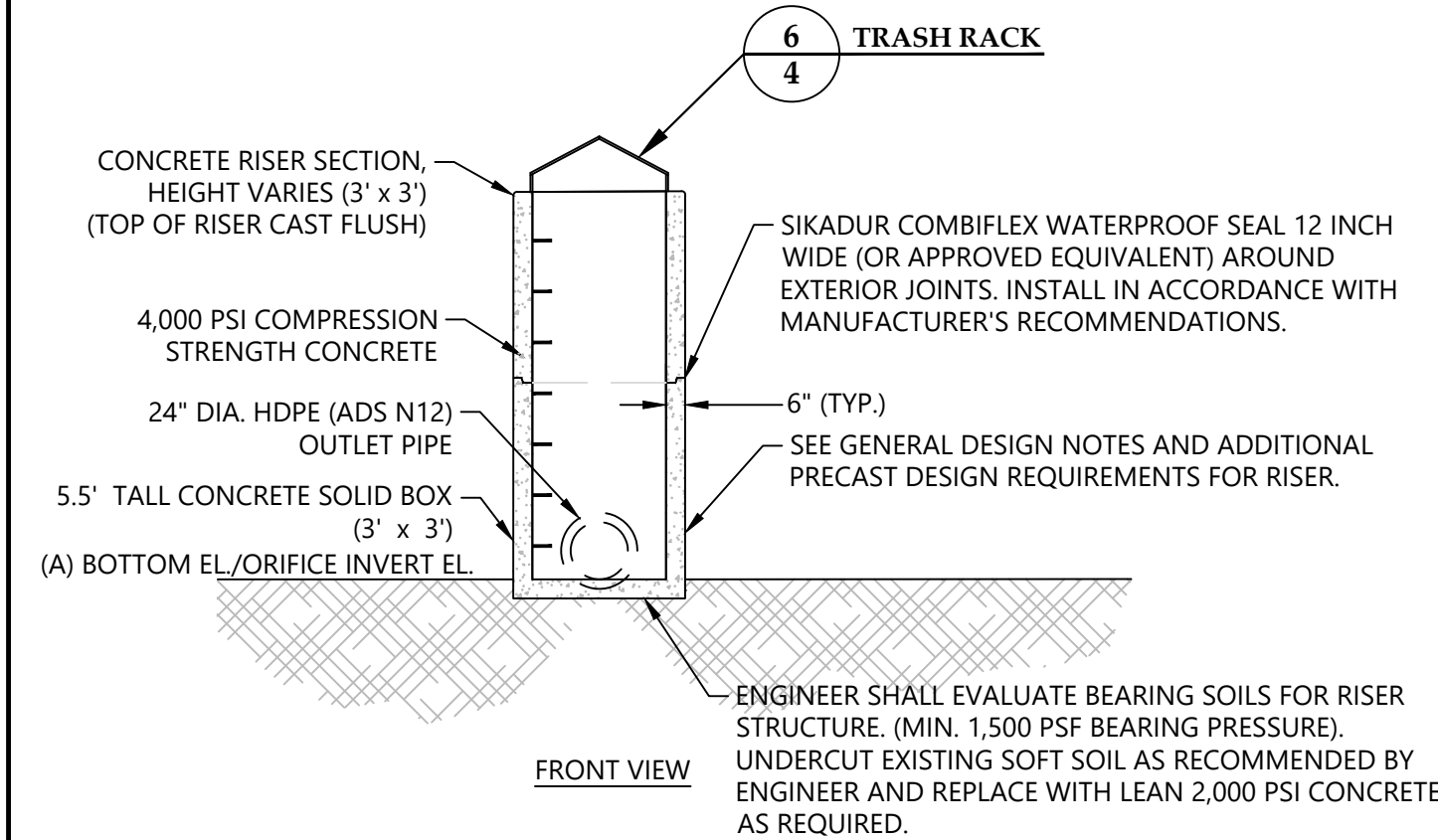
**SEDIMENT BASIN SUMMARY TABLE**

SEDIMENT BASIN ID	A	B	C	D	E	F	G	H	I	J	K	L	M	N
SEDIMENT BASIN ID	BOTTOM OF BASIN ELEVATION (FT.)	TOP OF RISER ELEVATION (FT.)	EMERGENCY SPILLWAY CREST ELEVATION (FT.)	TOP OF BERM ELEVATION (FT.)	TOP OF BERM WIDTH (FT.)	CLEAN OUT ELEVATION (FT.)	RISER SHAPE (FT. X FT.)	OUTLET PIPE DIAMETER (DO) (FT.)	OUTLET PIPE UPSTREAM INV. ELEVATION (FT.)	OUTLET PIPE DOWNSTREAM INV. ELEVATION (FT.)	LENGTH OF OUTLET PIPE (FT.)	SLOPE OF OUTLET PIPE (%)	INTERIOR SIDE SLOPES (Z FT. X 1 FT.)	EMERGENCY SPILLWAY INTERIOR SIDE SLOPES (Z FT. X 1 FT.)
PT-SB-1	557.0	562.7	563.7	565.0	12	560.1	3x3	2	557.0	556.0	100	1.0	3:1	3:1
W-SB-1	500.0	505.4	506.4	508.0	12	503.0	3x3	2	500.0	499.0	100	1.0	3:1	3:1
P-SB-1	450.0	457.4	458.4	460.0	12	454.1	3x3	2	450.0	449.0	100	1.0	3:1	3:1
P-SB-2	481.0	487.4	488.4	490.0	12	484.6	3x3	2	481.0	480.0	100	1.0	3:1	3:1
P-SB-3	490.0	497.3	498.3	500.0	12	494.1	3x3	2	490.0	489.0	100	1.0	3:1	3:1
NE-SB-1	427.0	434.4	435.4	437.0	12	431.3	3x3	2	427.0	426.0	100	1.0	3:1	3:1
NE-SB-2	412.0	416.8	417.8	420.0	12	414.7	3x3	2	412.0	411.0	100	1.0	3:1	3:1
NE-SB-3	412.0	418	419	421.0	12	415.4	3x3	2	412.0	411.0	100	1.0	3:1	3:1
NE-SB-4	479.0	484.5	485.5	487.0	12	481.0	3x3	2	479.0	478.0	100	1.0	3:1	3:1

**5 SEDIMENT BASIN SCALE: N.T.S.**



**6 TRASH RACK SCALE: N.T.S.**



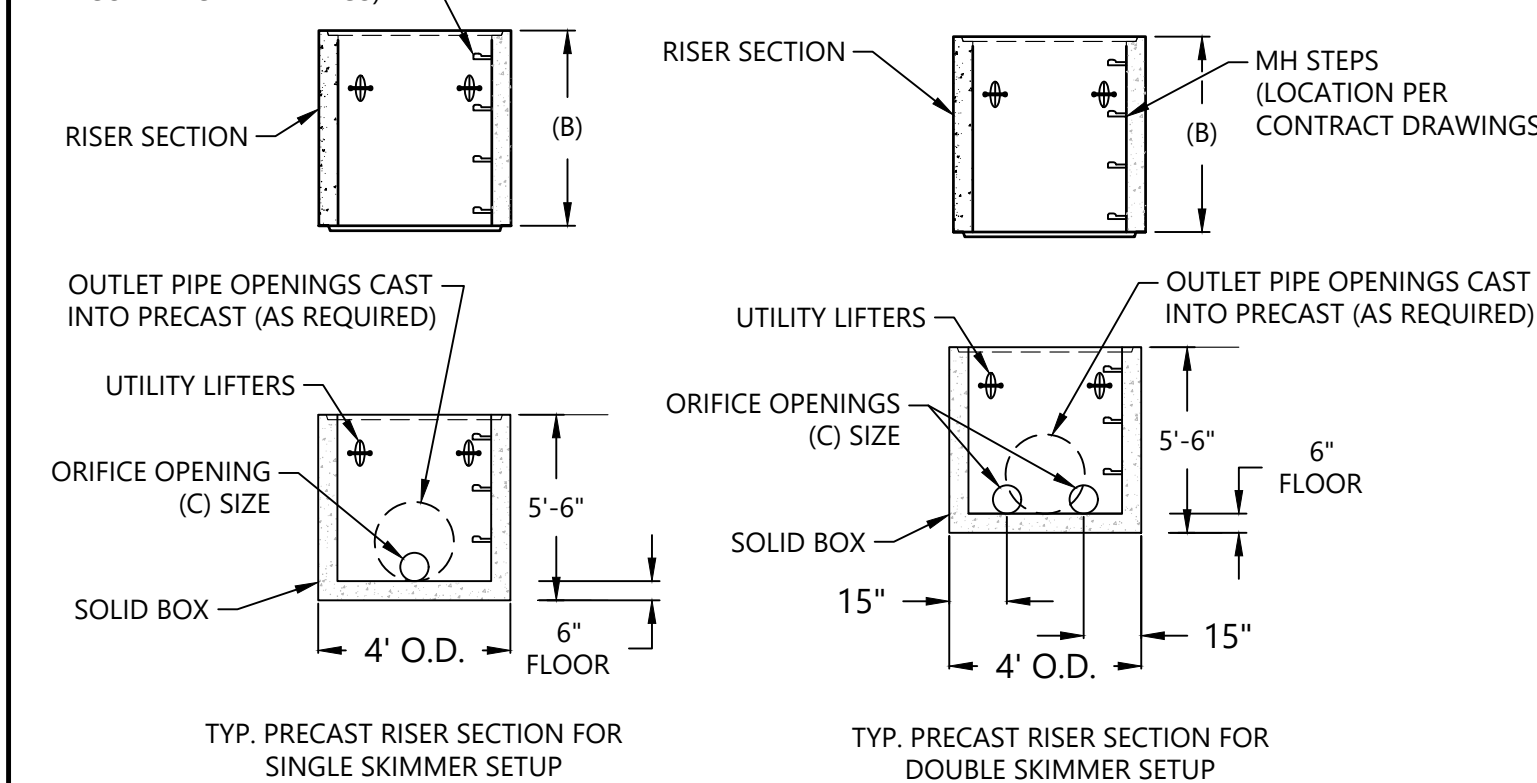
**ADDITIONAL PRECAST DESIGN REQUIREMENTS**

1. RISER SHALL BE DESIGNED FOR A WATER PRESSURE OF 1,300 PSF AND HORIZONTAL SOIL PRESSURE OF 700 PSF. (TOTAL HORIZONTAL PRESSURE OF 2,000 PSF).
2. STRENGTH DESIGN METHOD IN ACCORDANCE WITH (I.A.W.) ACI318.
3. APPLICABLE DESIGN DOCUMENTS (CURRENT EDITIONS):
  - ACI318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (MAIN DESIGN SPECIFICATIONS).
  - ASTM C890 STANDARD PRACTICE FOR MINIMUM STRUCTURAL LOADING FOR MONOLITHIC OR SECTIONAL PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES (LOADING SPECIFICATIONS).
  - ASTM C913 STANDARD SPECIFICATIONS FOR PRECAST CONCRETE AND WATER AND WASTEWATER STRUCTURES.
4. MAX DEPTH TO INVERT OF PRECAST (I.E. FLOOR) = 15' FOR SOLID BASE AND 10 FOR WAFFLE BASE.
5. GWT ASSUMED BELOW INVERT OF PRECAST.
6. LATERAL DESIGN PRESSURES (AS APPLICABLE TO DESIGN):
  - EQUIV DRY SOIL FLUID PRESSURE = 47 PCF.
  - EQUIV SATURATED SOIL FLUID PRESSURE = 85 PCF.
  - LIVE LOAD SURCHARGE = 80 PSF.
7. DESIGN CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS = 4,000 PSI (MIN).
8. REINFORCEMENT:
  - CARBON-STEEL DEFORMED BARS: ASTM A615, fy = 60 KSI (MIN.)
  - WELDED WIRE REINFORCEMENT (DEFORMED): ASTM A1064 fy = 70 KSI (MIN.)
9. COPOLYMER POLY PROPYLENE STEEL REINFORCED STEPS I.A.W. ASTM C478 SPACED 16" O.C.
10. LIFT LOOPS, PINS OR UTILITY ANCHORS PROVIDED FOR HANDLING. CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING OLD CASTLE PRECAST, INC. LIFTING INSTRUCTIONS AS SHOWN ON BACK OF SHIPPING TICKET.

**CONCRETE RISER SUMMARY TABLE**

SEDIMENT BASIN ID	A	B	C
SEDIMENT BASIN ID	BOTTOM EL./ORIFICE INVERT EL. (FT.)	RISER SECTION HEIGHT (FT.)	ORIFICE SIZE (IN.)
PT-SB-1	557'	2'	8"
W-SB-1	500'	0' (NOT USED)	7"
P-SB-1	450'	2'	(2) 8"
P-SB-2	481'	2'	7"
P-SB-3	490'	2'	8"
NE-SB-1	427'	2'	8"
NE-SB-2	412'	0' (NOT USED)	6"
NE-SB-3	412'	2'	6"
NE-SB-4	479'	0' (NOT USED)	8"

**7 CONCRETE RISER SCALE: N.T.S.**



DRAWING PATH: R:\CADD\Draws\Cherokee\2017\177\DWG\ES&C\DETAILS (SHEET 2 OF 4).dwg



NO.	DATE	BY	CHK	CIS	DESCRIPTION
3-23-21					REVISED INITIAL PROCESS PLAN

**DETAILS (SHEET 2 OF 4)**  
 FAIRFIELD-177 DEVELOPMENT SITE, E85C PLAN - INITIAL PHASE  
 LUCK STONE CORPORATION  
 FAIRFIELD COUNTY, SOUTH CAROLINA

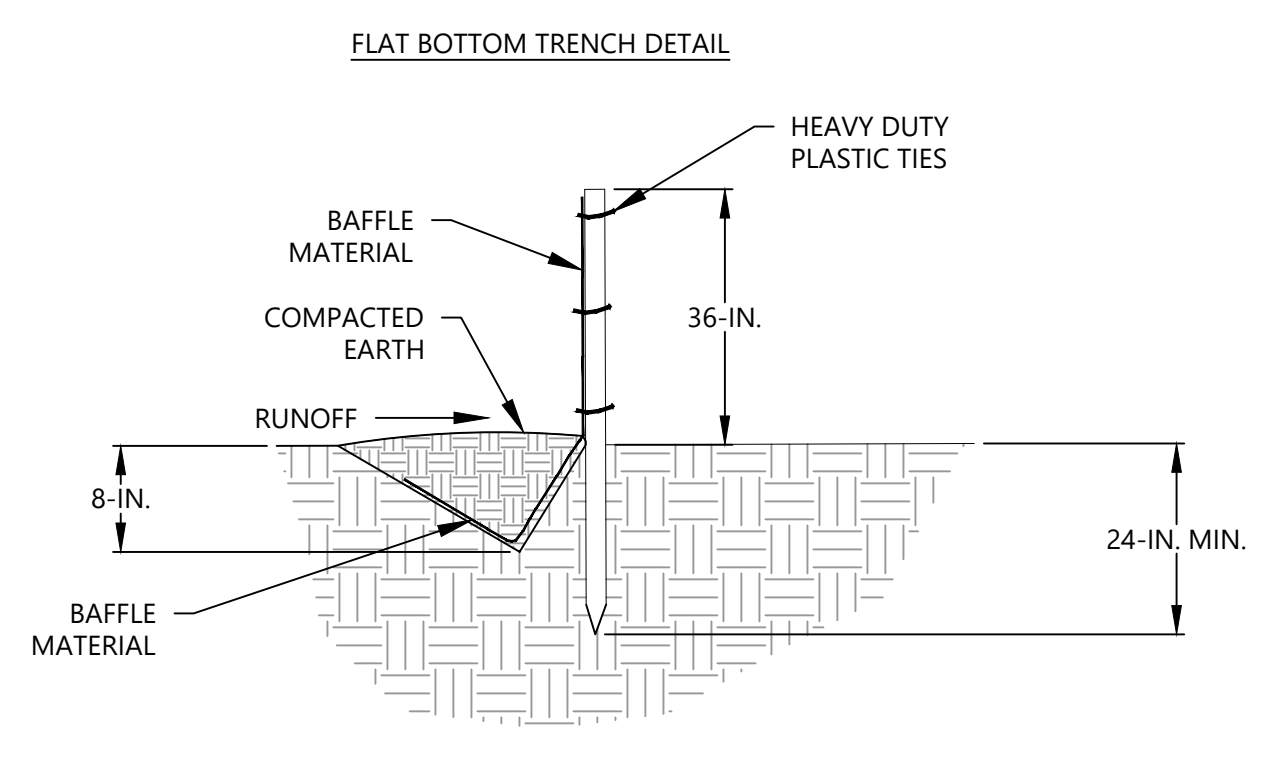
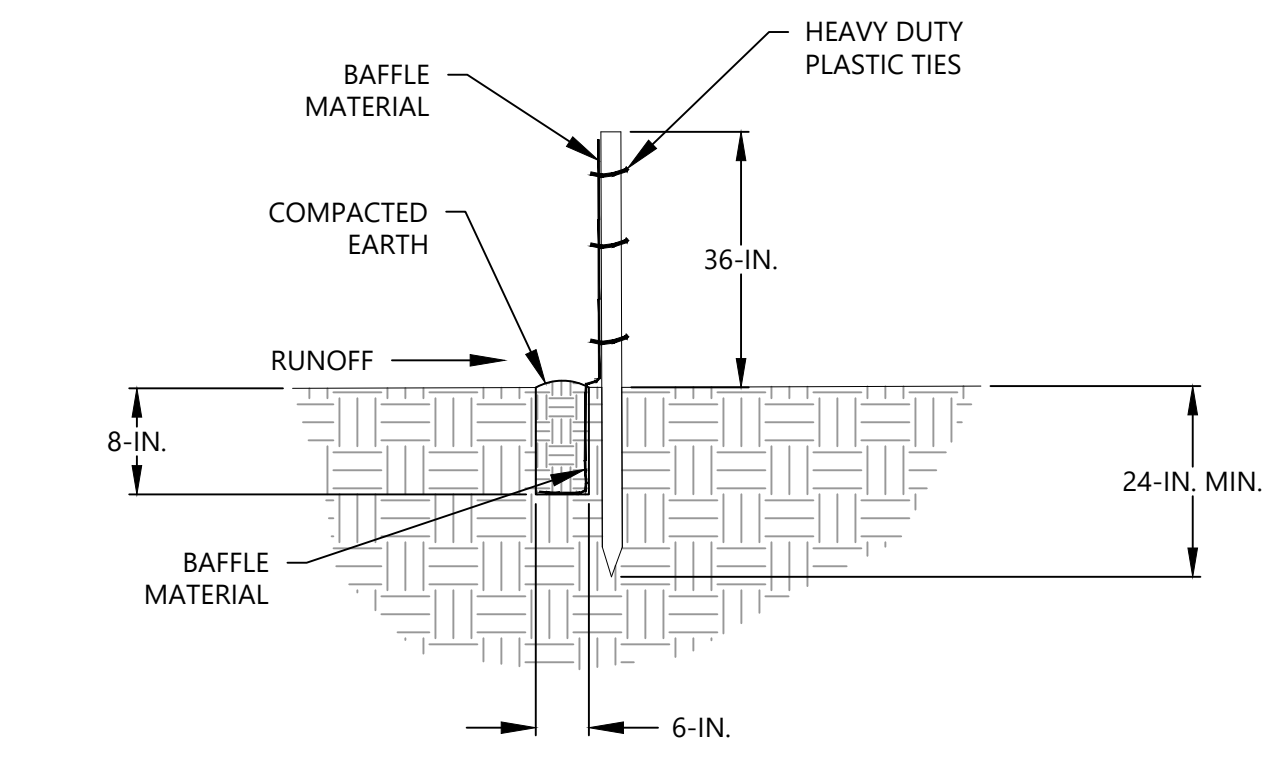
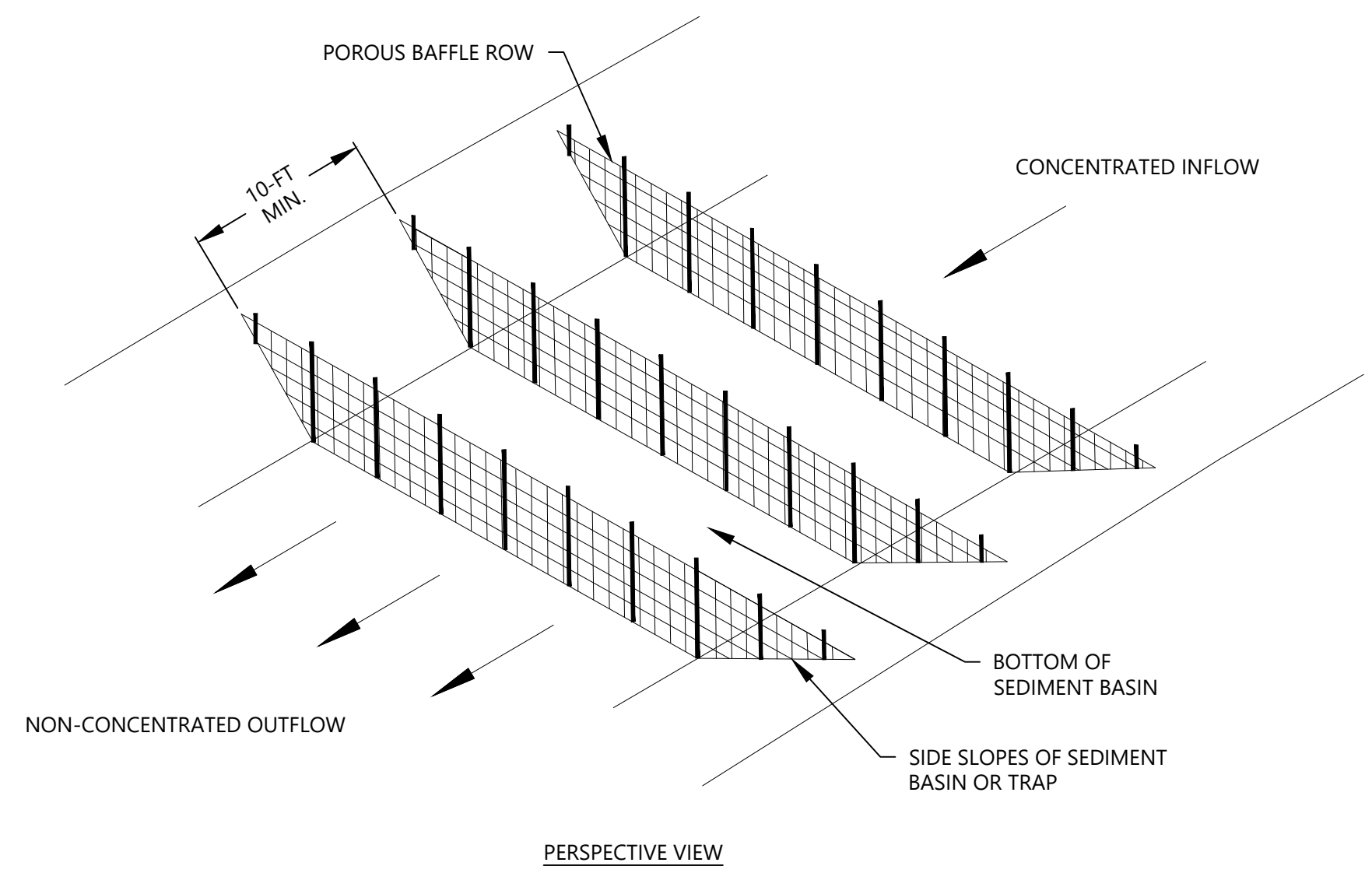
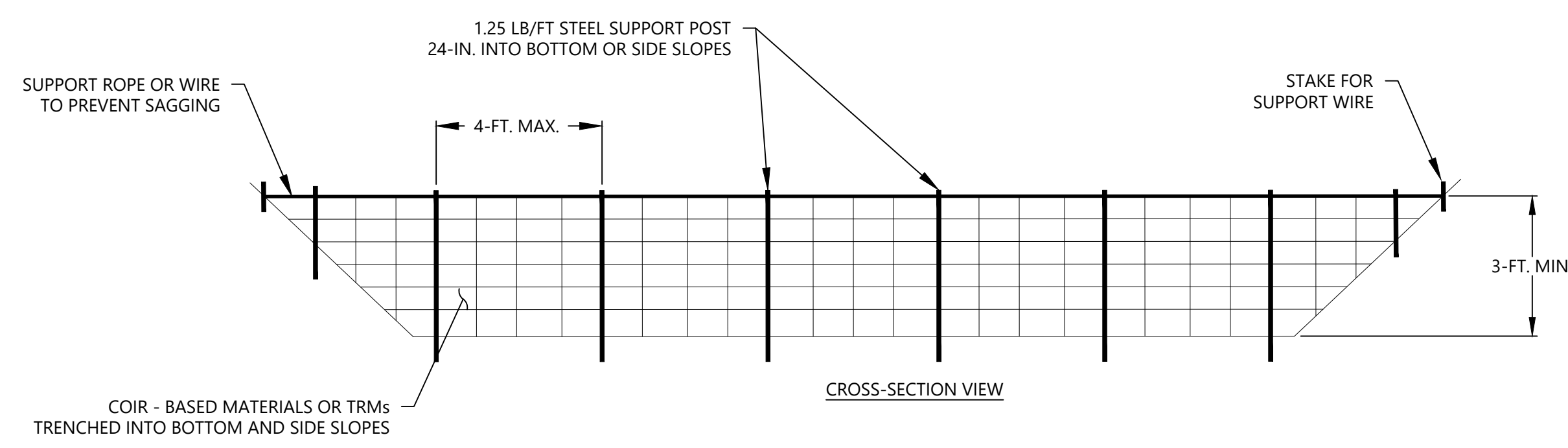
PROJECT NUMBER  
**210730C**  
DRAWING NUMBER





9751 SOUTHERN PINE BLVD  
CHARLOTTE, NC 28273  
(704) 523-4726

ENGINEERING FIRM  
LICENSE NUMBER: F-0176



**BAFFLES - POST REQUIREMENTS**

- POROUS BAFFLE POSTS MUST BE 60-IN. TO 96-IN. LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS:
  - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
  - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-IN. AND A NOMINAL "T" LENGTH OF 1.48-IN.
  - WEIGH 1.25 POUNDS PER FOOT (± 8%)
- POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF BAFFLE MATERIAL.
- INSTALL POSTS TO A MINIMUM OF 24-IN. A MINIMUM HEIGHT OF 1-IN. TO 2-IN. ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3-FT. SHALL BE MAINTAINED ABOVE THE GROUND.
- POST SPACING SHALL BE AT A MAXIMUM OF 4-FT. ON CENTER.

**BAFFLES - MATERIAL REQUIREMENTS**

- BAFFLE MATERIAL MUST BE COMPOSED OF COIR-BASED MATERIALS OR TURF REINFORCEMENT MATTING (TRM) THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
  - HAVE A LIGHT PENETRATION (% OPENINGS) BETWEEN 10-35%;
  - FREE OF LOOSE STRAW MATERIAL;
  - HAVE A MINIMUM TENSILE STRENGTH OF 145 LB/FT. AND;
  - HAVE A MINIMUM WIDTH OF 48-IN.
- 12-IN. OF THE FABRIC SHOULD BE PLACED WITHIN EXCAVATED TRENCH AND TOED IN WHEN THE TRENCH IS BACKFILLED OR BAFFLE MATERIAL MAY BE STAPLED INTO GROUND BY USING 12-IN. STAPLES WITH A MAXIMUM SPACING OF 12-IN.
- BAFFLE MATERIAL SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE WIDTH OF THE SEDIMENT BASIN OR TRAP TO AVOID JOINTS.

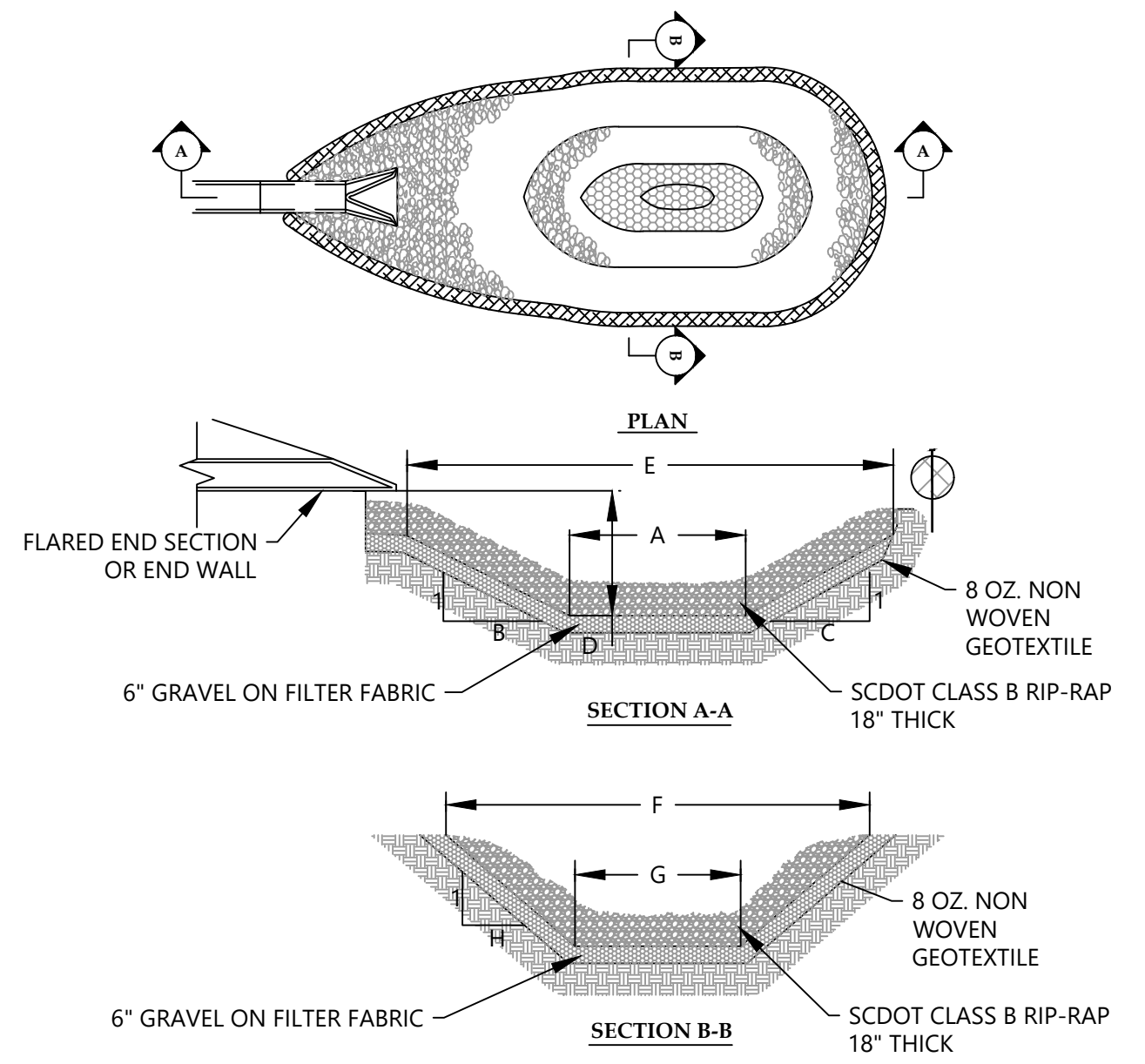
**BAFFLES - GENERAL NOTES**

- ATTACH BAFFLE TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED ALONG THE ABOVE GROUND PORTION OF EACH POST.
- INSTALL THE BAFFLE ROWS PERPENDICULAR TO THE DIRECTION OF THE STORMWATER FLOW AND PLACE EACH BAFFLE THE PROPER DISTANCE FROM INLET AND OUTLETS TO ALLOW ACCESS FOR MAINTENANCE AND CLEAN-OUT.
- EXTEND BAFFLE TO A MINIMUM OF 3 FEET.

**BAFFLES - INSPECTION & MAINTENANCE**

- THE KEY TO FUNCTIONAL POROUS BAFFLES IS WEEKLY INSPECTION, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
- REGULAR INSPECTIONS OF POROUS BAFFLES SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVEN THAT PRODUCES 1/2-IN. OR MORE OF PRECIPITATION.
- ATTENTION TO SEDIMENT ACCUMULATIONS ALONG EACH ROW OF BAFFLES IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE BAFFLE ROW OR WHEN IT REACHES THE CLEAN-OUT HEIGHT OF THE SEDIMENT BASIN OR TRAP, WHICHEVER IS REACHED FIRST.
- REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
- CHECK FOR AREAS WHERE STORMWATER RUNOFF HAS ERODED A CHANNEL BENEATH EACH ROW OF BAFFLES, OR WHERE THE BAFFLE HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE BAFFLE.
- CHECK FOR TEARS/RIPS WITHIN THE BAFFLES, AREAS WHERE THE BAFFLE HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE BAFFLE INEFFECTIVE. REMOVED DAMAGED BAFFLES AND REINSTALL NEW BAFFLES IMMEDIATELY.
- POROUS BAFFLES SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED AND ONCE IT IS REMOVED, THE RESULTING DISTURBED AREA SHALL BE PERMANENTLY STABILIZED.
- REMOVE ANY ACCUMULATED SEDIMENT UPON BAFFLE REMOVAL. DISPOSE OF SEDIMENT OFF-SITE ACCORDING TO STATE AND LOCAL REGULATIONS.

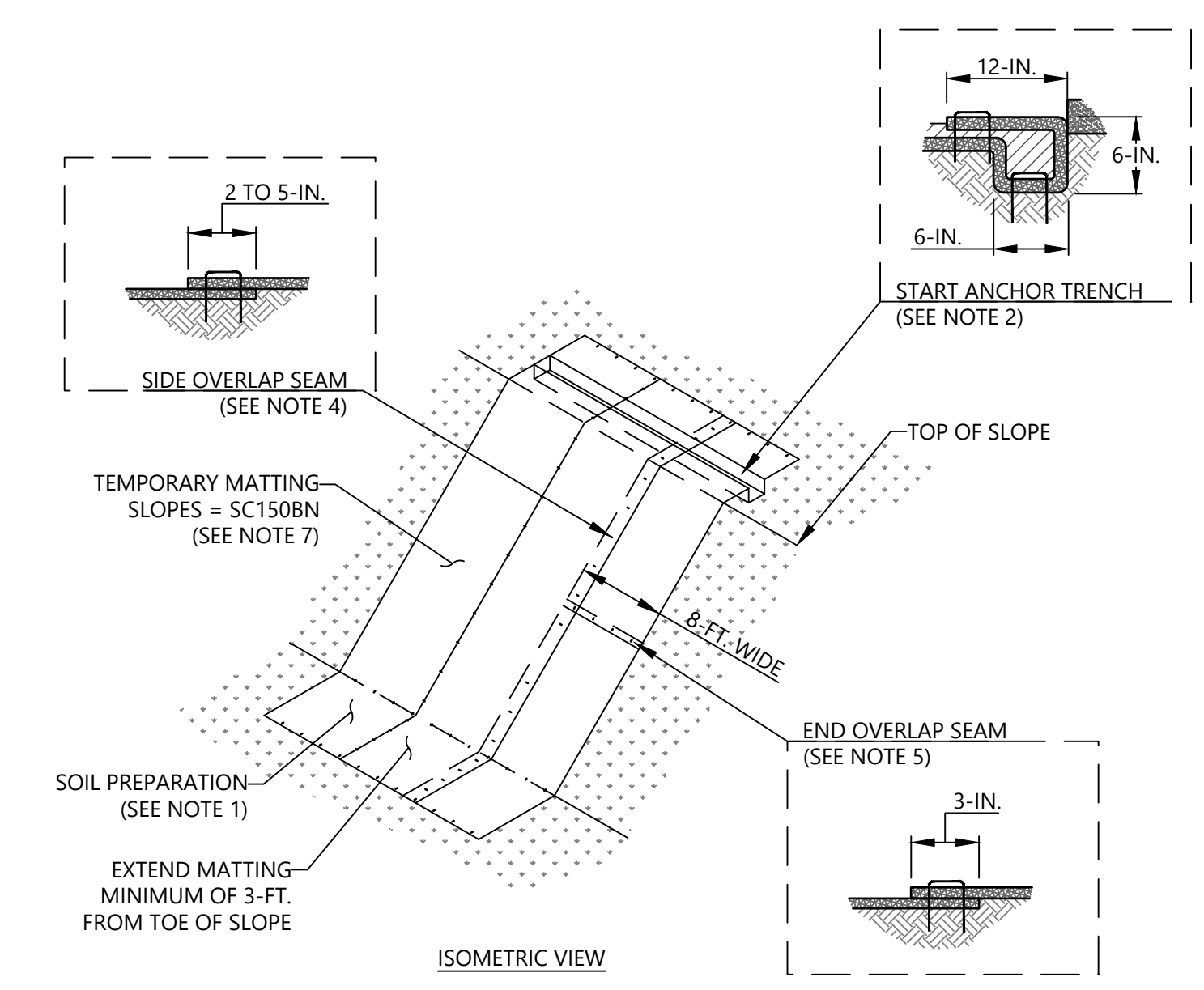
**8 POROUS BAFFLES**  
SCALE: N.T.S.



**MAINTENANCE**  
INFLUNGE POOL AT LEAST ONCE PER SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT GREATER THAN OR EQUAL TO 0.5-INCH IN 24 HOURS. REMOVE SEDIMENT AND RESTORE TO ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE POOL. CHECK EMBANKMENT, LINING, AND OUTLET AREA FOR ANY DAMAGE AND REPAIR AS NECESSARY, AS SOON AS PRACTICAL.

ID	A	B	C	D	E	F	G	H
PT-SB-1	1.4	3.0	3.0	1.8	12.5	8.8	1.4	2.0
W-SB-1	1.3	3.0	3.0	1.7	11.3	8.0	1.3	2.0
P-SB-1	2.2	3.0	3.0	2.7	18.5	13.0	2.1	2.0
P-SB-2	1.3	3.0	3.0	1.7	11.4	8.0	1.3	2.0
P-SB-3	1.5	3.0	3.0	1.9	12.9	9.0	1.5	2.0
NE-SB-1	1.5	3.0	3.0	1.9	12.7	8.9	1.4	2.0
NE-SB-2	1.2	3.0	3.0	1.5	10.5	7.4	1.2	2.0
NE-SB-3	1.2	3.0	3.0	1.6	10.7	7.5	1.2	2.0
NE-SB-4	1.4	3.0	3.0	1.7	11.8	8.3	1.3	2.0

**9 PLUNGE POOL**  
SCALE: N.T.S.



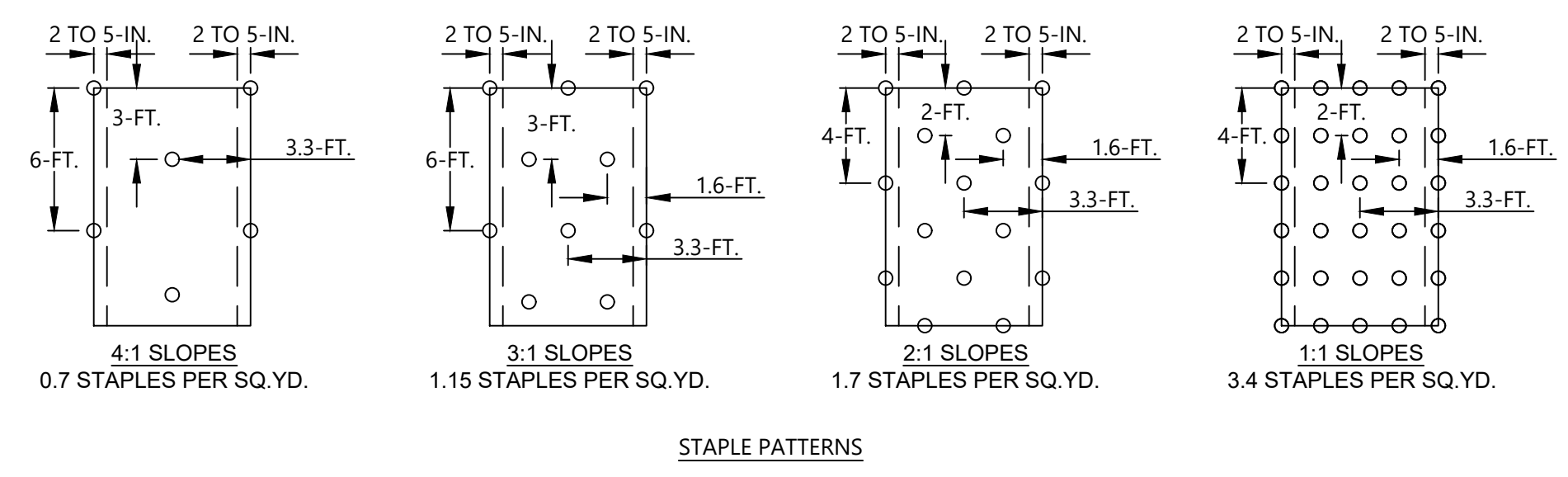
**SLOPE MATTING NOTES**

- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPs), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECPs IN A 6-IN. DEEP X 6-IN. WIDE TRENCH WITH APPROXIMATELY 12-IN. OF RECPs EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPs WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12-IN. APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12-IN. PORTION OF RECPs BACK OVER THE SEED AND COMPACTED SOIL. SECURE RECPs OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12-IN. APART ACROSS THE WIDTH OF THE RECPs.
- ROLL THE RECPs DOWN OR HORIZONTALLY ACROSS THE SLOPE BASED ON ENVIRONMENT INSPECTOR. RECPs WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECPs MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
- THE EDGES OF PARALLEL RECPs MUST BE STAPLED WITH APPROXIMATELY 2 TO 5-IN. OVERLAP DEPENDING ON THE RECP TYPE.
- CONSECUTIVE RECPs SPICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3-IN. OVERLAP. STAPLE THROUGH OVERLAPPED AREA. APPROXIMATELY 12-IN. APART ACROSS ENTIRE RECPs WIDTH. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6-IN. MAY BE NECESSARY TO PROPERLY SECURE THE RECPs.
- TEMPORARY MATTING SHALL BE NORTH AMERICAN GREEN BIONET SC150BN OR ENGINEER APPROVED EQUIVALENT.

**SLOPE MATTING MAINTENANCE**

- INSPECT AT LEAST ONCE EVERY CALENDAR WEEK AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5-IN. OR GREATER.
- MAKE ANY NECESSARY REPAIRS IMMEDIATELY.
- GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED, AND EROSION MUST NOT OCCUR BENEATH THE RECP.
- ANY AREAS OF THE RECP THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED.
- IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED.
- MONITOR AND REPAIR THE RECP AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.

REF: DETAIL BASED ON NCDEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, CHAPTERS 6 AND 8 REVISED, MAY 2013



**10 TEMPORARY MATTING SLOPES**  
SCALE: N.T.S.

NO.	DATE	REVISION	INITIAL	PROCESS	PLANT	DESCRIPTION	BY	CHK	CIS
1	3-23-21								

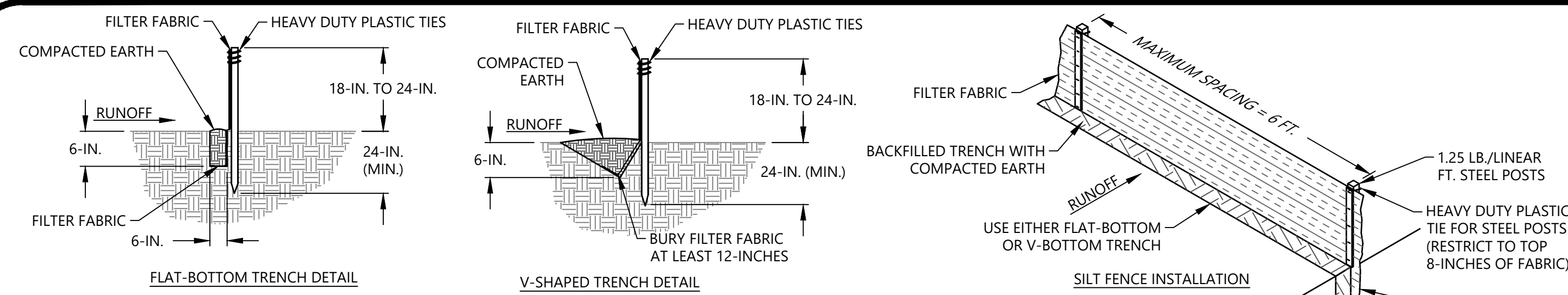
**DETAILS (SHEET 3 OF 4)**

PROJECT NUMBER: 210730C  
DRAWING NUMBER: 5

FAIRFIELD 1-77 DEVELOPMENT SITE, E&S PLAN - INITIAL PHASE  
LUCK STONE CORPORATION  
FAIRFIELD COUNTY, SOUTH CAROLINA

DRAWING PATH: R:\CADD\Detail\2021\LUCK STONE 1-77\DWG\ES&S\DETAILS (SHEET 3 OF 4).dwg





**SILT FENCE NOTES:**

- DO NOT PLACE SILT FENCE ACROSS CHANNELS OR IN OTHER AREAS SUBJECT TO CONCENTRATED FLOWS. SILT FENCE SHOULD NOT BE USED AS A VELOCITY CONTROL BMP. CONCENTRATED FLOWS ARE ANY FLOWS GREATER THAN 0.5 CFS.
- MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE SILT FENCE SHALL BE 100- FEET.
- MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO THE FENCE LINE) SHALL BE 2:1.
- SILT FENCE JOINTS, WHEN NECESSARY, SHALL BE COMPLETED BY ONE OF THE FOLLOWING OPTIONS:
  - WRAP EACH FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 1-FOOT MINIMUM OVERLAP;
  - OVERLAP SILT FENCE BY INSTALLING 3- FEET PAST THE SUPPORT POST TO WHICH THE NEW SILT FENCE ROLL IS ATTACHED. ATTACH OLD ROLL TO NEW ROLL WITH HEAVY-DUTY PLASTIC TIES; OR,
  - OVERLAP ENTIRE WIDTH OF EACH SILT FENCE ROLL FROM ONE SUPPORT POST TO THE NEXT SUPPORT POST.
- ATTACH FILTER FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED WITHIN THE TOP 8-INCHES OF THE FABRIC.
- INSTALL THE SILT FENCE PERPENDICULAR TO THE DIRECTION OF THE STORMWATER FLOW AND PLACE THE SILT FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.
- INSTALL SILT FENCE CHECKS (TIE-BACKS) EVERY 50-100 FEET, DEPENDENT ON SLOPE, ALONG SILT FENCE THAT IS INSTALLED WITH SLOPE AND WHERE CONCENTRATED FLOWS ARE EXPECTED OR ARE DOCUMENTED ALONG THE PROPOSED/INSTALLED SILT FENCE.

**SILT FENCE POST REQUIREMENTS:**

- SILT FENCE POSTS MUST BE 48-INCH LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS:
  - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
  - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND A NOMINAL "I" LENGTH OF 1.48-INCHES.
  - WEIGH 1.25 POUNDS PER FOOT (± 8%)
- POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF FILTER FABRIC.
- STEEL POSTS MAY NEED TO HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM WHEN INSTALLED ALONG STEEP SLOPES OR INSTALLED IN LOOSE SOILS. THE PLATE SHOULD HAVE A MINIMUM CROSS SECTION OF 17- SQUARE INCHES AND BE COMPOSED OF 15 GAUGE STEEL. AT A MINIMUM, THE METAL SOIL STABILIZATION PLATE SHOULD BE COMPLETELY BURIED.
- INSTALL POSTS TO A MINIMUM OF 24-INCHES. A MINIMUM HEIGHT OF 1 TO 2-INCHES ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3 FEET SHALL BE MAINTAINED ABOVE THE GROUND.
- POST SPACING SHALL BE AT A MAXIMUM OF 6- FEET ON CENTER.

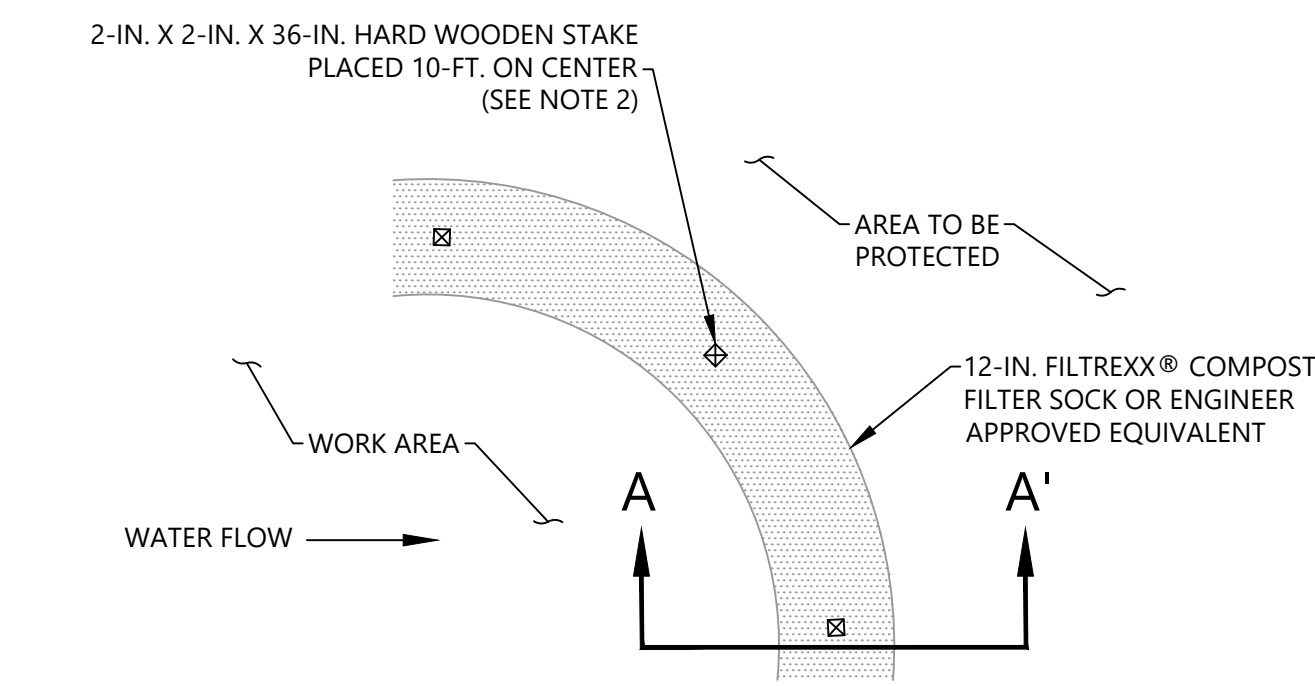
**SILT FENCE FABRIC REQUIREMENTS:**

- SILT FENCE MUST BE COMPOSED OF WOVEN GEOTEXTILE FILTER FABRIC THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
  - COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES THAT ARE FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER;
  - FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION;
  - FREE OF ANY DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES; AND,
  - HAVE A MINIMUM WIDTH OF 36-INCHES.
- USE ONLY FABRIC APPEARING ON SC DOT'S QUALIFIED PRODUCTS LISTING (QPL), APPROVAL SHEET #34, MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SC DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- 12-INCHES OF THE FABRIC SHOULD BE PLACED WITHIN EXCAVATED TRENCH AND SECURED WHEN THE TRENCH IS BACKFILLED.
- FILTER FABRIC SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS.
- FILTER FABRIC SHALL BE INSTALLED AT A MINIMUM OF 24-INCHES ABOVE THE GROUND.

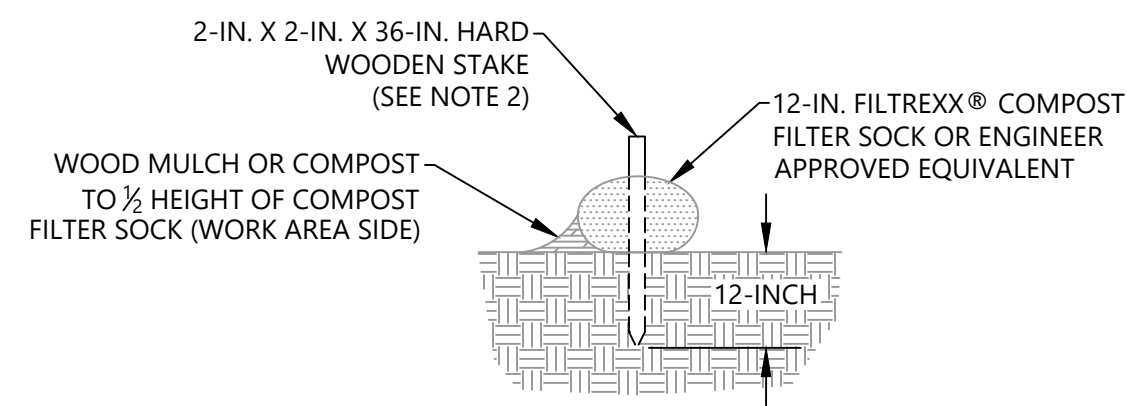
**SILT FENCE INSPECTION & MAINTENANCE:**

- THE KEY TO FUNCTIONAL SILT FENCE IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
- REGULAR INSPECTIONS OF SILT FENCE SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
- ATTENTION TO SEDIMENT ACCUMULATIONS ALONG THE SILT FENCE IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE SILT FENCE.
- REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
- CHECK FOR AREAS WHERE STORMWATER RUNOFF HAS ERODED A CHANNEL BENEATH THE SILT FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE SILT FENCE. INSTALL CHECKS/TIE-BACKS AND/OR REINSTALL SILT FENCE, AS NECESSARY.
- CHECK FOR TEARS WITHIN THE SILT FENCE, AREAS WHERE SILT FENCE HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE SILT FENCE INEFFECTIVE. REMOVE DAMAGED SILT FENCE AND REINSTALL NEW SILT FENCE IMMEDIATELY.
- SILT FENCE SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED AND ONCE IT IS REMOVED, THE RESULTING DISTURBED AREA SHALL BE PERMANENTLY STABILIZED.

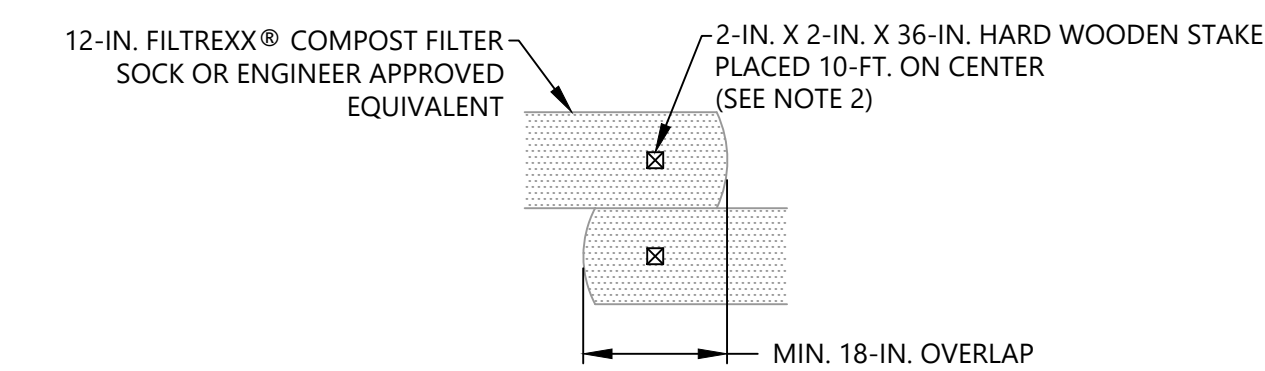
**11**  
**6** SILT FENCE  
SCALE: N.T.S.



PLAN-VIEW



SECTION A-A'



CONNECTION DETAIL

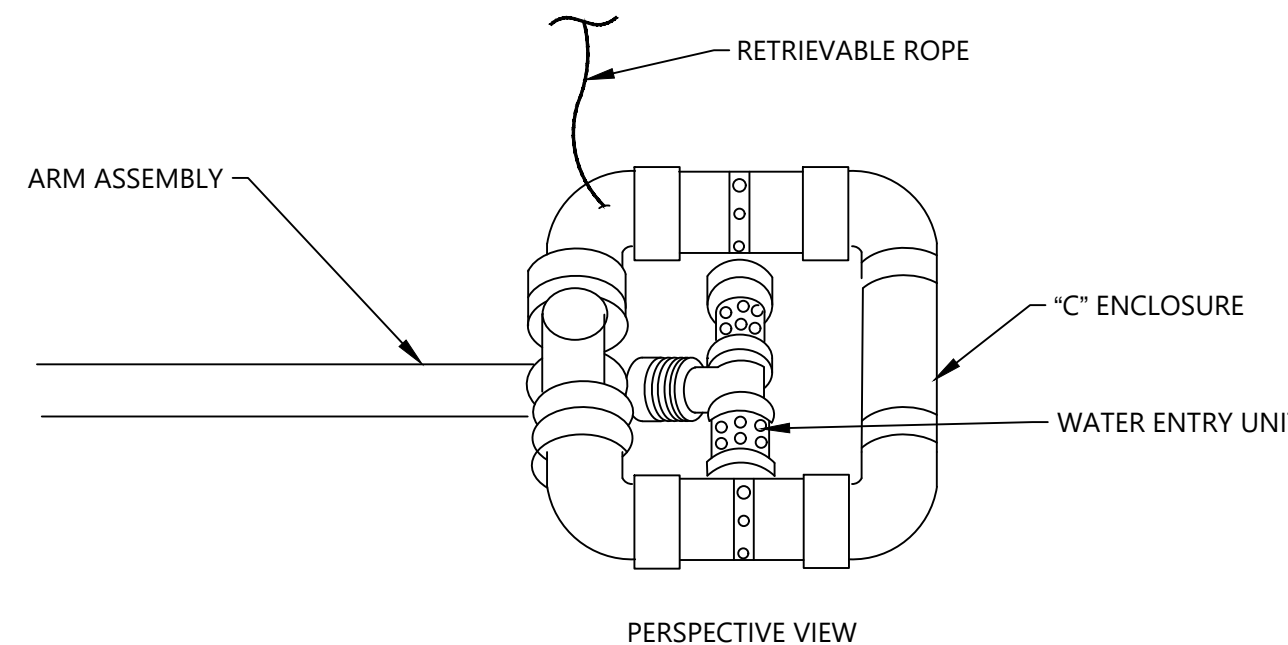
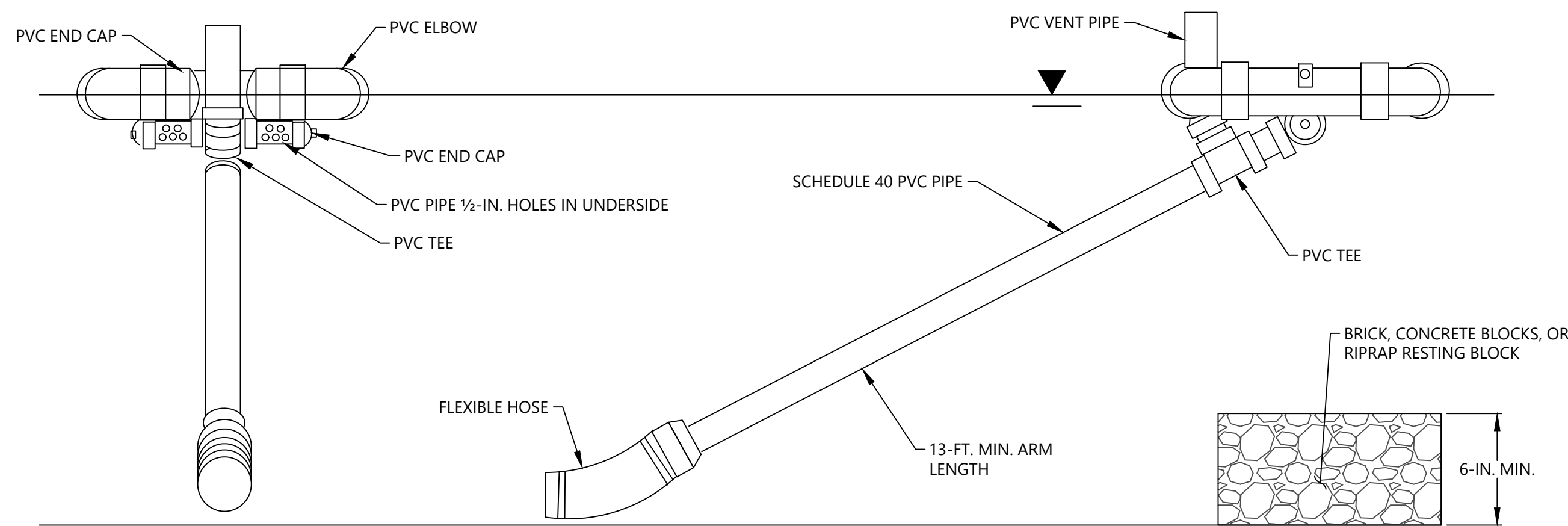
**COMPOST FILTER SOCK NOTES:**

- USE 12-INCH FILTREXX® COMPOST FILTER SOCK OR ENGINEER APPROVED EQUIVALENT.
- HARD WOODEN STAKES SHALL BE INSTALLED THROUGH THE MIDDLE OF THE COMPOST FILTER SOCK. SPACE STAKES EVERY 10 LINEAR FEET. DRIVE THE STAKE TO A MINIMUM OF 1- FT. INTO THE GROUND LEAVING A MINIMUM OF 3-IN. PROTRUDING ABOVE THE COMPOST FILTER SOCK.
- WHEN MULTIPLE COMPOST FILTER SOCKS ARE USED, INSTALL MINIMUM OF 18-IN. OVERLAP. WHEN INSTALLING, USE 2-IN. BY 2-IN. BY 3- FT. WOODEN STAKES TO HOLD COMPOST FILTER SOCKS IN PLACE.
- TO PREVENT WATER & SEDIMENT FROM FLOWING AROUND MEASURES A MINIMUM 10- FT. LENGTH OF COMPOST FILTER SOCK MUST BE PLACED UPSLOPE AT A 30 DEGREE ANGLE FROM THE ENDS OF THE MEASURES.
- SEDIMENT CONTROL SHOULD BE INSTALLED PARALLEL TO THE BASE OF THE SLOPE OR OTHER DISTURBED AREA. IN CHALLENGING CONDITIONS (I.E. 2:1 SLOPES), A SECOND SEDIMENT CONTROL SHALL BE CONSTRUCTED AT THE TOP OF THE SLOPE.
- LOOSE COMPOST MAY BE BACKFILLED ALONG THE UPSLOPE SIDE OF THE SEDIMENT CONTROL, FILLING THE SEAM BETWEEN THE SOIL SURFACE AND DEVICE, IMPROVING FILTRATION AND SEDIMENT RETENTION.

**COMPOST FILTER SOCK MAINTENANCE:**

- REGULAR INSPECTIONS OF COMPOST FILTER SOCKS SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2-IN. OR MORE OF PRECIPITATION.
- MAKE ANY NECESSARY REPAIRS IMMEDIATELY.
- REMOVE ACCUMULATED SEDIMENT OVER 1/2 THE HEIGHT OF THE COMPOST FILTER SOCK AND ANY DEBRIS. THE COMPOST SOCK MUST BE REPLACED IF CLOGGED OR TORN.
- IF PONDING BECOMES EXCESSIVE, THE SOCK MAY NEED TO BE REPLACED WITH A LARGER DIAMETER OR A DIFFERENT MEASURE. THE SOCK NEEDS TO BE REINSTALLED IF UNDERMINED OR DISLODGED.
- THE COMPOST SOCK SHALL BE INSPECTED UNTIL LAND DISTURBANCE IS COMPLETE AND THE AREA ABOVE THE MEASURE HAS BEEN PERMANENTLY STABILIZED.
- SHOULD THE SILT FENCE ADJACENT TO THE OUTLET COLLAPSE, TEAR, OR BECOME INEFFECTIVE, REPAIR OR REPLACE IT PROMPTLY.
- REMOVE ALL COMPOST FILTER SOCK MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

**13**  
**6** COMPOST FILTER SOCK  
SCALE: N.T.S.



**MAINTENANCE NOTES:**

- INSPECT SKIMMER AT LEAST ONCE PER SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT GREATER THAN OR EQUAL TO 0.5-IN. IN 24 HOURS.

SKIMMER TABLE			
SEDIMENT BASIN	PURPOSE	SIZE (IN.)	ORIFICE SIZE (IN.)
PT-SB-1	E&SC DEWATERING	8"	8"
W-SB-1	E&SC DEWATERING	8"	7"
P-SB-1	E&SC DEWATERING	8"	8"
P-SB-2	E&SC DEWATERING	8"	7"
P-SB-3	E&SC DEWATERING	8"	8"
NE-SB-1	E&SC DEWATERING	8"	8"
NE-SB-2	E&SC DEWATERING	6"	6"
NE-SB-3	E&SC DEWATERING	8"	6"
NE-SB-4	E&SC DEWATERING	8"	8"

**12**  
**6** SKIMMER  
SCALE: N.T.S.



9751 SOUTHERN PINE BLVD  
CHARLOTTE, NC 28273  
(704) 523-4726

ENGINEERING FIRM  
LICENSE NUMBER: F-0176



NO.	DATE	BY	CHK	CIS	DESCRIPTION
3-23-21					REVISED INITIAL PROCESS PLANT

DETAILS (SHEET 4 OF 4)

PROJECT NUMBER  
210730C  
DRAWING NUMBER

6

6