

McADAMS

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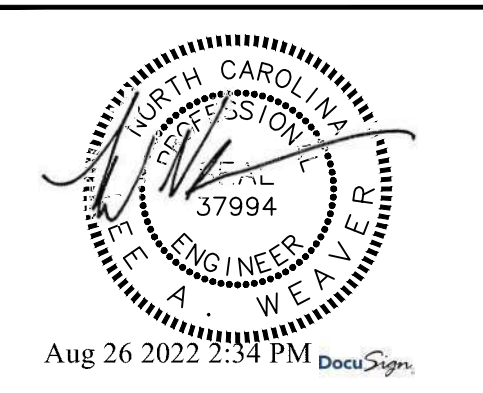
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UNIVERSITY PLACE PHASE 1D ZONING COMPLIANCE PERMIT CHAPEL HILL, NC 27514



Aug 26 2022 2:34 PM DocuSign

REVISIONS

Table with 3 columns: NO., DATE, DESCRIPTION. Includes revisions for 04/22/2022, 06/29/2022, and 08/16/2022.

PLAN INFORMATION

PROJECT NO. RAM-19000 FILENAME RAM19000-EC1 CHECKED BY LAW DRAWN BY MRO SCALE 1"=40' DATE 11.12.2021 SHEET

EROSION CONTROL & CM NOTES C6.01-1D

FINAL DRAWING - RELEASED FOR CONSTRUCTION

EROSION CONTROL NOTES:

- 1. EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE. THE CONTRACTOR SHALL CALL FOR AN INSPECTION BY ORANGE COUNTY SEDIMENTATION AND EROSION CONTROL (SEC) ONCE INITIAL MEASURES ARE IN PLACE.
2. REQUIRED TREE PROTECTION FENCING SHALL BE INSTALLED AND A PRE-CONSTRUCTION CONFERENCE SCHEDULED WITH THE TOWN'S URBAN FORESTER PRIOR TO BEGINNING LAND DISTURBANCE.
3. SEDIMENT/EROSION CONTROL DEVICES MUST BE CHECKED AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE.
4. IN ADDITION TO THE REQUIREMENT DURING CONSTRUCTION FOR THE INSPECTION OF EROSION CONTROL DEVICES AFTER EVERY RAINFALL, THE CONTRACTOR SHALL INSPECT THE EROSION AND SEDIMENT CONTROL DEVICES AND OFF-SITE ROADWAYS DAILY, MAKE ANY NECESSARY REPAIRS OR ADJUSTMENTS TO THE DEVICES, REMOVE DEPOSITION OF WET OR DRY SILT ON ADJACENT ROADWAYS AND MAINTAIN INSPECTION LOGS DOCUMENTING THE DAILY INSPECTIONS AND ANY NECESSARY REPAIRS.
5. A COPY OF THE APPROVED EROSION CONTROL PLAN MUST BE ON FILE AT THE JOB SITE AT ALL TIMES.
6. CONSTRUCTION, MAINTENANCE, AND REMOVAL OF ALL EROSION CONTROL DEVICES ARE THE RESPONSIBILITY OF THE GRADING CONTRACTOR UNLESS OTHERWISE NOTED.
7. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
8. NO DEBRIS SHALL BE TRACKED ONTO ANY EXISTING PAVED AREAS OR PUBLIC RIGHT OF WAY. IF THE SITUATION OCCURS WHERE MULCH, ROCK AND DEBRIS IS TRACKED ONTO PAVEMENT, THE CONTRACTOR SHALL CLEAN THE PAVEMENT AND INSTALL ADDITIONAL MEASURES TO PREVENT THE FUTURE OCCURRENCE.
9. DURING THE CONSTRUCTION PHASE, ADDITIONAL EROSION AND SEDIMENT CONTROLS MAY BE REQUIRED IF THE PROPOSED MEASURES DO NOT CONTAIN THE SEDIMENT ON SITE. THE EROSION CONTROL INSPECTOR MAY REQUIRE ADDITIONAL FIELD MEASURES AS NECESSARY TO PROVIDE ADEQUATE PROTECTION FROM RECEIVING WATER COURSES.
10. PROTECTION OF EXISTING VEGETATION: AT THE START OF GRADING INVOLVING THE STRIPPING OF TOPSOIL OR GRADING OF EXISTING GRADE AROUND A TREE, A CLEAR, SHARP, PROTECTION FENCE SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA AND SHALL BE POSTED ON THE PROTECTION FENCE. A PROTECTION FENCE CONSTRUCTED OF MATERIAL RESISTANT TO DEGRADATION BY SUN, WIND, AND MOISTURE FOR THE DURATION OF THE CONSTRUCTION, SHALL BE INSTALLED AT THE SAME TIME AS THE EROSION CONTROL MEASURES AND SHALL BE IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE.
11. A CONSTRUCTION SEQUENCE HAS BEEN PROVIDED. INSTALLATION OF ALL PROPOSED SEDIMENTATION & EROSION CONTROL MEASURES IN THE SEQUENCE(S) PROVIDED AND MAINTENANCE OF THOSE DEVICES IS REQUIRED. THE CONTRACTOR MAY BE ALLOWED, WITH PRIOR APPROVAL FROM THE OWNER, TO COORDINATE CHANGES TO THE PLAN WITH THE ON-SITE SEDIMENTATION & EROSION CONTROL INSPECTOR AND THE ENGINEER.
12. PROVIDE INLET PROTECTION AROUND ALL SITE STORM INLETS. PROTECT OPEN PIPES UNDER CONSTRUCTION WITH EITHER PLYWOOD OR WITH MESH AND GRAVEL WEIRS. RUNOFF SHALL NOT BE ALLOWED IN ANY OPEN TRENCH.
13. CONTRACTOR TO VERIFY SILT FENCE OUTLET PLACEMENT AT LOW POINTS AS THEY EXIST OR DEVELOP. ADDITIONAL SILT FENCE OUTLETS MAY BE REQUIRED TO PREVENT EROSION DURING AND AFTER CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES. IF ADDITIONAL SILT FENCE OUTLETS ARE NECESSARY, CONTRACTOR TO ADD ADDITIONAL SILT FENCE OUTLETS PER ENGINEER, NCDOT EROSION CONTROL INSPECTOR, OR OWNER DIRECTION. IF FLOODING OF WATER OR SEDIMENT OCCURS ALONG SILT FENCE, CONTRACTOR SHALL INSTALL AN ADDITIONAL SILT FENCE OUTLET.
14. TEMPORARY DIVERSIONS SHALL BE MAINTAINED DAILY BY CONTRACTOR SO THAT THEY ARE FUNCTIONAL AT THE END OF EACH WORKDAY AND WHEN STOPPING WORK FOR RAIN.

CONTRACTOR'S MAINTENANCE PLAN:

- 1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
2. SEDIMENT BASINS SHALL BE INSPECTED REGULARLY DURING LAND DISTURBING ACTIVITIES AND AFTER EACH RUNOFF-PRODUCING RAINFALL. SEDIMENT DEPOSITS SHALL BE REMOVED AS NEEDED TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAINFALL EVENT, AND TO REDUCE PRESSURE ON THE FENCE. FENCING MATERIALS AND SEDIMENT DEPOSITS SHALL BE REMOVED, AND THE AREA BROUGHT TO GRADE FOLLOWING STABILIZATION OF UPGRADIENT DISTURBED AREAS.
3. SEDIMENT FENCES SHALL BE INSPECTED AT LEAST ONCE A WEEK AND AFTER EACH RUNOFF-PRODUCING RAINFALL. REPAIRS SHALL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHALL BE REMOVED AS NEEDED TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAINFALL EVENT, AND TO REDUCE PRESSURE ON THE FENCE. FENCING MATERIALS AND SEDIMENT DEPOSITS SHALL BE REMOVED, AND THE AREA BROUGHT TO GRADE FOLLOWING STABILIZATION OF UPGRADIENT DISTURBED AREAS.
4. DIVERSION DITCHES MUST REMAIN IN PLACE UNTIL PROJECT IS STABILIZED.
5. EROSION CONTROL DURING SITE CONSTRUCTION WILL BE ACCOMPLISHED BY USE OF SILT FENCING AND SILT FENCE OUTLETS. DEVICES MUST BE EMPTIED WHEN SEDIMENT ACCUMULATION HAS REACHED 6" DEPTH.

EROSION CONTROL LEGEND

Legend showing symbols for SILT FENCE OUTLET, INLET PROTECTION, INLET PROTECTION FOR EXISTING STRUCTURES, TEMPORARY SLOPE DRAIN, FILTER BERM, CHECK DAM, SILT FENCE, TREE PROTECTION FENCE, LIMITS OF DISTURBANCE, WOODED AREA, DIVERSION DITCH, and CONSTRUCTION ENTRANCE/EXIT.

SEE SHEET C0.00 FOR ALL PROJECT, SITE, GRADING, STORM DRAINAGE AND UTILITY NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF CHAPEL HILL ENGINEERING DESIGN AND CONSTRUCTION STANDARDS

TEMPORARY SEEDING SCHEDULE

Table with 3 columns: SEEDING DATE, SEEDING MIXTURE, APPLICATION RATE. Includes dates from JAN 1 - MAY 1 and MAY 1 - AUG 15.

SOIL AMENDMENTS

FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 4,000 LB/AC GROUND AGRICULTURE LIMESTONE AND 750 LB/AC 10-10-10 FERTILIZER (FROM AUG 15 - DEC 30, INCREASE 10-10-10 FERTILIZER TO 1000 LB/AC).

MULCH

APPLY 4000 LB/AC STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE

JAN 1 - AUG 15: REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.
AUG 15 - DEC 30: REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOP DRESS WITH 50 LB/AC OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/AC KOBE LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

NOTE: USE THE TEMPORARY SEEDING SCHEDULE ONLY WHEN DATE IS NOT CORRECT TO USE THE PERMANENT SEEDING SCHEDULE.

PERMANENT SEEDING SCHEDULE

Table with 3 columns: SEEDING DATE, SEEDING MIXTURE, APPLICATION RATE. Includes dates AUG 25 - OCT (BEST) and FEB - APR 15 (POSSIBLE).

SOIL AMENDMENTS

FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 4,000 LB/AC GROUND AGRICULTURE LIMESTONE AND 1000 LB/AC 10-10-10 FERTILIZER.

MULCH

APPLY 4000 LB/AC STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE

INSPECT AND REPAIR MULCH FREQUENTLY. REFERTILIZE IN LATE WINTER OF THE FOLLOWING YEAR. USE SOIL TESTS OR APPLY 150 LB/AC 10-10-10 FERTILIZER. MOW REGULARLY TO A HEIGHT OF 2-4 INCHES.

SEEDBED PREPARATION

AREAS TO BE SEEDDED TO BE SCARIFIED 4" DEEP. A FIRM, WELL PULVERIZED, UNIFORM SEEDBED SHOULD BE PROVIDED. FERTILIZER SHALL BE PLACED DURING SCARIFICATION AS FOLLOWS:
LIME: 45 LBS / 1,000 SF
PHOSPHOROUS: 20 LBS / 1,000 SF
FERTILIZER: 17 LBS / 1,000 SF

CONSTRUCTION SEQUENCE - STAGE 1

- 1. OBTAIN A LAND-DISTURBING PERMIT AND SCHEDULE A PRECONSTRUCTION CONFERENCE WITH ORANGE COUNTY EROSION CONTROL OFFICER, WESLEY POOLE (919)245-2587. THE PRECONSTRUCTION MEETING SHALL INCLUDE A REPRESENTATIVE FROM OWASA, TOWN OF CHAPEL HILL, TOWN OF CHAPEL HILL URBAN FORESTER, AND OWNER.
NOTE: INSTALL A RURAL TYPE MAILBOX ON THE SITE TO HOLD A COPY OF THE APPROVED EROSION CONTROL PLAN AND TO PROVIDE A PLACE FOR INSPECTORS TO LEAVE INSPECTION REPORT, COMPLIANCE NOTICES, ETC.
2. INSTALL GRAVEL CONSTRUCTION ENTRANCE(S) PER PLAN. ALSO INSTALL TEMPORARY SILT FENCING WITH OUTLETS AS SHOWN.
3. CONTRACTOR SHALL CLEAR ONLY THOSE AREAS NECESSARY TO ACCESS AND INSTALL INITIAL PERIMETER DEVICES. INSTALL INLET PROTECTION ON EXISTING INLETS AS SHOWN.
4. INSTALL INLET PROTECTION PER ORANGE COUNTY SEC STANDARDS AND SPECIFICATIONS ON ALL SPECIFIED INLETS.
5. CALL 919.245.2587 FOR ON-SITE INSPECTION BY ORANGE COUNTY EROSION CONTROL.
6. BEGIN CLEARING, DEMOLITION OF EXISTING ASPHALT AND GRAVEL AREAS, AND GENERAL GRADING OF STAGE 1 AREA. MAINTAIN DEVICES AS NEEDED.
7. NO MUD SHALL BE TRACKED ONTO EXISTING PAVEMENT OR A NOTICE OF VIOLATION FROM THE EROSION CONTROL DEPARTMENT MAY ENSUE. ADDITIONAL MEASURES MAY BE NECESSARY TO ASSURE THAT NO SEDIMENT LEAVES THE SITE.
8. PROVIDE ALL DISTURBED AREAS WITH GROUND COVER WITHIN 14 CALENDAR DAYS AFTER COMPLETION OF ANY PHASE OF CLEARING, GRUBBING OR GRADING. THE SEEDING, SEEDBED PREPARATION, MULCH AND/OR ROLLED EROSION CONTROL PRODUCT INSTALLATION MUST BE IN ACCORDANCE WITH THE SEEDING SCHEDULE PROVIDED IN THIS S&E PLAN. NOTE: SLOPES IN EXCESS OF 3H:1V SHALL BE STABILIZED WITHIN 7 DAYS AND FOR MODERATE SLOPES (SLOPES LESS THAN 3H:1V) SHALL BE STABILIZED WITHIN 14 DAYS.
9. WITH APPROVAL FROM ORANGE COUNTY EROSION CONTROL INSPECTOR, CONTINUE TO STAGE 2.

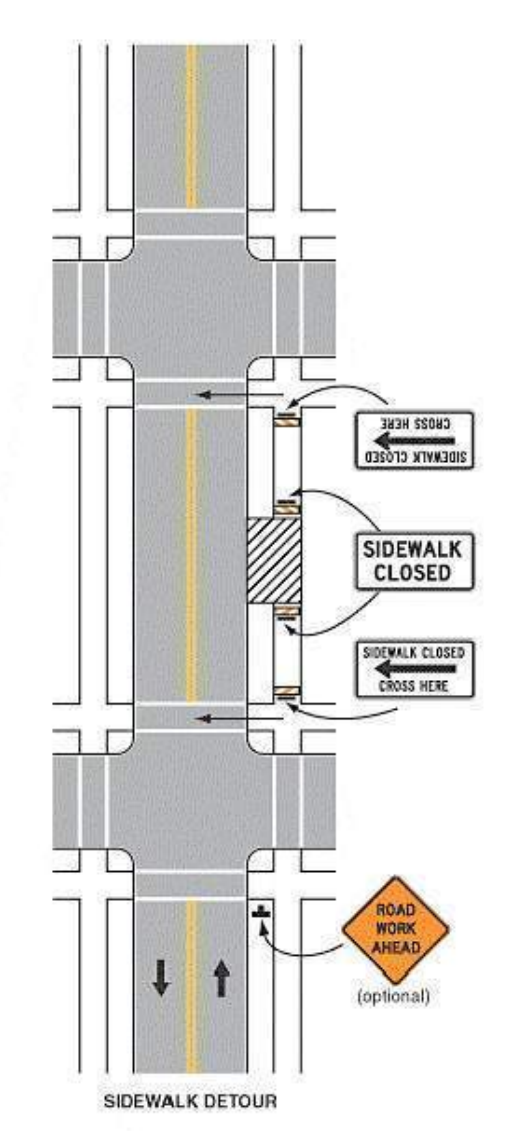
CONSTRUCTION SEQUENCE - STAGE 2

- 1. CONSTRUCT STORM DRAIN SYSTEM AS SHOWN.
2. INSTALL INLET PROTECTION ON ALL INLET STRUCTURES DURING CONSTRUCTION.
3. PROVIDE ALL DISTURBED AREAS WITH GROUND COVER WITHIN 14 CALENDAR DAYS AFTER COMPLETION OF ANY PHASE OF CLEARING, GRUBBING OR GRADING. THE SEEDING, SEEDBED PREPARATION, MULCH AND/OR ROLLED EROSION CONTROL PRODUCT INSTALLATION MUST BE IN ACCORDANCE WITH THE SEEDING SCHEDULE PROVIDED IN THIS S&E PLAN. NOTE: SLOPES IN EXCESS OF 3H:1V SHALL BE STABILIZED WITHIN 7 DAYS AND FOR MODERATE SLOPES (SLOPES LESS THAN 3H:1V) SHALL BE STABILIZED WITHIN 14 DAYS.
4. AT THE CONCLUSION OF BUILDING OR IF LAND-DISTURBING ACTIVITY IS STOPPED FOR MORE THAN 14 CONSECUTIVE CALENDAR DAYS, PERMANENT VEGETATIVE COVER SHALL BE INSTALLED IN ACCORDANCE WITH THIS S&E PLAN.
5. WHEN SITE IS AT FINAL GRADE AND NO FURTHER GRADING IS NECESSARY, CONTRACTOR SHALL STABILIZE PORTIONS OF THE SITE WITH SEED/MULCH UNTIL FINAL LANDSCAPING IS INSTALLED.
6. WHEN CONSTRUCTION IS COMPLETE, CALL OCEC TO OBTAIN FINAL INSPECTION AND CERTIFICATE OF COMPLETION TO CLOSE OUT EROSION CONTROL PERMIT.

GROUND STABILIZATION table with columns: SITE AREA DESCRIPTION, STABILIZATION TIME FRAME, STABILIZATION TIME FRAME EXCEPTIONS. Includes rows for PERIMETER DICES, SWALES, DITCHES AND SLOPES; HIGH QUALITY WATER (HQW) ZONES; SLOPES STEEPER THAN 3:1; SLOPES 3:1 OR FLATTER; ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1.

BUILDING WASTES HANDLING table with bullet points: NO PAINT OR LIQUID WASTES IN STREAM OR STORM DRAINS; DEDICATED AREAS FOR DEMOLITION, CONSTRUCTION AND OTHER WASTES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES AVAILABLE; EARTHEN-MATERIAL STOCKPILES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES AVAILABLE; CONCRETE MATERIALS MUST BE CONTROLLED TO AVOID CONTACT WITH SURFACE WATER, WETLANDS, OR BUFFERS.

Figure 6H-28. Sidewalk Detour or Diversion (TA-28)



Typical Application 28

Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in the figure.

FIGURE 6H-28 SIDEWALK DETOUR OR DIVERSION (TA-28)

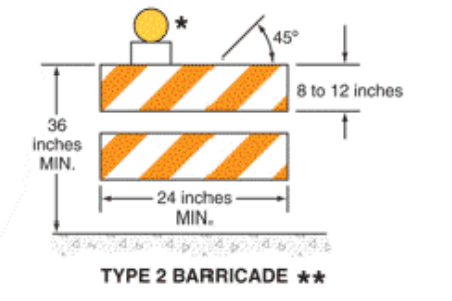


FIGURE 6F-7 CHANNELIZING DEVICES - SIDEWALK BARRICADE

*WARNING LIGHTS (OPTIONAL)
**RAIL STRIPE WIDTHS SHALL BE 6 INCHES, EXCEPT THAT 4-INCH WIDE STRIPS MAY BE USED IF RAIL LENGTHS ARE LESS THAN 36 INCHES. THE SIDES OF BARRICADES FACING TRAFFIC SHALL HAVE RETROREFLECTIVE RAIL FACES.

SIGNAGE NOTES

- 1. ALL SIGNAGE SHALL BE COORDINATED WITH TOWN OF CHAPEL HILL
2. ALL SIGNAGE SHALL MEET MUTCD STANDARDS AND SPECIFICATIONS AND NCDOT PEDESTRIAN SAFETY SPECIFICATIONS.
3. ALL PEDESTRIAN SIGNAGE SHALL BE MOUNTED ON TYPE 2 BARRICADES COMPLIANT WITH 2009 MUTCD SECTION 6F.63.

PEDESTRIAN MANAGEMENT NOTES

- 1. ROUTE SHALL BE ACCESSIBLE AT ALL TIMES PER ADA.
2. KEEP PEDESTRIAN ROUTE CLEAR OF CONSTRUCTION ACTIVITIES.
3. UNIQUE PEDESTRIANS NEEDS SHALL BE COORDINATED WITH THE SITE CONTRACTOR.

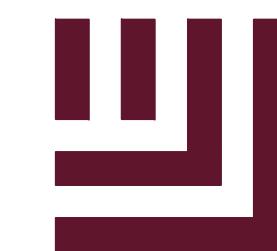
CONSTRUCTION MANAGEMENT NOTES:

- 1. ALL CONSTRUCTION RELATED VEHICULAR TRAFFIC SHALL ENTER/LEAVE THE SITE THROUGH THE TEMPORARY CONSTRUCTION ENTRANCES AS SHOWN ON THE PLAN.
2. TEMPORARY CONSTRUCTION ENTRANCES MAY SHIFT INTO SITE IN COORDINATION WITH CONSTRUCTION SEQUENCE/TRAFFIC CONTROL FOR EUBANKS ROAD. SITE CONTRACTOR TO SEE PLANS BY RAMSEY KEMP AND ASSOCIATES AND COORDINATE WITH ROADWAY CONTRACTOR.
3. NO OPEN BURNING SHALL BE PERMITTED ON THIS SITE.
4. THE APPLICANT SHALL POST A CONSTRUCTION SIGN ON THE DEVELOPMENT SITE THAT LISTS THE FOLLOWING:
• PROPERTY OWNER'S REPRESENTATIVE & TELEPHONE NUMBER
• CONTRACTOR'S REPRESENTATIVE & TELEPHONE NUMBER
• TELEPHONE NUMBER FOR REGULATORY INFO AT TIME OF BUILDING PERMIT
• SIGN MAY BE A MAXIMUM OF 32 SF AND A MAXIMUM HEIGHT OF 8 FT.
5. NO CONSTRUCTION ACTIVITY WHICH WILL BE SUBJECT TO THE TOWN'S NOISE ORDINANCE (ARTICLE III SECTION 11-37-42) SHALL OCCUR BETWEEN NIGHTTIME HOURS AS DEFINED IN THE TOWN ORDINANCE. THIS MEANS, IN GENERAL, BETWEEN 9 PM AND 7 AM AS DEFINED BY SECTION 11-40 (B) OF THE NOISE ORDINANCE.
7. LOCATION OF CONSTRUCTION OFFICE, PARKING, AND MATERIAL STORAGE AREA IS APPROXIMATE, AND MAY CHANGE DEPENDING ON ANY ON-SITE CONSTRUCTION SEQUENCE OF THE PROJECT AS IT IS BEING COMPLETED.

TRAFFIC MANAGEMENT NOTES:

- 1. TRAFFIC IS NOT INTENDED TO BE INTERRUPTED DURING THE PROPOSED CONSTRUCTION, HOWEVER, NCDOT STANDARD DRAWINGS FOR TEMPORARY LANE CLOSURES (1101.02) AND TEMPORARY ROAD CLOSURES (1101.03) SHALL BE USED IF TEMPORARY TRAFFIC IMPACTS ARE NECESSARY.

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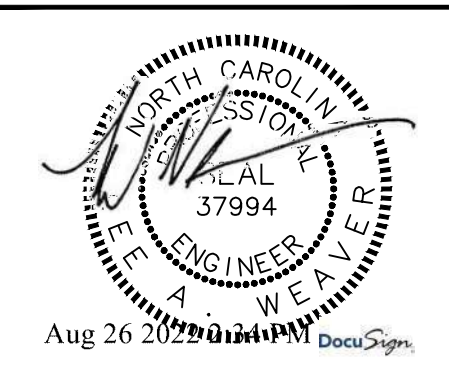
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1	04/22/2022	REVISED PER TOCH COMMENTS
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3	08/16/2022	FINAL SUBMITTAL

PLAN INFORMATION

PROJECT NO. RAM-19000
 FILENAME RAM19000-EC1
 CHECKED BY LAW
 DRAWN BY MRO
 SCALE 1"=50'
 DATE 11. 12. 2021

SHEET

**EROSION CONTROL & CM
PLAN - STAGE 1**

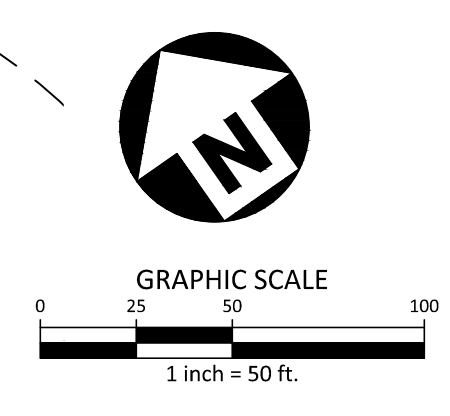
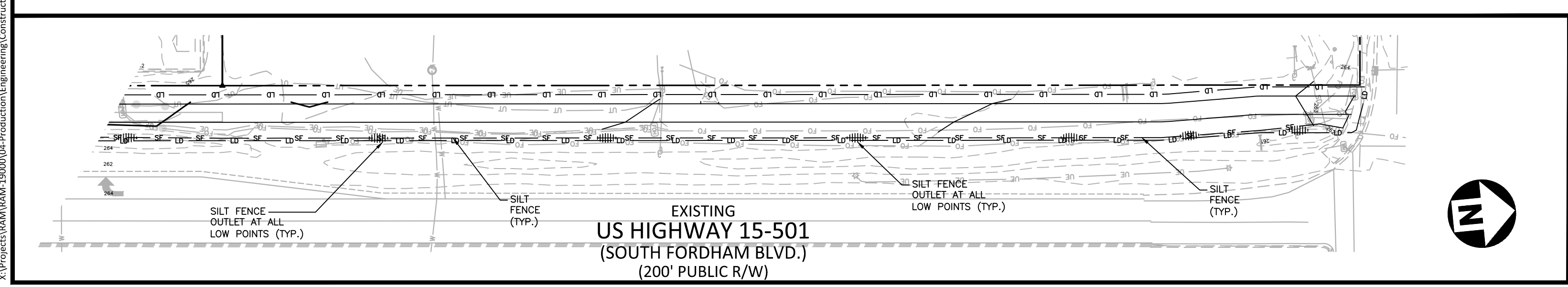
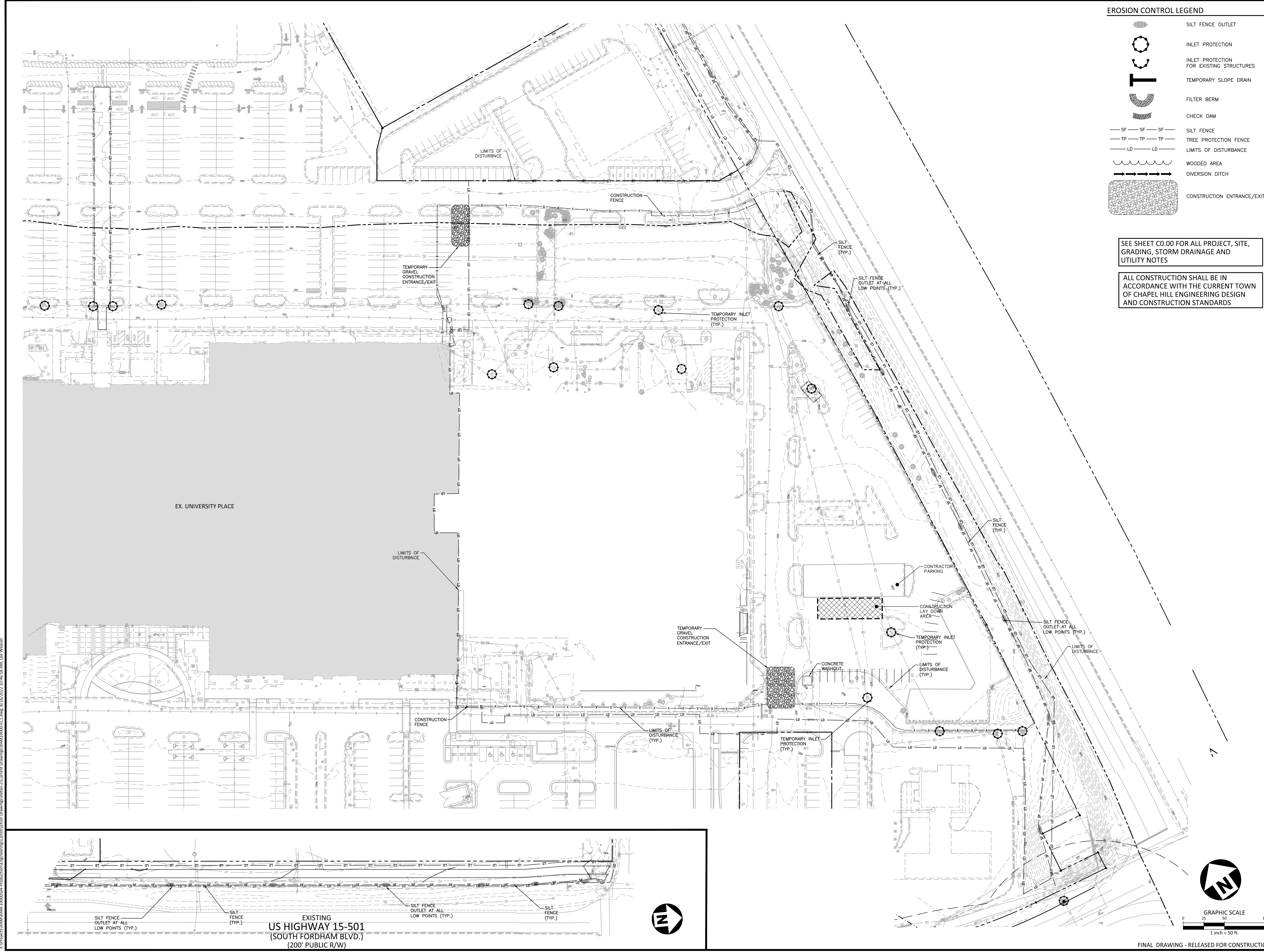
C6.02-1D

EROSION CONTROL LEGEND

- SILT FENCE OUTLET
- INLET PROTECTION
- INLET PROTECTION FOR EXISTING STRUCTURES
- TEMPORARY SLOPE DRAIN
- FILTER BERM
- CHECK DAM
- SILT FENCE
- TREE PROTECTION FENCE
- LIMITS OF DISTURBANCE
- WOODED AREA
- DIVERSION DITCH
- CONSTRUCTION ENTRANCE/EXIT

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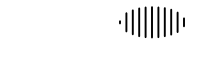






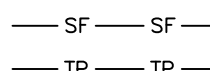
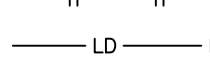

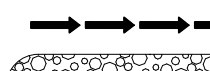
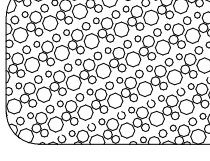


FINAL DRAWING - RELEASED FOR CONSTRUCTION

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SEE THIS SHEET

EROSION CONTROL LEGEND

-  SILT FENCE OUTLET
-  INLET PROTECTION
-  INLET PROTECTION FOR EXISTING STRUCTURES
-  TEMPORARY SLOPE DRAIN
-  FILTER BERM
-  CHECK DAM
-  SILT FENCE
-  TREE PROTECTION FENCE
-  LIMITS OF DISTURBANCE
-  WOODED AREA
-  DIVERSION DITCH
-  CONSTRUCTION ENTRANCE/EXIT

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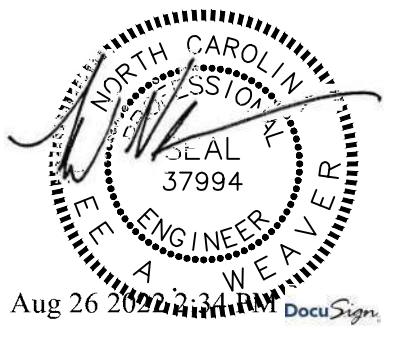
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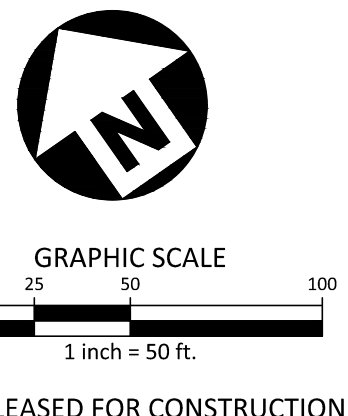
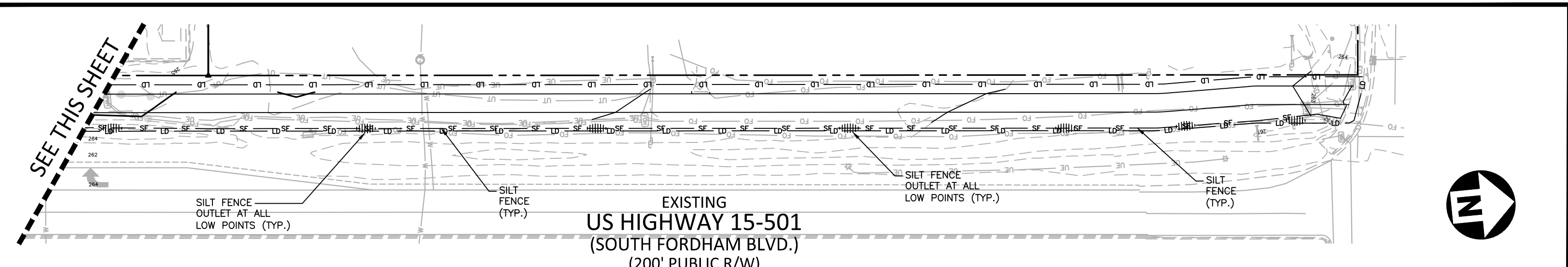
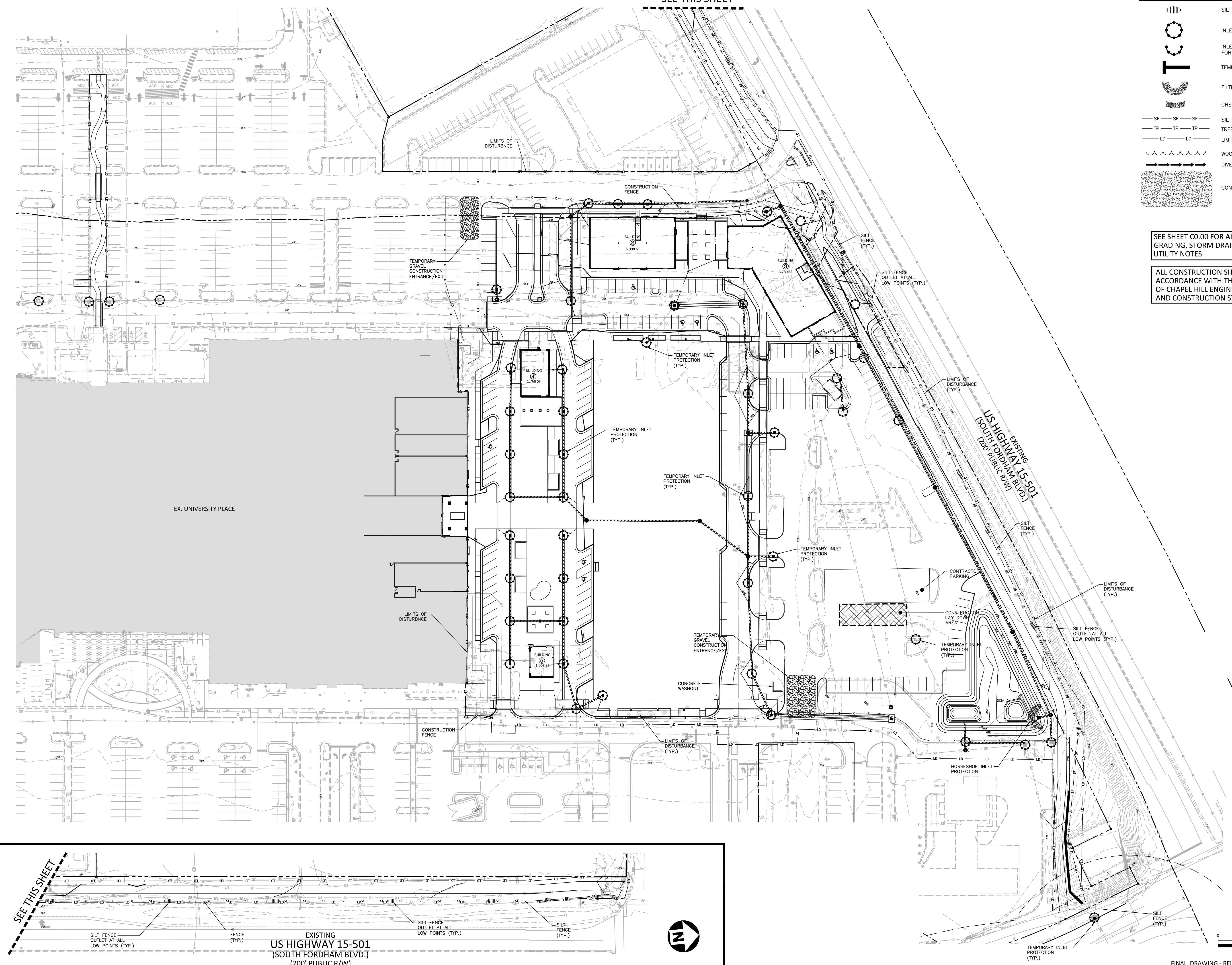
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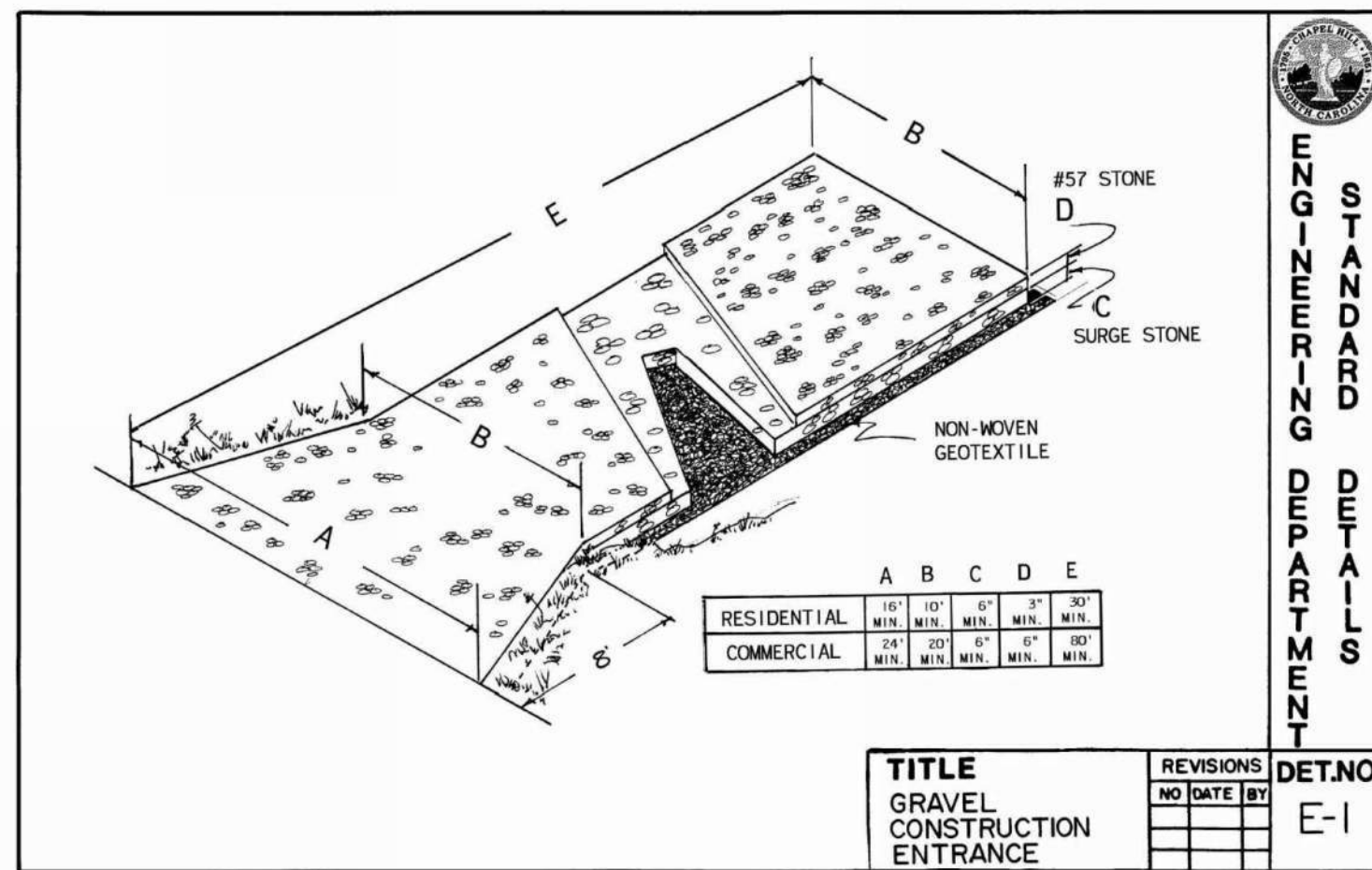
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CHECKED BY	LAW
DRAWN BY	MRO
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SHEET
EROSION CONTROL & CM PLAN - STAGE 2
C6.03-1D



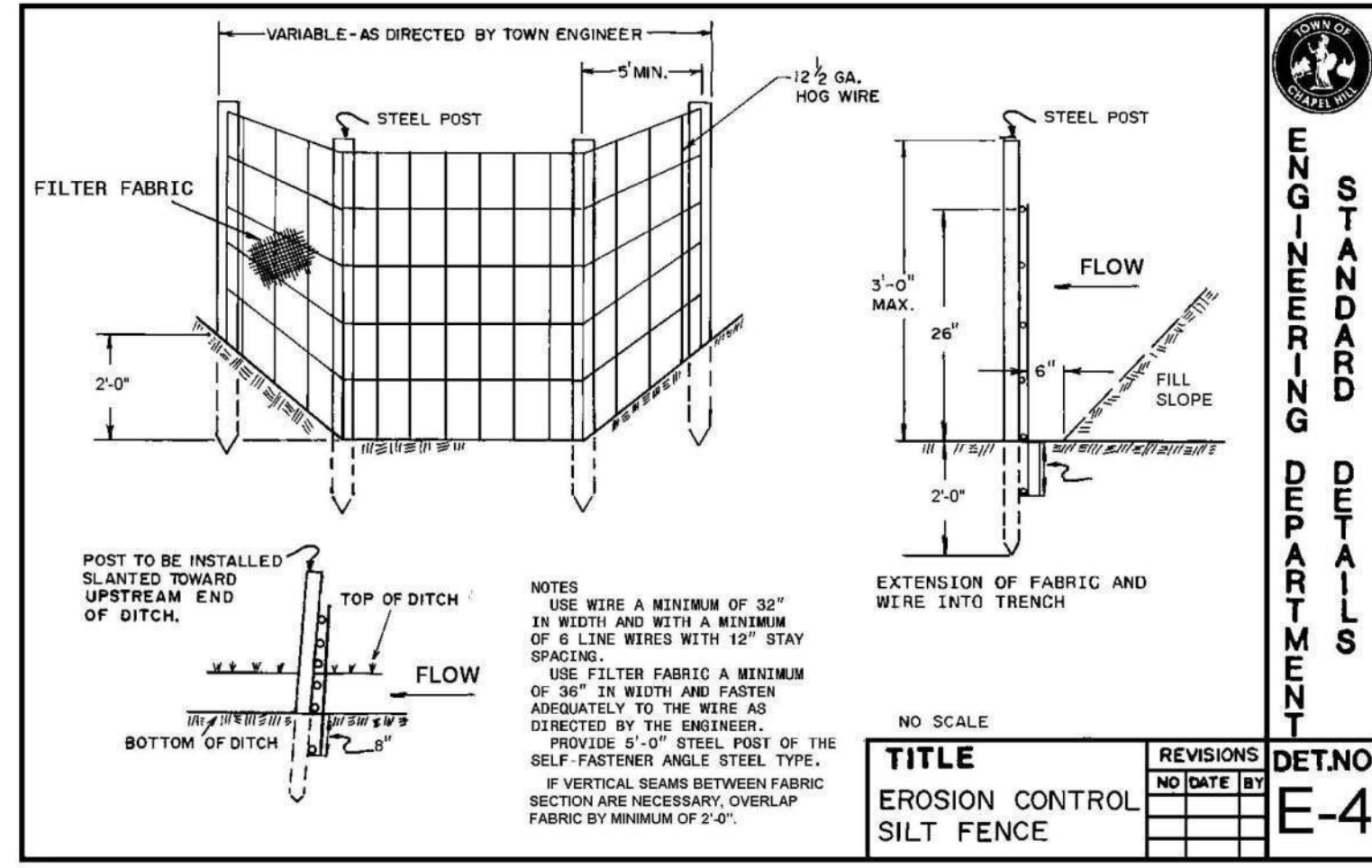
FINAL DRAWING - RELEASED FOR CONSTRUCTION

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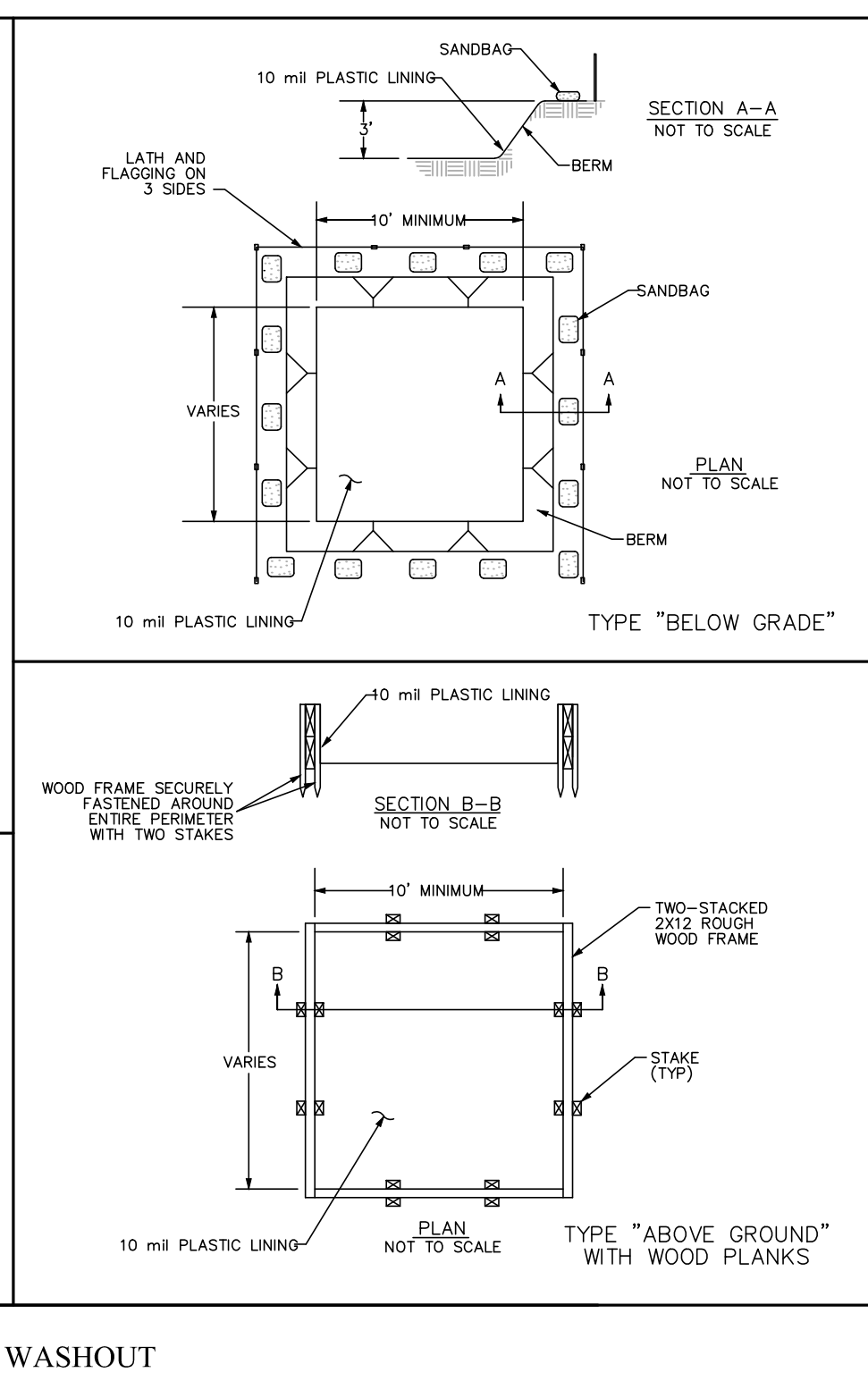
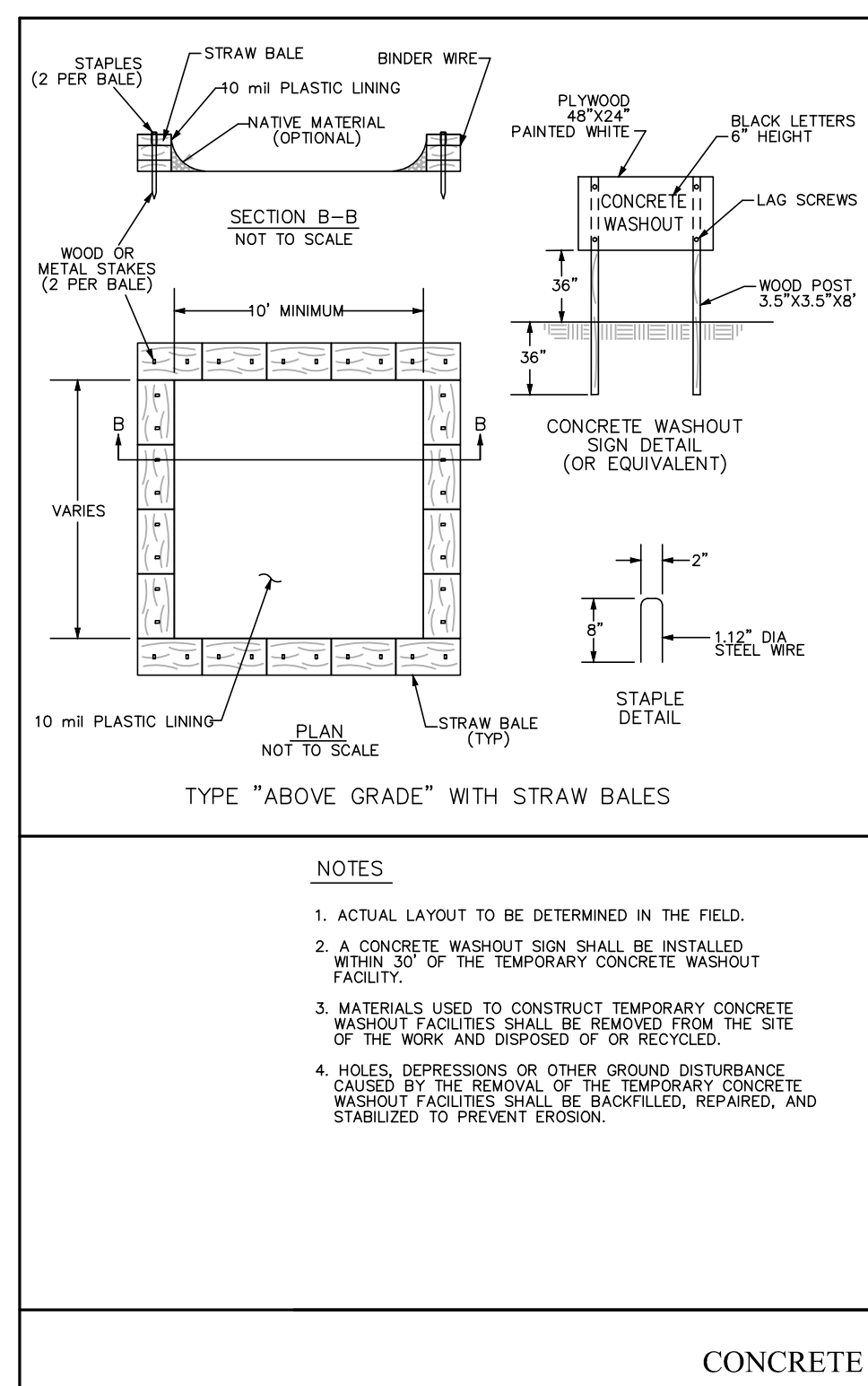
STANDARD ENGINEERING DEPARTMENT DETAILS

TITLE	REVISIONS	DET.NO
GRAVEL CONSTRUCTION ENTRANCE	NO DATE BY	E-1



STANDARD ENGINEERING DEPARTMENT DETAILS

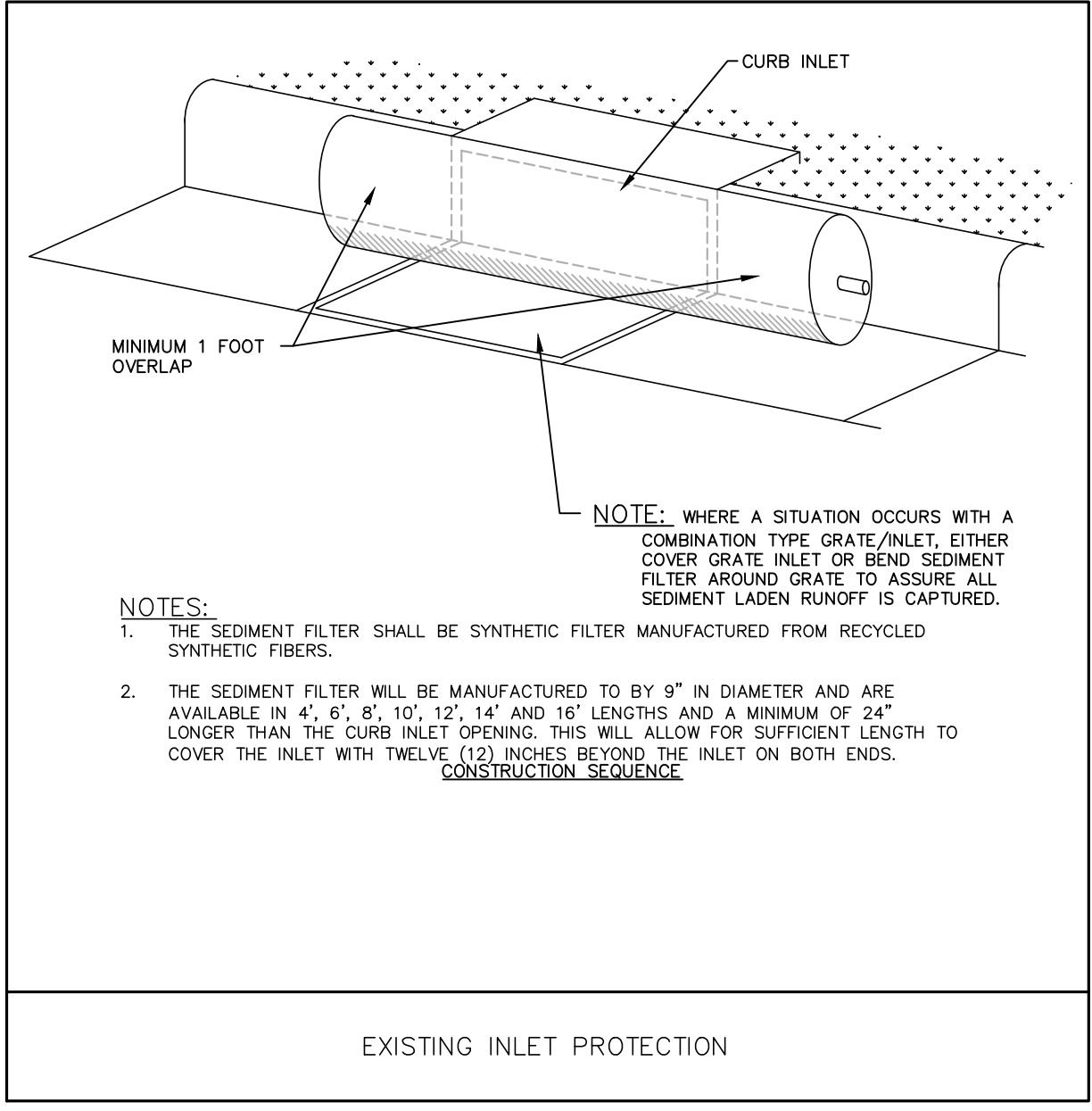
TITLE	REVISIONS	DET.NO
EROSION CONTROL SILT FENCE	NO DATE BY	E-4



NOTES

- ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
- A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
- MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
- HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

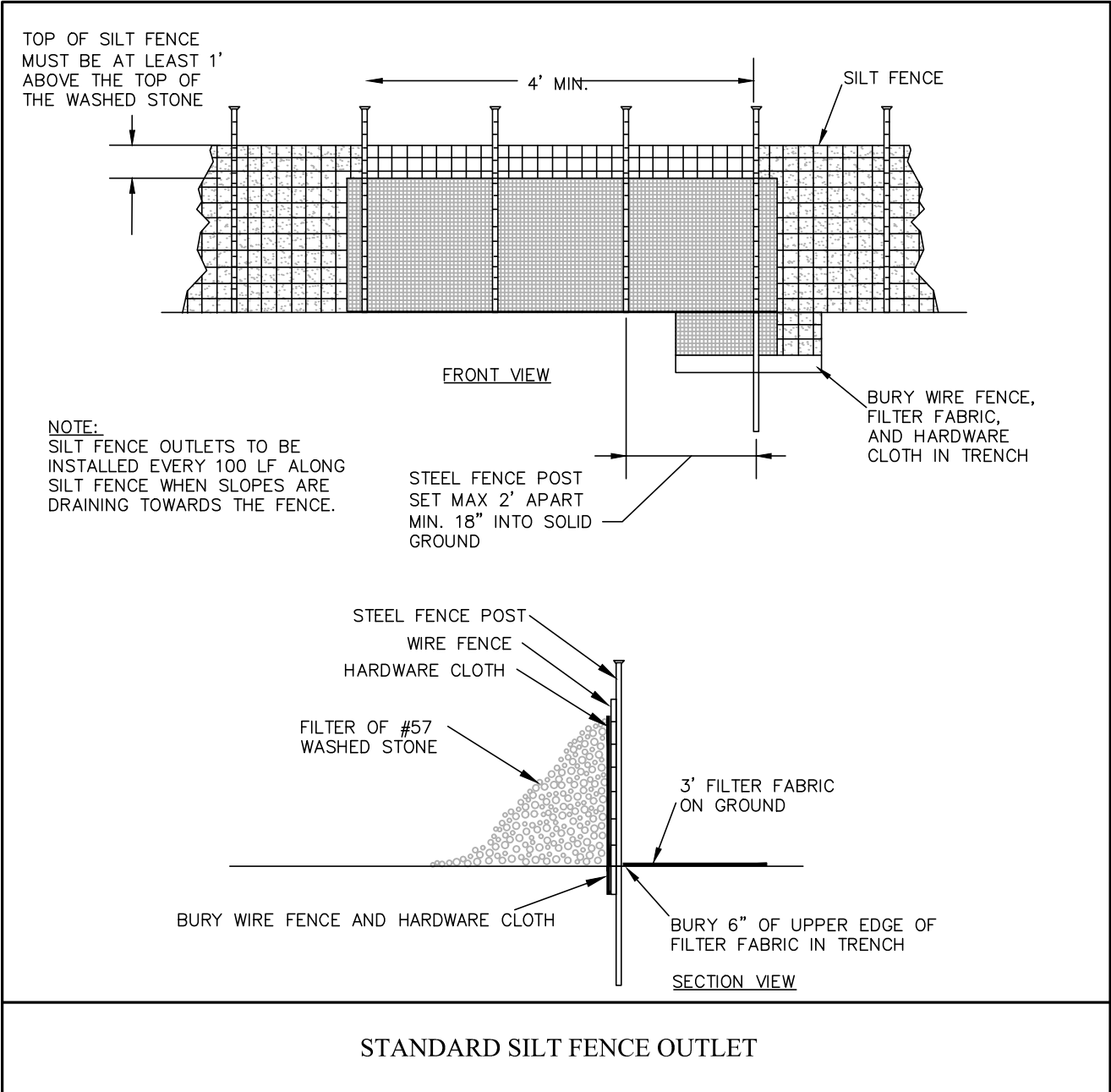
CONCRETE WASHOUT



NOTES:

- THE SEDIMENT FILTER SHALL BE SYNTHETIC FILTER MANUFACTURED FROM RECYCLED SYNTHETIC FIBERS.
- THE SEDIMENT FILTER WILL BE MANUFACTURED TO BY 9" IN DIAMETER AND ARE AVAILABLE IN 4", 6", 8", 10", 12", 14" AND 16" LENGTHS AND A MINIMUM OF 24" LONGER THAN THE CURB INLET OPENING. THIS WILL ALLOW FOR SUFFICIENT LENGTH TO COVER THE INLET WITH TWELVE (12) INCHES BEYOND THE INLET ON BOTH ENDS.

EXISTING INLET PROTECTION



NOTE: SILT FENCE OUTLETS TO BE INSTALLED EVERY 100 LF ALONG SILT FENCE WHEN SLOPES ARE DRAINING TOWARDS THE FENCE.

SILT FENCE OUTLET MAINTENANCE

REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.

REPLACE STONE AS NEEDED TO ENSURE DEWATERING.

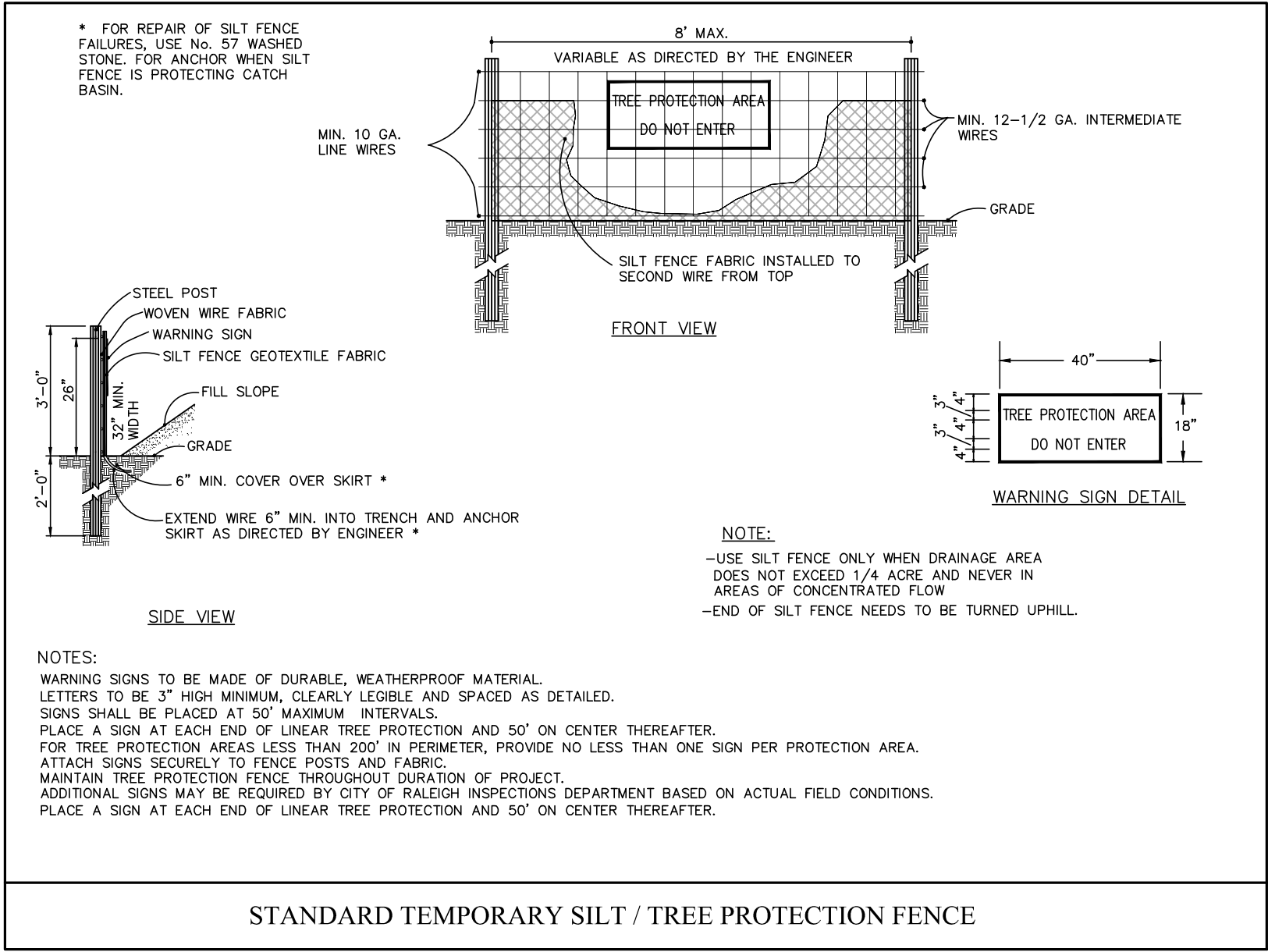
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.

REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

STANDARD SILT FENCE OUTLET



NOTES:

FOR REPAIR OF SILT FENCE FAILURES, USE NO. 57 WASHED STONE FOR ANCHOR WHEN SILT FENCE IS PROTECTING CATCH BASIN.

WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS.

PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.

FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.

MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.

ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF FALGUSH INSPECTIONS DEPARTMENT BASED ON ACTUAL FIELD CONDITIONS.

PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.

STANDARD TEMPORARY SILT / TREE PROTECTION FENCE

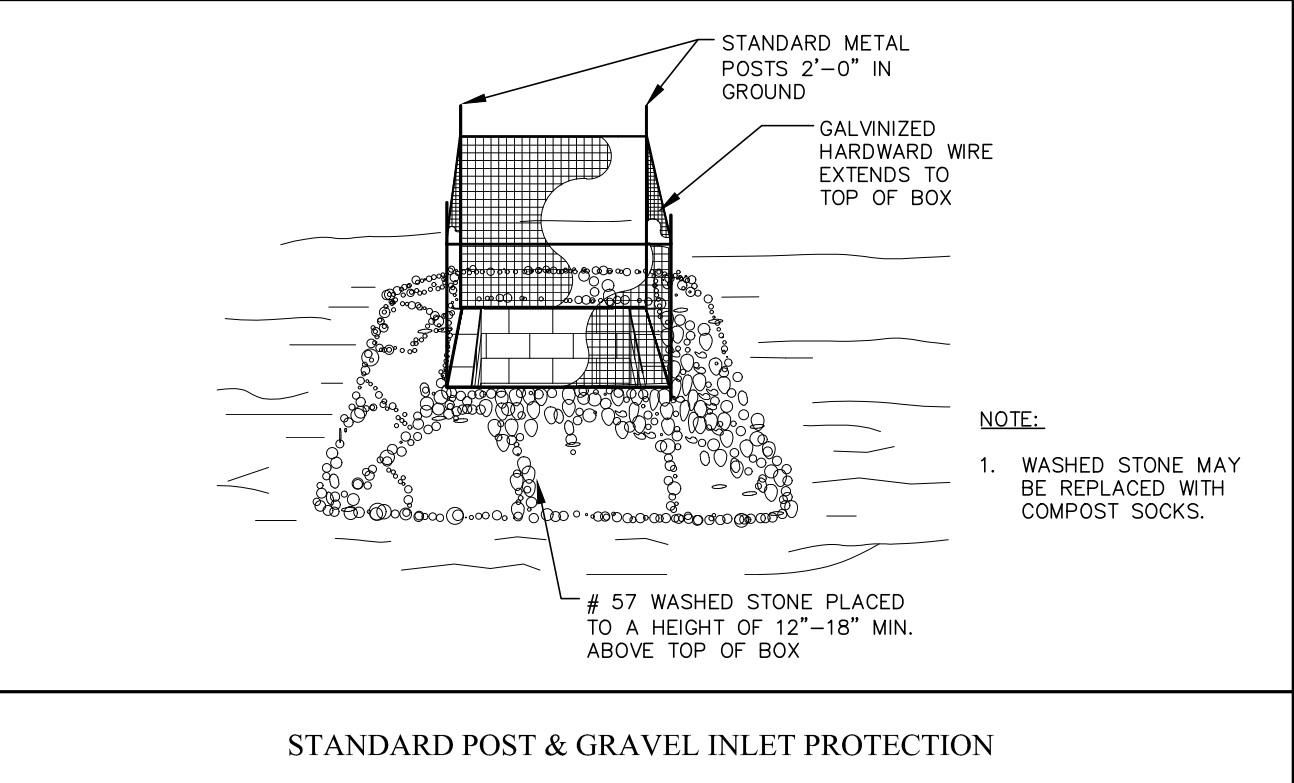
SILT FENCE MAINTENANCE

INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.

REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



NOTE:

- WASHED STONE MAY BE REPLACED WITH COMPOST SOCKS.

STANDARD POST & GRAVEL INLET PROTECTION

BLOCK AND GRAVEL INLET PROTECTION MAINTENANCE

INSPECT THE BARRIER AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL AND MAKE REPAIRS AS NEEDED.

REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS.

WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY.

BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT.

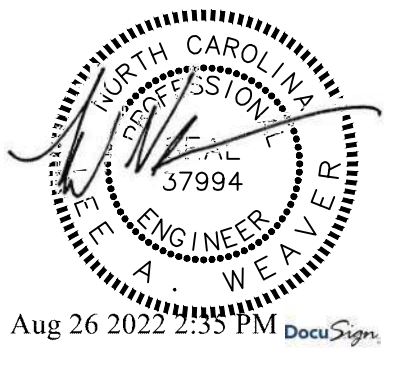
APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.

CLIENT

RAM REALTY
127 W. WORTHINGTON AVE, SUITE 290
CHARLOTTE, NORTH CAROLINA 28203



**UNIVERSITY PLACE
PHASE 1D
ZONING COMPLIANCE PERMIT**
CHAPEL HILL, NC 27514



REVISIONS

NO.	DATE	DESCRIPTION
1	04/22/2022	REVISED PER TOCH COMMENTS
2	06/29/2022	REVISED PER TOCH COMMENTS
3	08/16/2022	FINAL SUBMITTAL

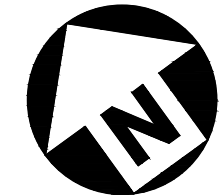
PLAN INFORMATION

PROJECT NO. RAM-19000
FILENAME RAM19000-EC2
CHECKED BY LAW
DRAWN BY MRO
SCALE N/A
DATE 11.12.2021
SHEET

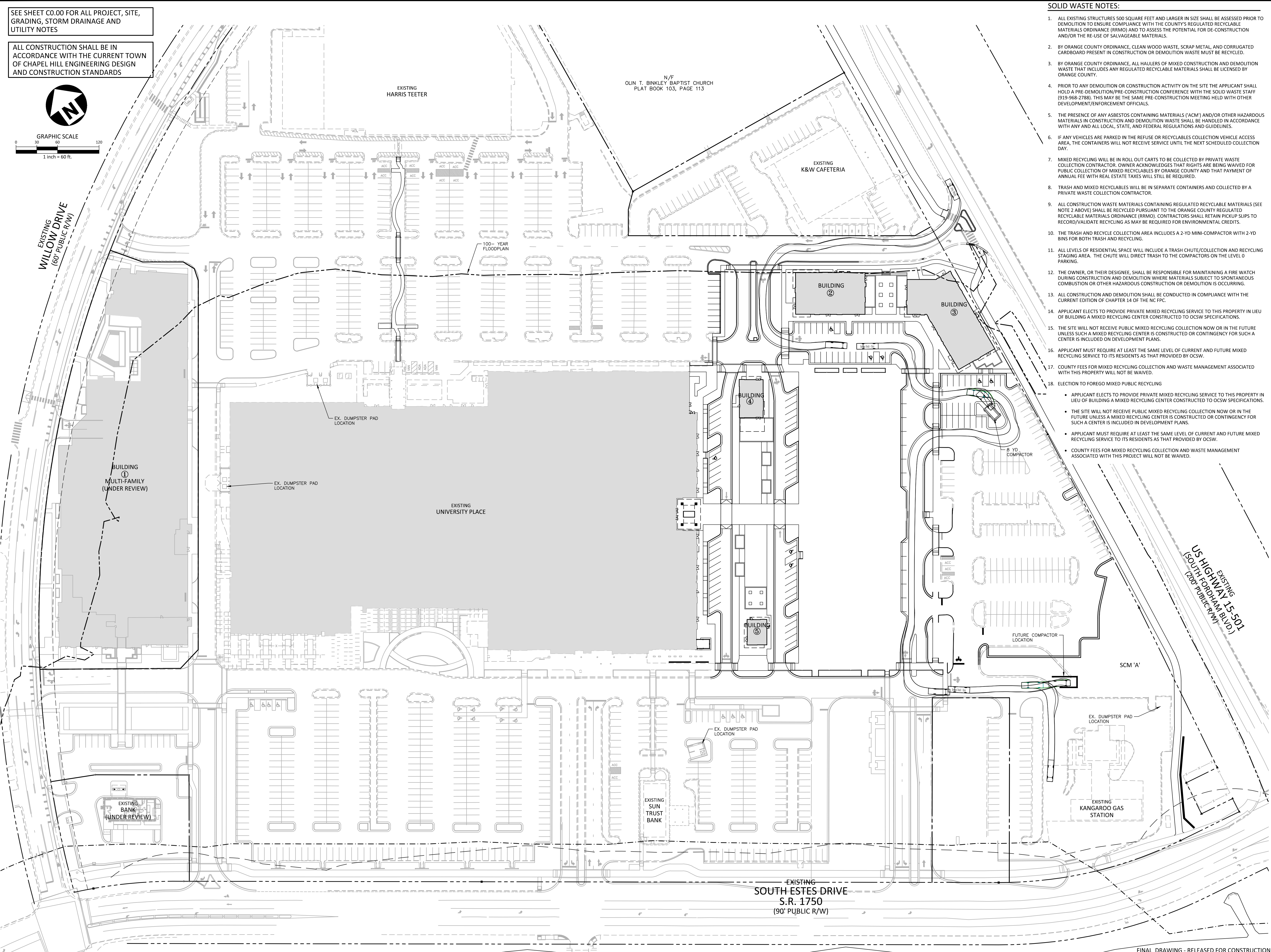
**EROSION CONTROL
DETAILS
C6.05-1D**

SEE SHEET C0.00 FOR ALL PROJECT, SITE, GRADING, STORM DRAINAGE AND UTILITY NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF CHAPEL HILL ENGINEERING DESIGN AND CONSTRUCTION STANDARDS



GRAPHIC SCALE
0 30 60 120
1 inch = 60 ft.



SOLID WASTE NOTES:

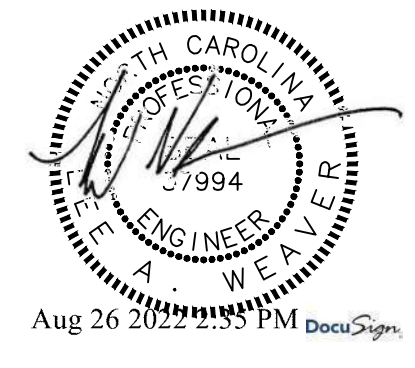
- ALL EXISTING STRUCTURES 500 SQUARE FEET AND LARGER IN SIZE SHALL BE ASSESSED PRIOR TO DEMOLITION TO ENSURE COMPLIANCE WITH THE COUNTY'S REGULATED RECYCLABLE MATERIALS ORDINANCE (RRMO) AND TO ASSESS THE POTENTIAL FOR DE-CONSTRUCTION AND/OR THE RE-USE OF SALVAGEABLE MATERIALS.
- BY ORANGE COUNTY ORDINANCE, CLEAN WOOD WASTE, SCRAP METAL, AND CORRUGATED CARDBOARD PRESENT IN CONSTRUCTION OR DEMOLITION WASTE MUST BE RECYCLED.
- BY ORANGE COUNTY ORDINANCE, ALL HAULERS OF MIXED CONSTRUCTION AND DEMOLITION WASTE THAT INCLUDES ANY REGULATED RECYCLABLE MATERIALS SHALL BE LICENSED BY ORANGE COUNTY.
- PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITY ON THE SITE THE APPLICANT SHALL HOLD A PRE-DEMOLITION/PRE-CONSTRUCTION CONFERENCE WITH THE SOLID WASTE STAFF (919-968-2788). THIS MAY BE THE SAME PRE-CONSTRUCTION MEETING HELD WITH OTHER DEVELOPMENT/FORCEMENT OFFICIALS.
- THE PRESENCE OF ANY ASBESTOS CONTAINING MATERIALS (ACM) AND/OR OTHER HAZARDOUS MATERIALS IN CONSTRUCTION AND DEMOLITION WASTE SHALL BE HANDLED IN ACCORDANCE WITH ANY AND ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND GUIDELINES.
- IF ANY VEHICLES ARE PARKED IN THE REFUSE OR RECYCLABLES COLLECTION VEHICLE ACCESS AREA, THE CONTAINERS WILL NOT RECEIVE SERVICE UNTIL THE NEXT SCHEDULED COLLECTION DAY.
- MIXED RECYCLING WILL BE IN ROLL OUT CARTS TO BE COLLECTED BY PRIVATE WASTE COLLECTION CONTRACTOR. OWNER ACKNOWLEDGES THAT RIGHTS ARE BEING WAIVED FOR PUBLIC COLLECTION OF MIXED RECYCLABLES BY ORANGE COUNTY AND THAT PAYMENT OF ANNUAL FEE WITH REAL ESTATE TAXES WILL STILL BE REQUIRED.
- TRASH AND MIXED RECYCLABLES WILL BE IN SEPARATE CONTAINERS AND COLLECTED BY A PRIVATE WASTE COLLECTION CONTRACTOR.
- ALL CONSTRUCTION WASTE MATERIALS CONTAINING REGULATED RECYCLABLE MATERIALS (SEE NOTE 2 ABOVE) SHALL BE RECYCLED PURSUANT TO THE ORANGE COUNTY REGULATED RECYCLABLE MATERIALS ORDINANCE (RRMO). CONTRACTORS SHALL RETAIN PICKUP SLIPS TO RECORD/VALIDATE RECYCLING AS MAY BE REQUIRED FOR ENVIRONMENTAL CREDITS.
- THE TRASH AND RECYCLE COLLECTION AREA INCLUDES A 2-YD MINI-COMPACTOR WITH 2-YD BINS FOR BOTH TRASH AND RECYCLING.
- ALL LEVELS OF RESIDENTIAL SPACE WILL INCLUDE A TRASH CHUTE/COLLECTION AND RECYCLING STAGING AREA. THE CHUTE WILL DIRECT TRASH TO THE COMPACTORS ON THE LEVEL 0 PARKING.
- THE OWNER, OR THEIR DESIGNEE, SHALL BE RESPONSIBLE FOR MAINTAINING A FIRE WATCH DURING CONSTRUCTION AND DEMOLITION WHERE MATERIALS SUBJECT TO SPONTANEOUS COMBUSTION OR OTHER HAZARDOUS CONSTRUCTION OR DEMOLITION IS OCCURRING.
- ALL CONSTRUCTION AND DEMOLITION SHALL BE CONDUCTED IN COMPLIANCE WITH THE CURRENT EDITION OF CHAPTER 14 OF THE NC FPC.
- APPLICANT ELECTS TO PROVIDE PRIVATE MIXED RECYCLING SERVICE TO THIS PROPERTY IN LIEU OF BUILDING A MIXED RECYCLING CENTER CONSTRUCTED TO OCSW SPECIFICATIONS.
- THE SITE WILL NOT RECEIVE PUBLIC MIXED RECYCLING COLLECTION NOW OR IN THE FUTURE UNLESS SUCH A MIXED RECYCLING CENTER IS CONSTRUCTED OR CONTINGENCY FOR SUCH A CENTER IS INCLUDED ON DEVELOPMENT PLANS.
- APPLICANT MUST REQUIRE AT LEAST THE SAME LEVEL OF CURRENT AND FUTURE MIXED RECYCLING SERVICE TO ITS RESIDENTS AS THAT PROVIDED BY OCSW.
- COUNTY FEES FOR MIXED RECYCLING COLLECTION AND WASTE MANAGEMENT ASSOCIATED WITH THIS PROPERTY WILL NOT BE WAIVED.
- ELECTION TO FOREGO MIXED PUBLIC RECYCLING
 - APPLICANT ELECTS TO PROVIDE PRIVATE MIXED RECYCLING SERVICE TO THIS PROPERTY IN LIEU OF BUILDING A MIXED RECYCLING CENTER CONSTRUCTED TO OCSW SPECIFICATIONS.
 - THE SITE WILL NOT RECEIVE PUBLIC MIXED RECYCLING COLLECTION NOW OR IN THE FUTURE UNLESS A MIXED RECYCLING CENTER IS CONSTRUCTED OR CONTINGENCY FOR SUCH A CENTER IS INCLUDED IN DEVELOPMENT PLANS.
 - APPLICANT MUST REQUIRE AT LEAST THE SAME LEVEL OF CURRENT AND FUTURE MIXED RECYCLING SERVICE TO ITS RESIDENTS AS THAT PROVIDED BY OCSW.
 - COUNTY FEES FOR MIXED RECYCLING COLLECTION AND WASTE MANAGEMENT ASSOCIATED WITH THIS PROJECT WILL NOT BE WAIVED.

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CLIENT
RAM REALTY
127 W. WORTHINGTON AVE, SUITE 290
CHARLOTTE, NORTH CAROLINA 28203



**UNIVERSITY PLACE
PHASE 1D
ZONING COMPLIANCE PERMIT**
CHAPEL HILL, NC 27514



REVISIONS

NO.	DATE	DESCRIPTION
1	04/22/2022	REVISED PER TOCH COMMENTS
2	06/29/2022	REVISED PER TOCH COMMENTS
3	08/16/2022	FINAL SUBMITTAL

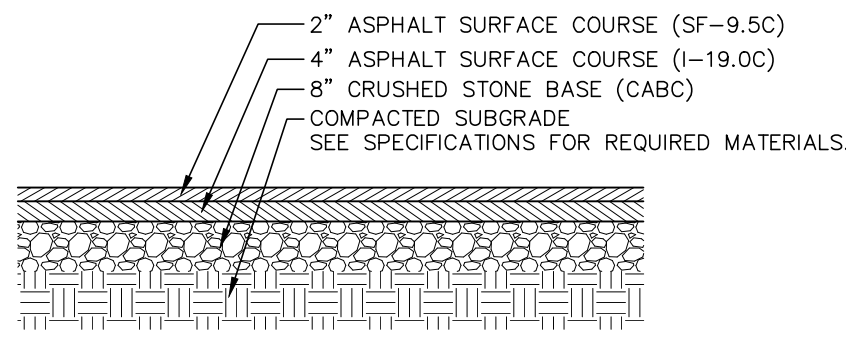
PLAN INFORMATION

PROJECT NO.	RAM-19000
FILENAME	RAM19000-OAS1
CHECKED BY	LAW
DRAWN BY	MRO
SCALE	1"=60'
DATE	11. 12. 2021

SHEET
SOLID WASTE PLAN
C7.01-1D

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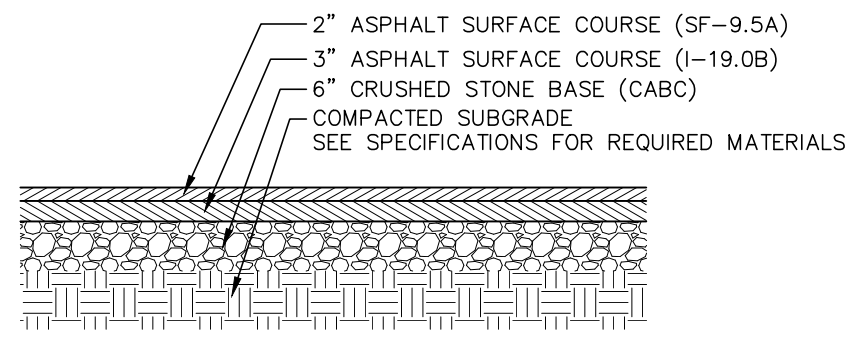
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THE PAVEMENT SECTIONS SHOWN ARE PRELIMINARY. THE CONTRACTOR SHALL VERIFY PAVEMENT DESIGN WITH THE GEOTECHNICAL ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.



SUBGRADE COMPACTED TO A MINIMUM 98% STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698) REFER TO SOILS REPORT IF AVAILABLE.

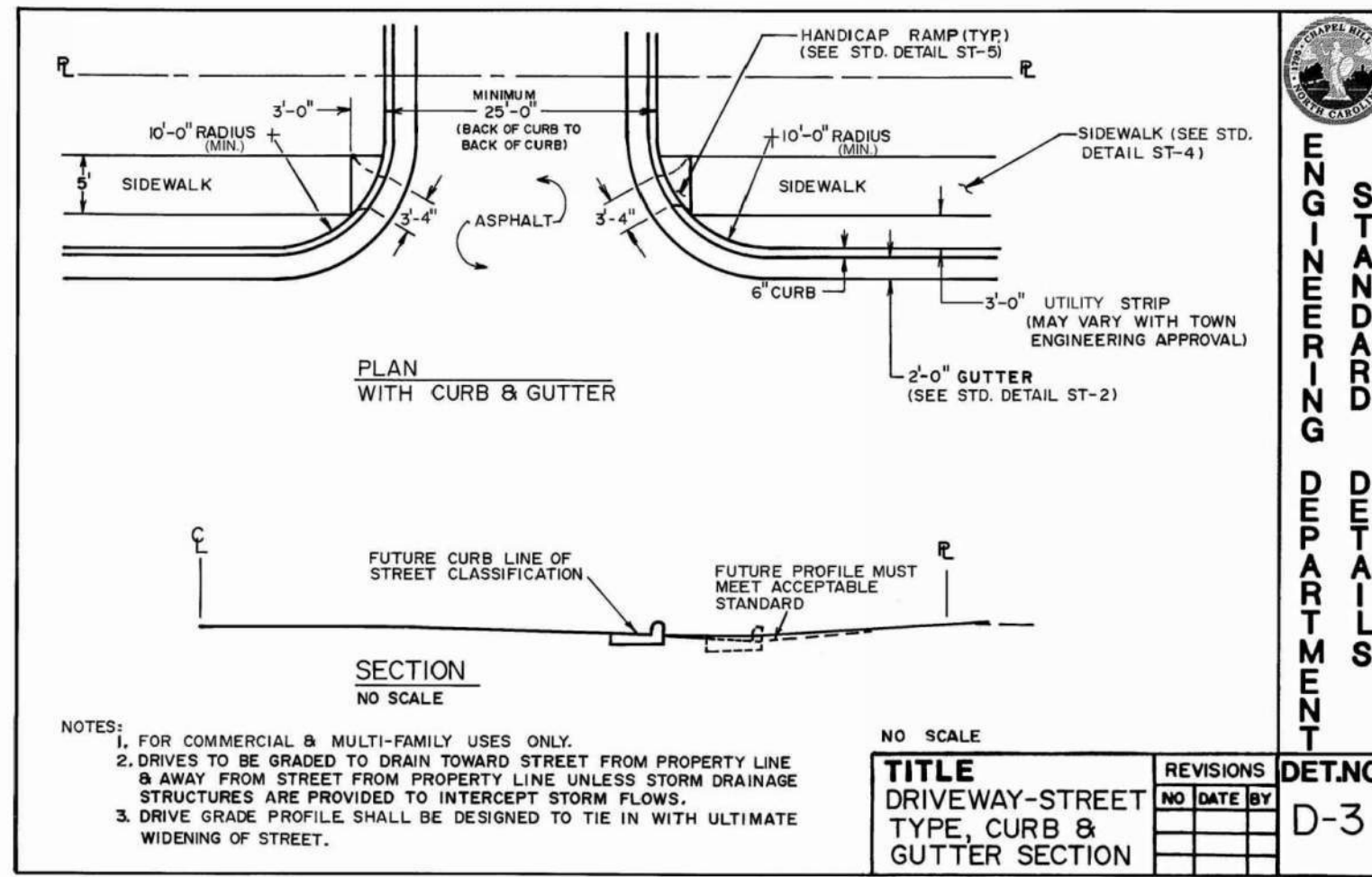
ON-SITE ASPHALT HEAVY DUTY TRAFFIC PAVEMENT DETAIL
N.T.S.

NOTE:
THE PAVEMENT SECTIONS SHOWN ARE PRELIMINARY. THE CONTRACTOR SHALL VERIFY PAVEMENT DESIGN WITH THE GEOTECHNICAL ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

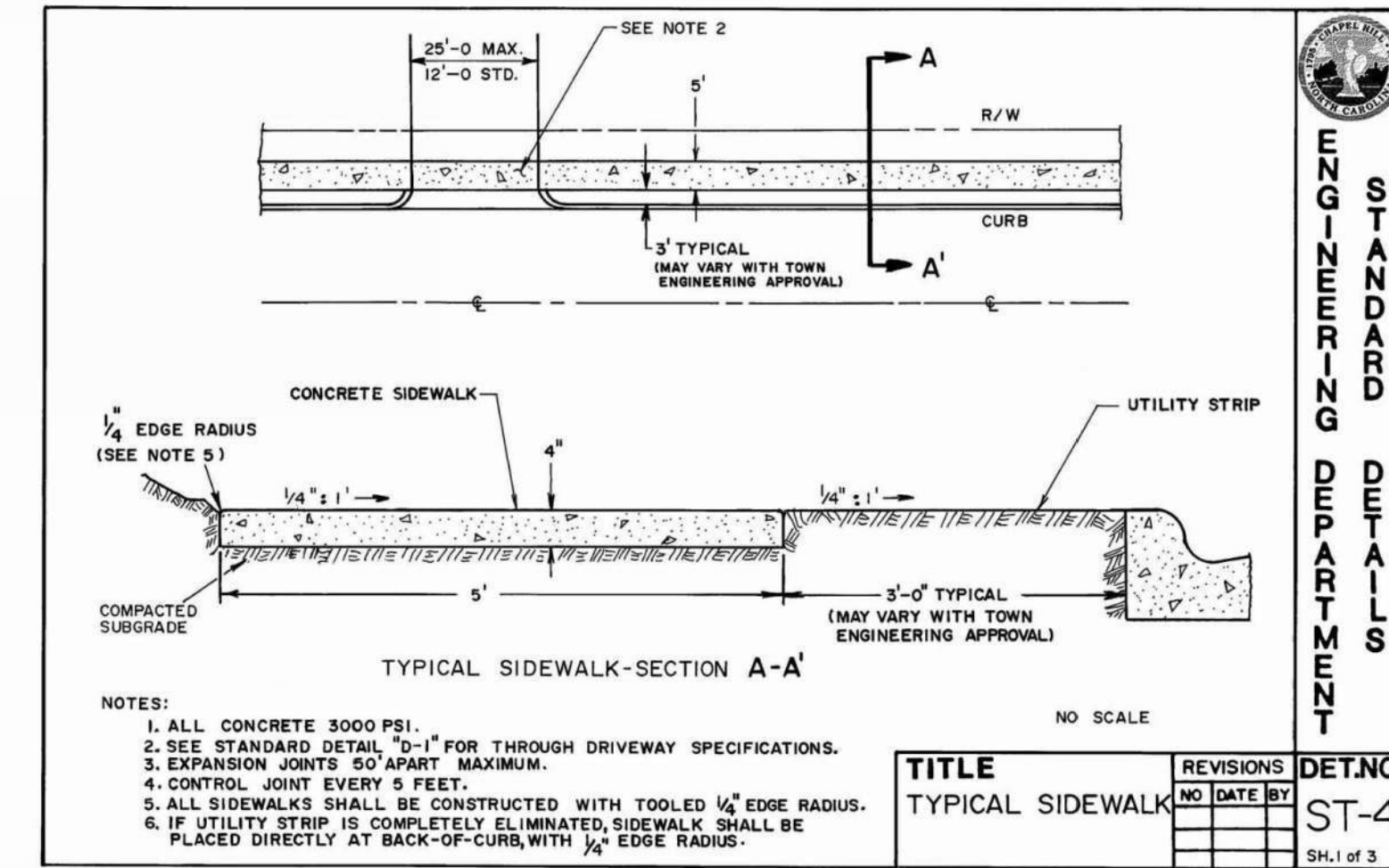


SUBGRADE COMPACTED TO A MINIMUM 98% STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698) REFER TO SOILS REPORT IF AVAILABLE.

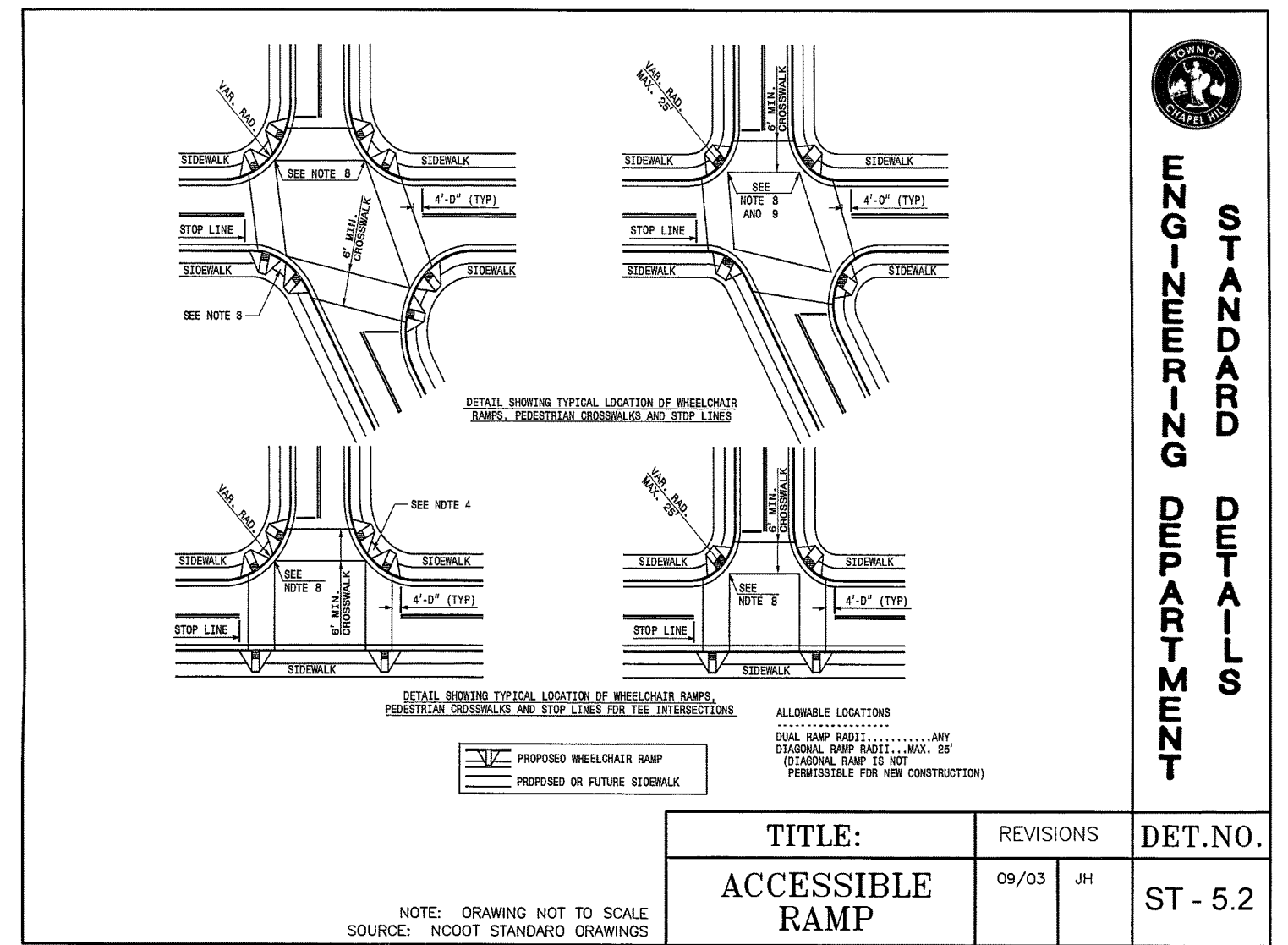
ON-SITE ASPHALT PARKING PAVEMENT DETAIL
N.T.S.



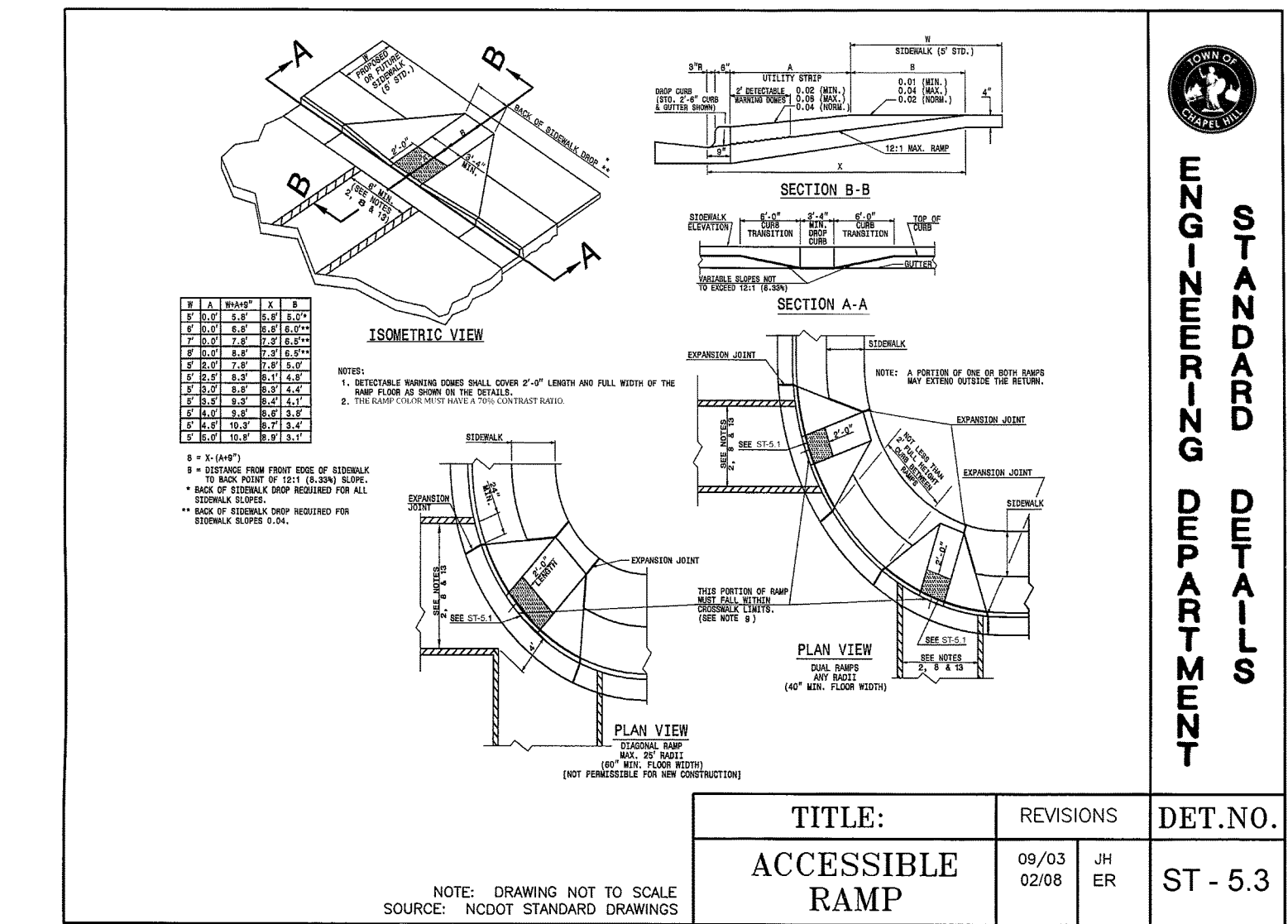
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DRIVEWAY-STREET TYPE CURB & GUTTER SECTION	NO DATE BY	D-3



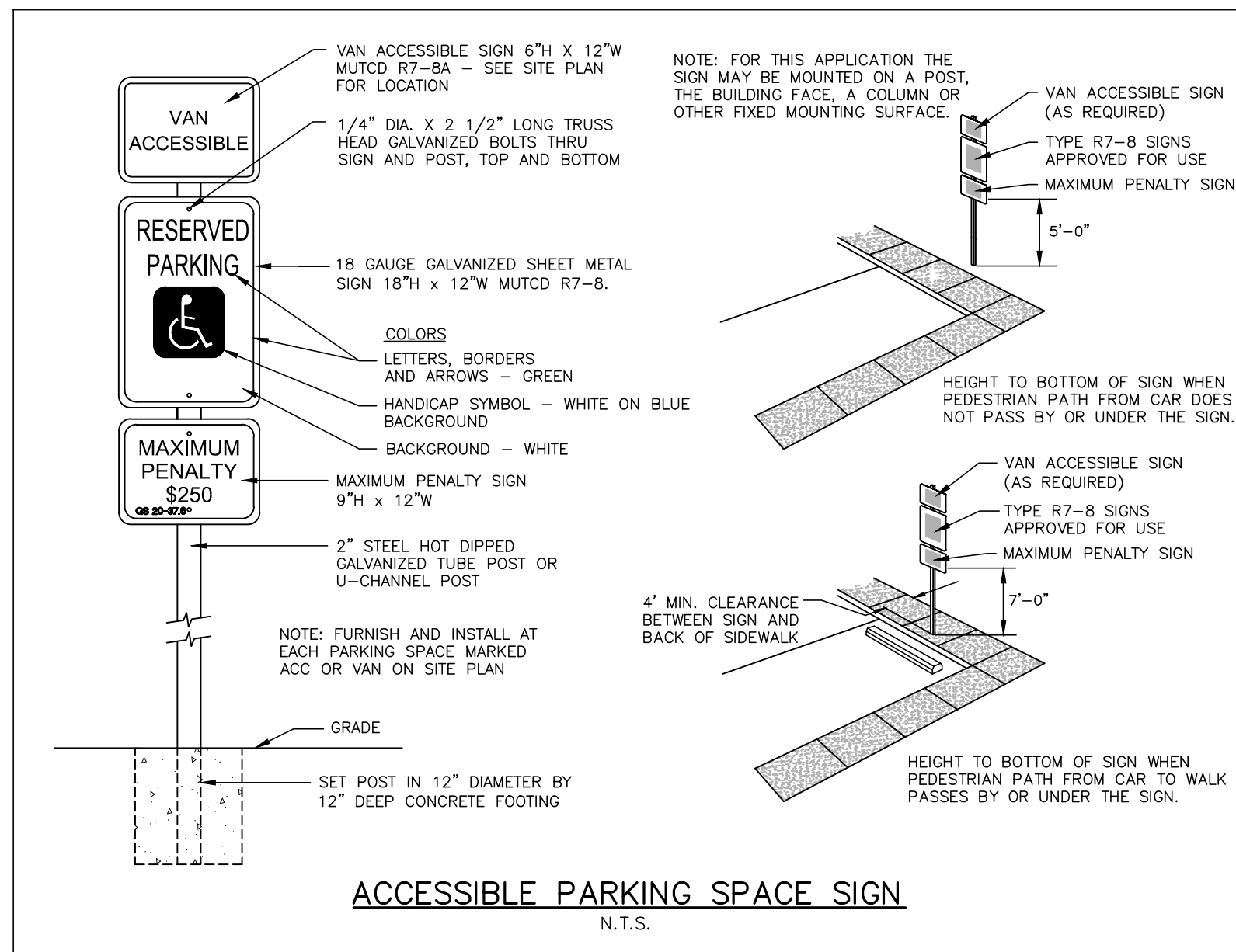
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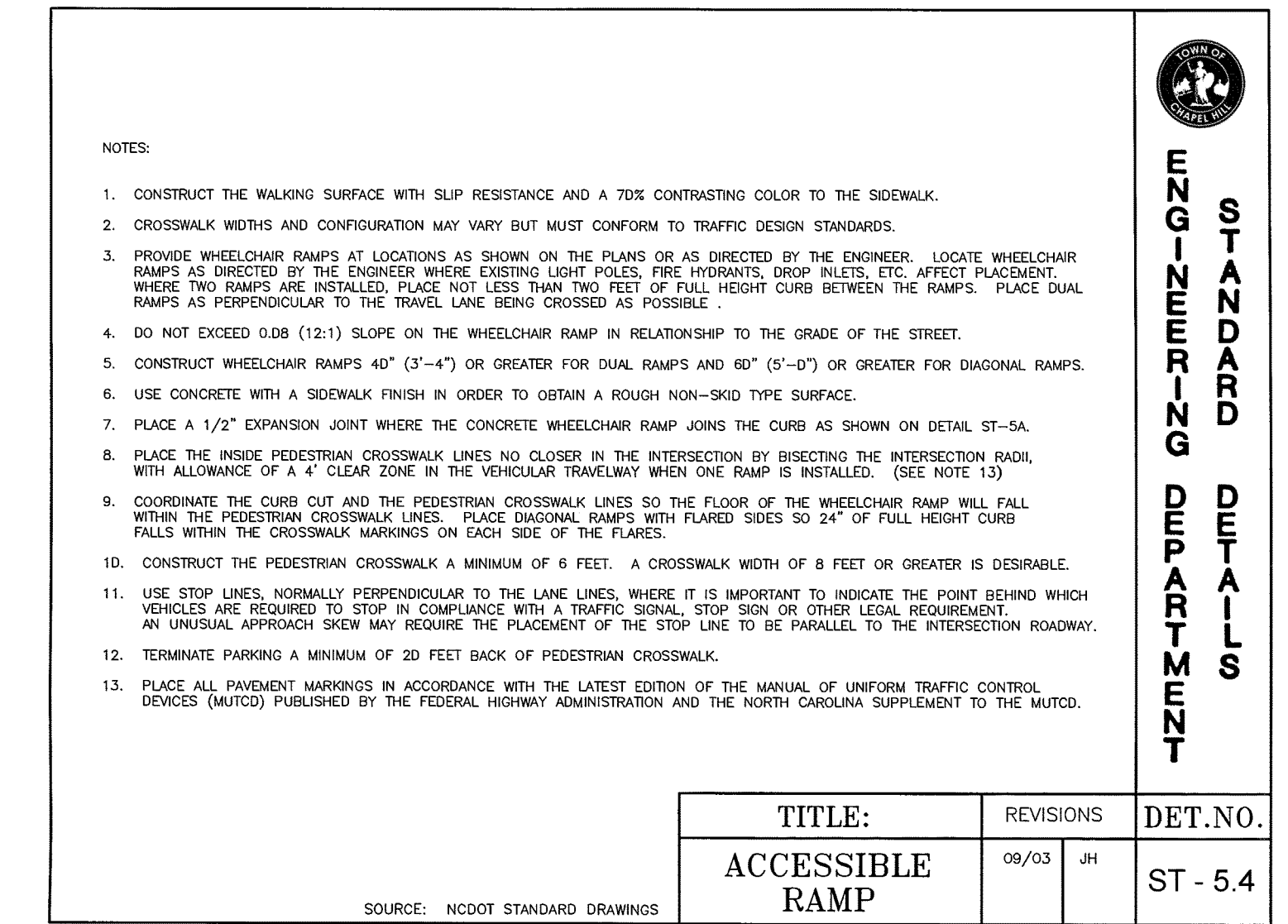
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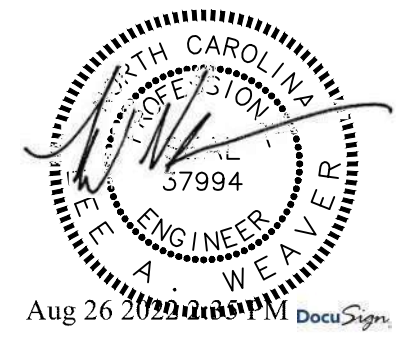
ACCESSIBLE PARKING SPACE SIGN
N.T.S.



TITLE	REVISIONS	DET.NO.
ACCESSIBLE RAMP	09/03 JH	ST - 5.4



**UNIVERSITY PLACE
PHASE 1D
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CHAPEL HILL, NC 27514



REVISIONS

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1	04/22/2022	REVISED PER TOCH COMMENTS
2	06/29/2022	REVISED PER TOCH COMMENTS
3	08/16/2022	FINAL SUBMITTAL

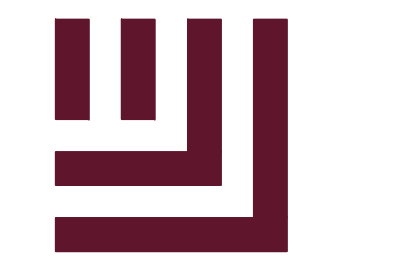
PLAN INFORMATION

PROJECT NO.	RAM-19000
FILENAME	RAM19000-D1
CHECKED BY	LAW
DRAWN BY	MRO
SCALE	N/A
DATE	11. 12. 2021

SITE DETAILS

C8.00-1D

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license number: C-0293

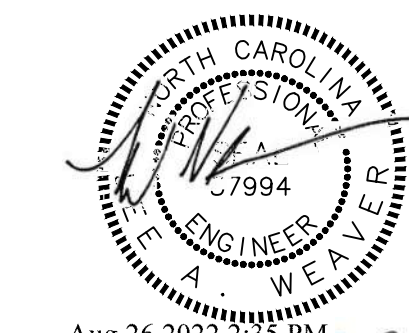
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CLIENT

RAM REALTY
127 W. WORTHINGTON AVE, SUITE 290
CHARLOTTE, NORTH CAROLINA 28203



UNIVERSITY PLACE
PHASE 1D
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CHAPEL HILL, NC 27514



Aug 26 2022 2:35 PM

REVISIONS

NO.	DATE	DESCRIPTION
1	04/22/2022	REVISED PER TOCH COMMENTS
2	06/29/2022	REVISED PER TOCH COMMENTS
3	08/16/2022	FINAL SUBMITTAL

PLAN INFORMATION

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FILENAME	RAM19000-D1
CHECKED BY	LAW
DRAWN BY	MRO
SCALE	N/A
DATE	11. 12. 2021

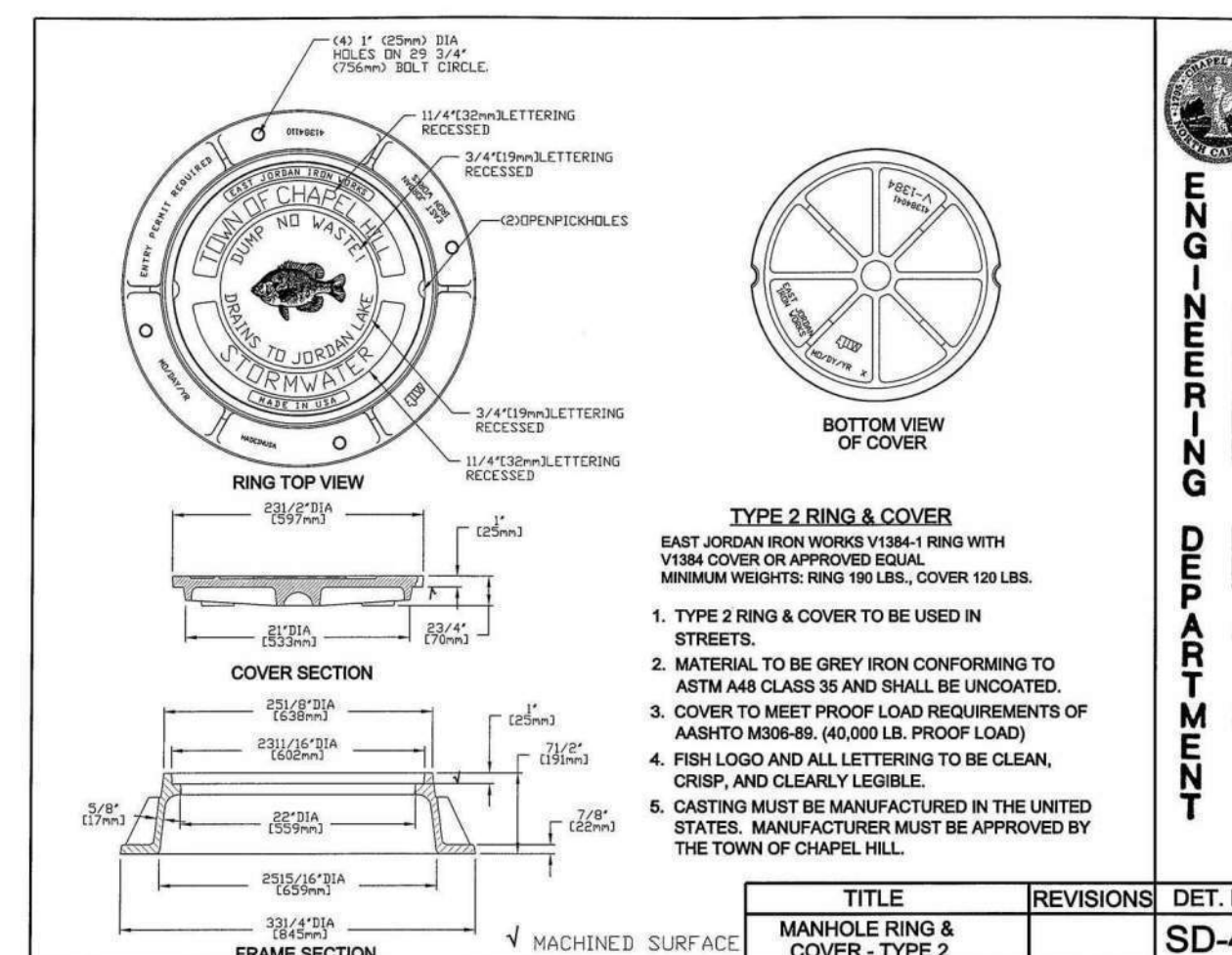
SHEET

STORM DRAINAGE
DETAILS

C8.01-1D

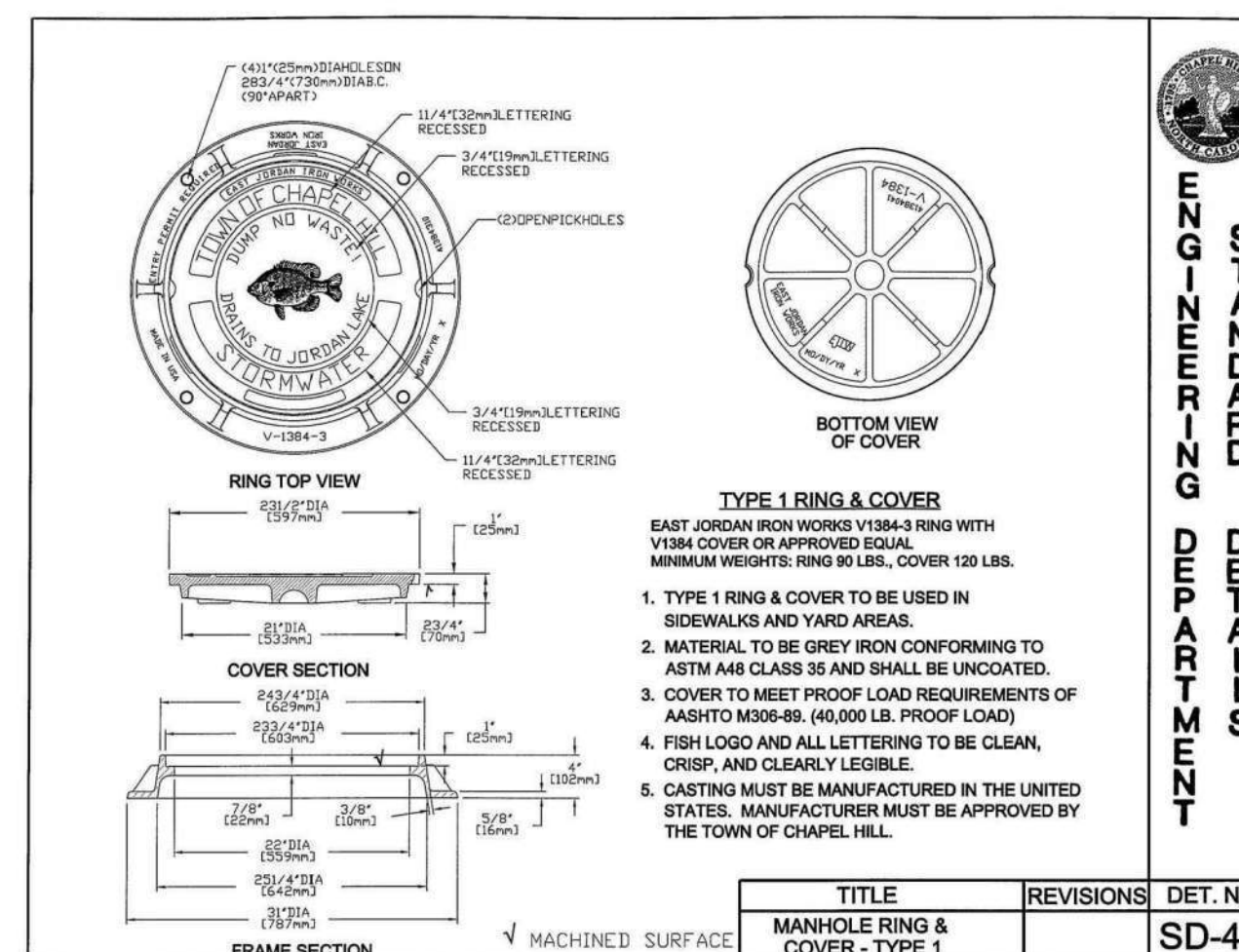
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STANDARD
ENGINEERING
DEPARTMENT
DETAILS



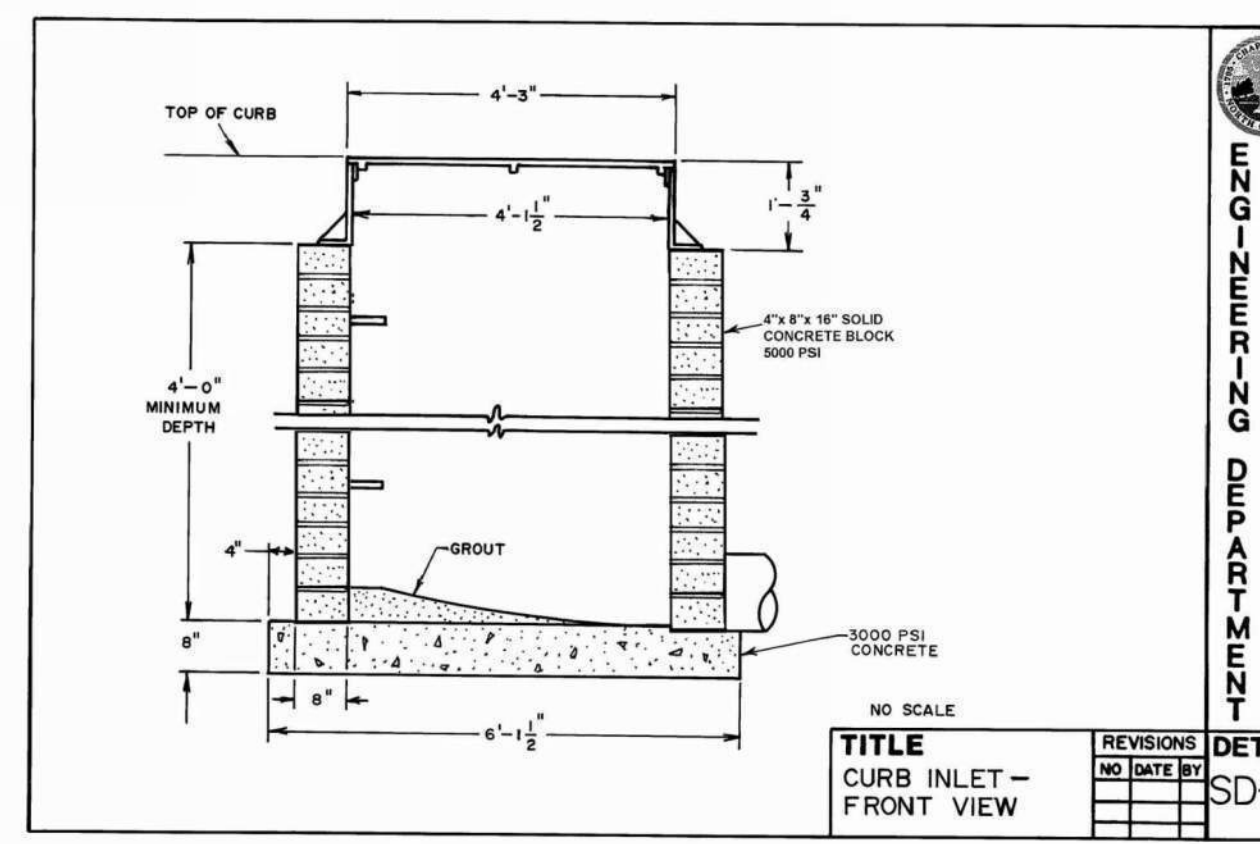
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MANHOLE RING & COVER - TYPE 2		SD-4B

STANDARD
ENGINEERING
DEPARTMENT
DETAILS



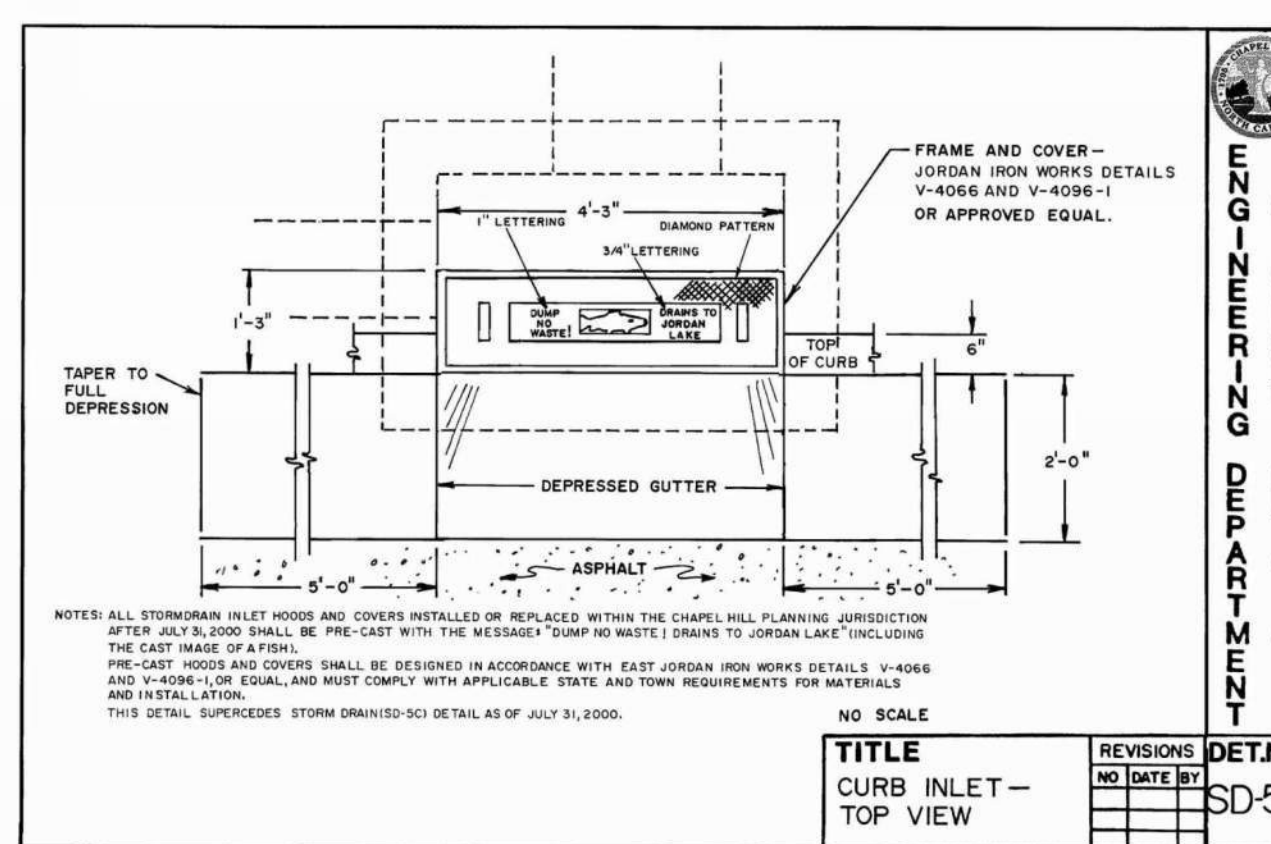
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MANHOLE RING & COVER - TYPE 1		SD-4A

STANDARD
ENGINEERING
DEPARTMENT
DETAILS



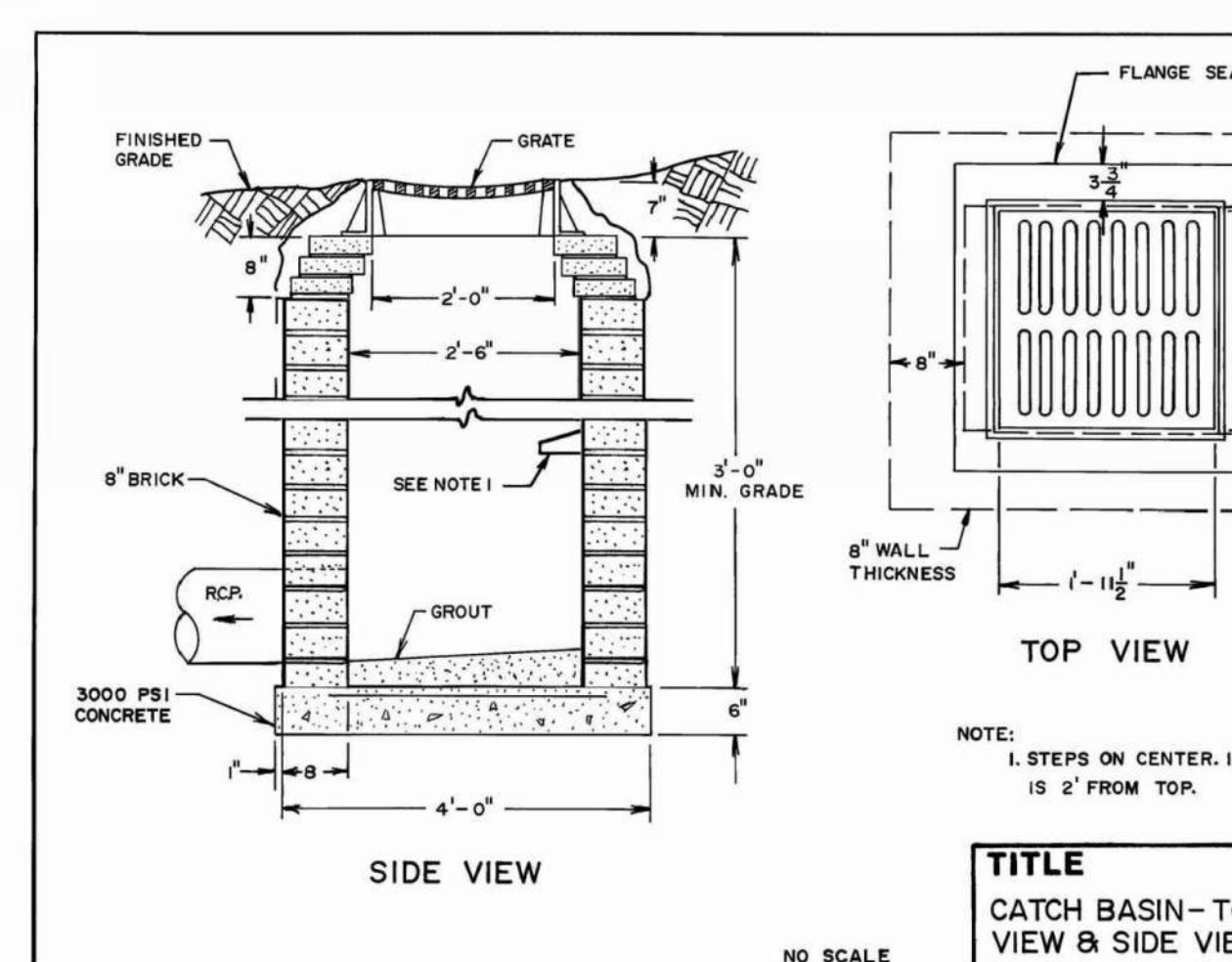
TITLE	REVISIONS	DET. NO.
CURB INLET - FRONT VIEW		SD-5B

STANDARD
ENGINEERING
DEPARTMENT
DETAILS



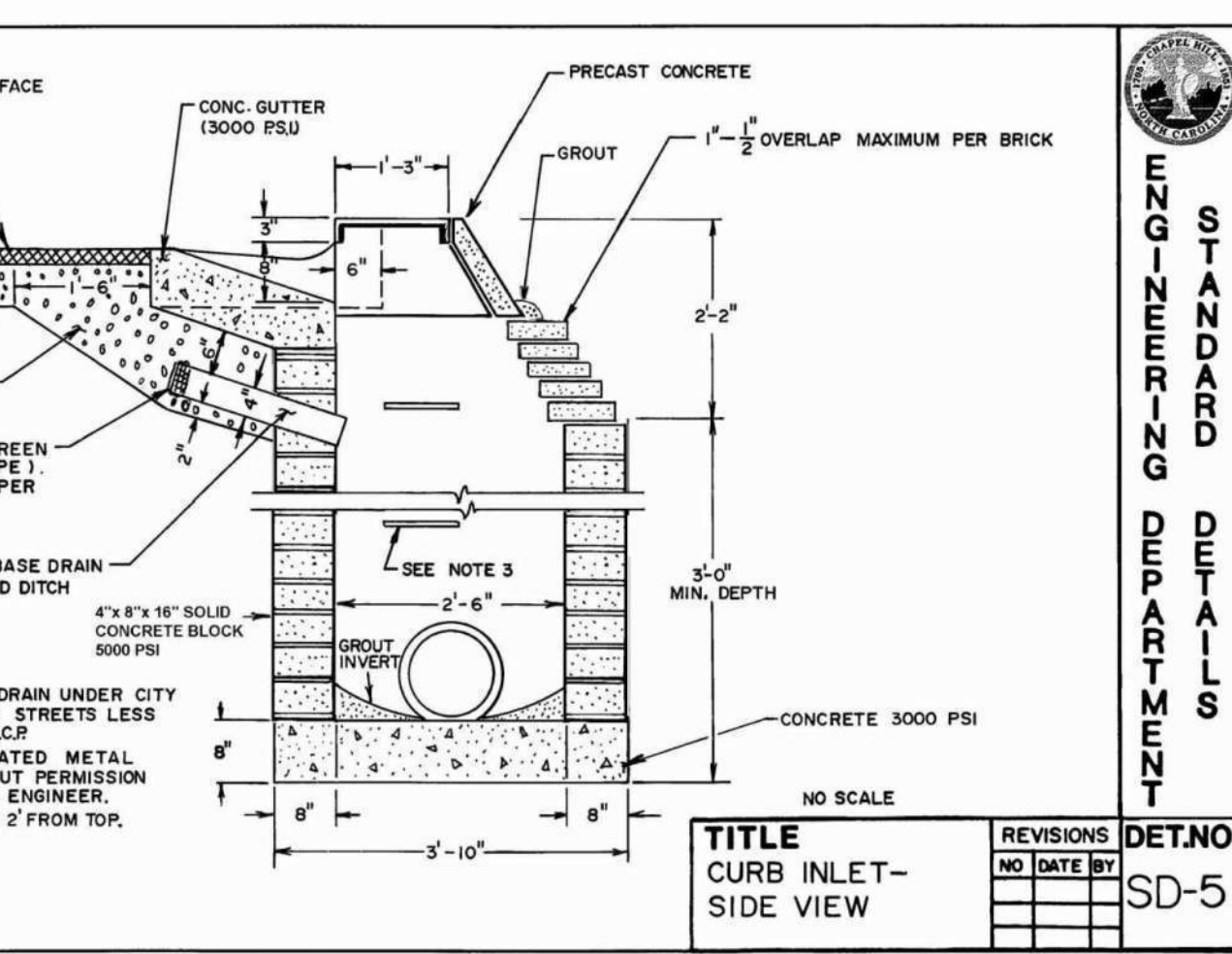
TITLE	REVISIONS	DET. NO.
CURB INLET - TOP VIEW		SD-5A

STANDARD
ENGINEERING
DEPARTMENT
DETAILS



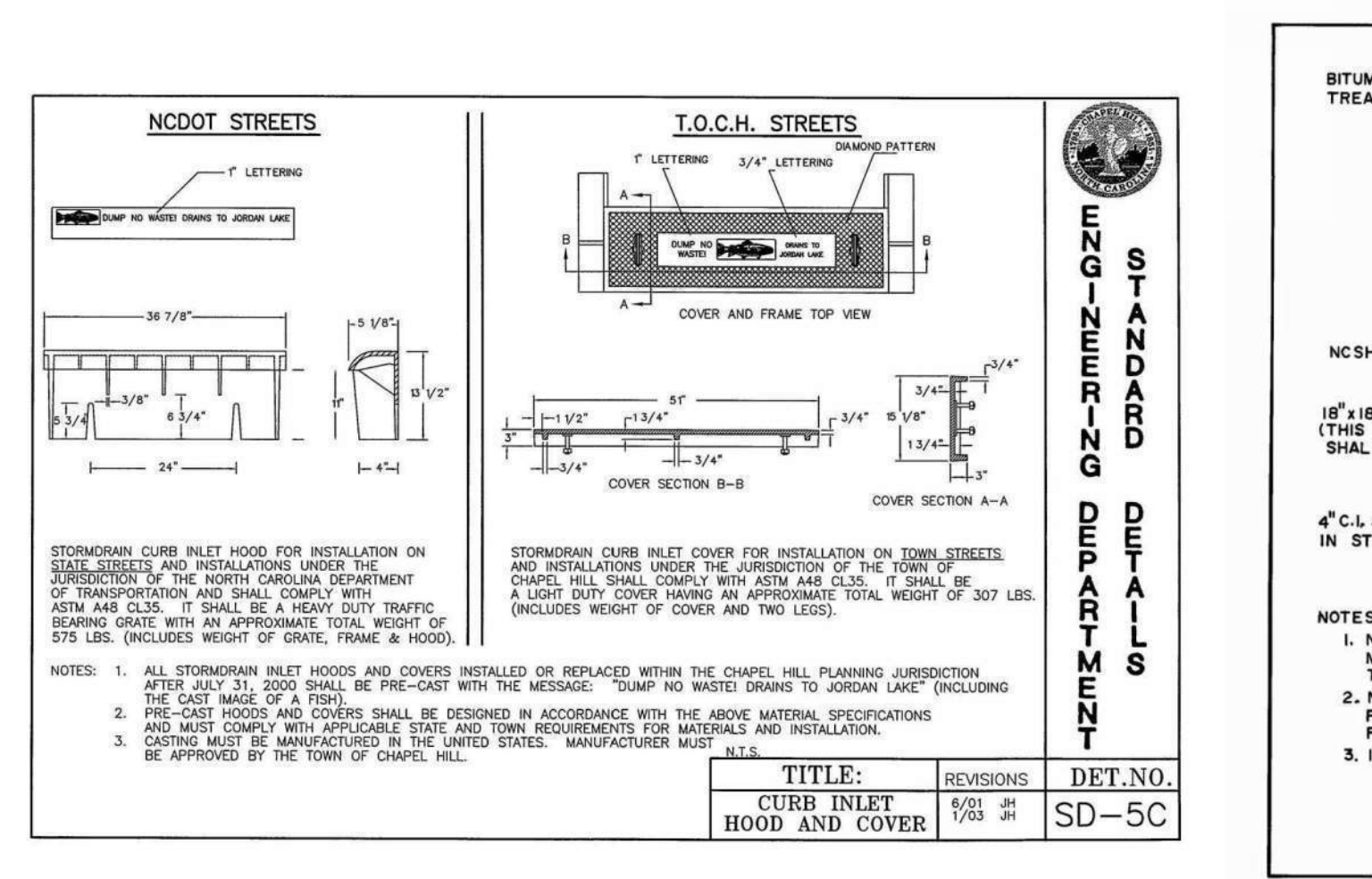
TITLE	REVISIONS	DET. NO.
CATCH BASIN - TOP VIEW & SIDE VIEW		SD-6

STANDARD
ENGINEERING
DEPARTMENT
DETAILS



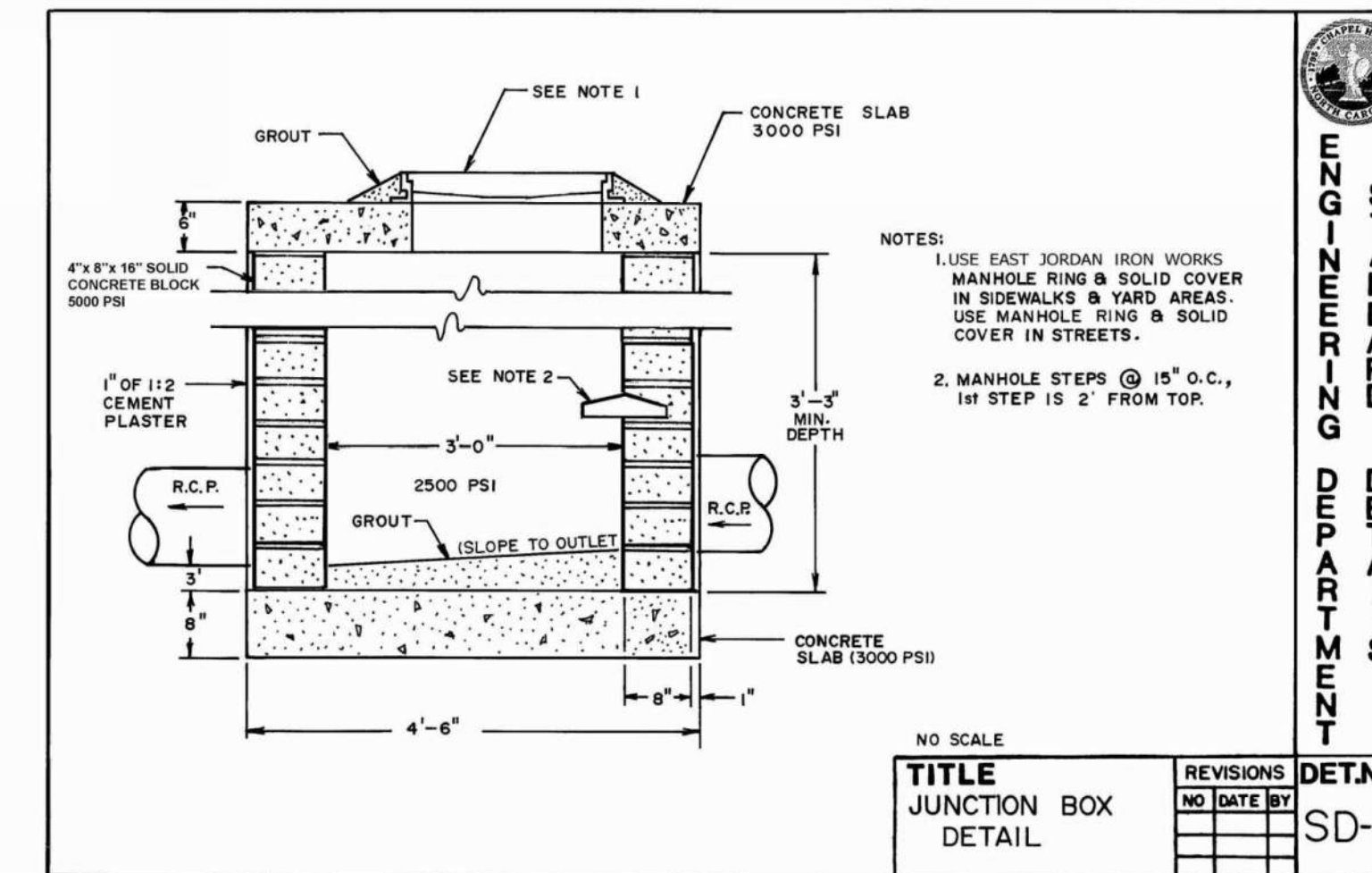
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CURB INLET - SIDE VIEW		SD-5

STANDARD
ENGINEERING
DEPARTMENT
DETAILS



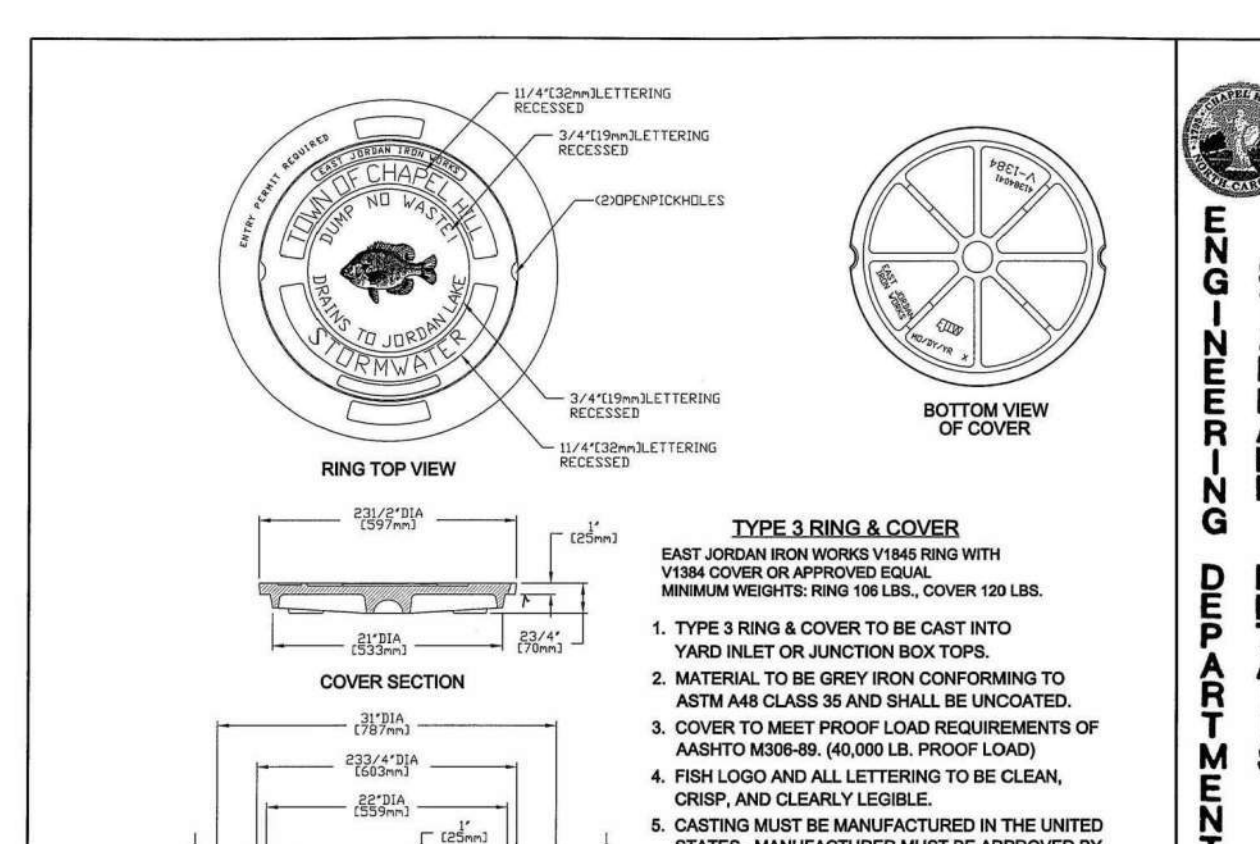
TITLE	REVISIONS	DET. NO.
CURB INLET HOOD AND COVER		SD-5C

STANDARD
ENGINEERING
DEPARTMENT
DETAILS

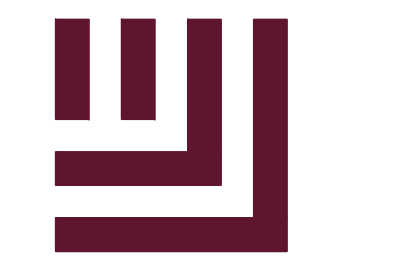


TITLE	REVISIONS	DET. NO.
JUNCTION BOX DETAIL		SD-3

STANDARD
ENGINEERING
DEPARTMENT
DETAILS



TITLE	REVISIONS	DET. NO.
MANHOLE RING & COVER - TYPE 3		SD-4C



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CLIENT

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127 W. WORTHINGTON AVE, SUITE 290
CHARLOTTE, NORTH CAROLINA 28203

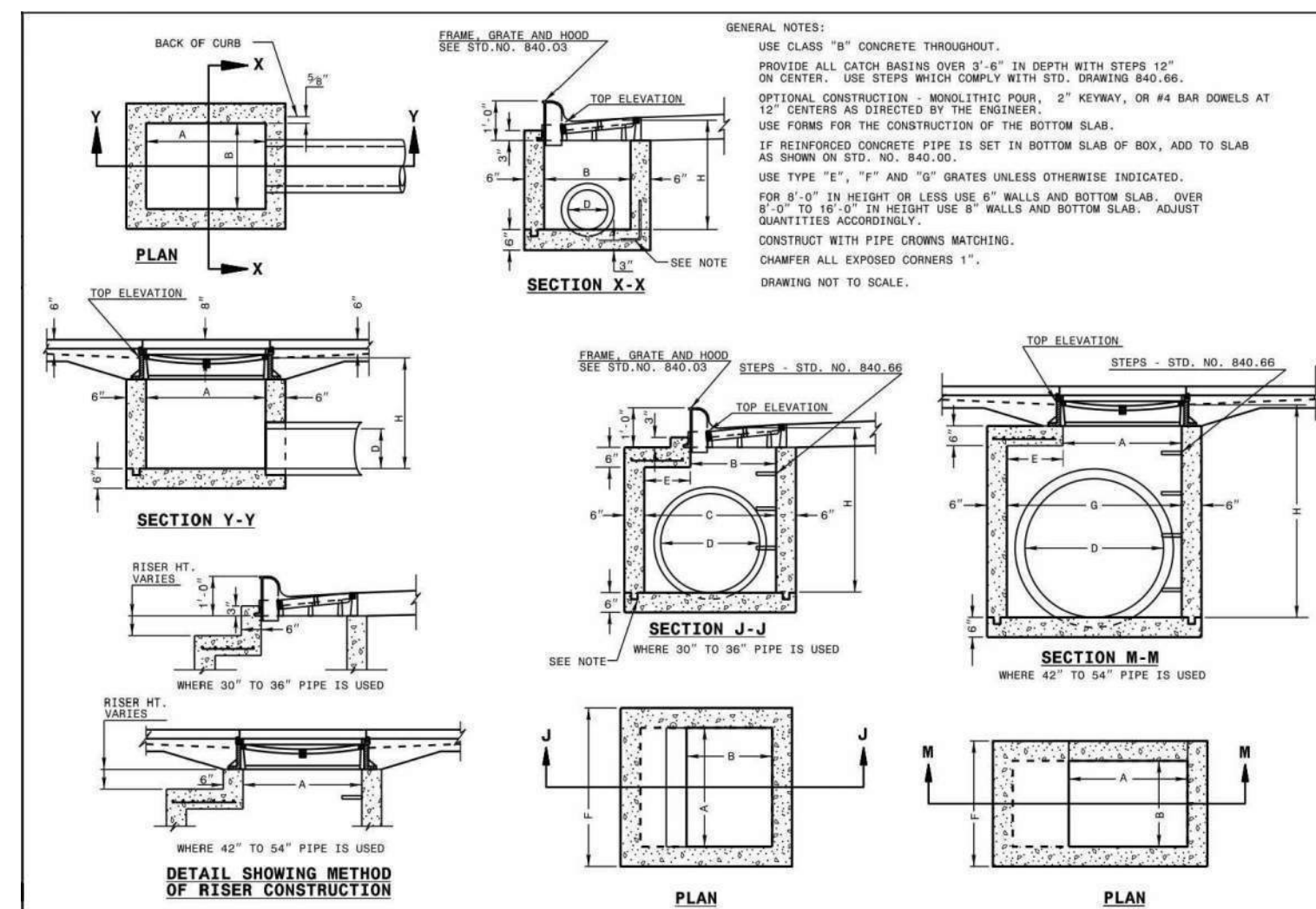


Ram Realty Advisors

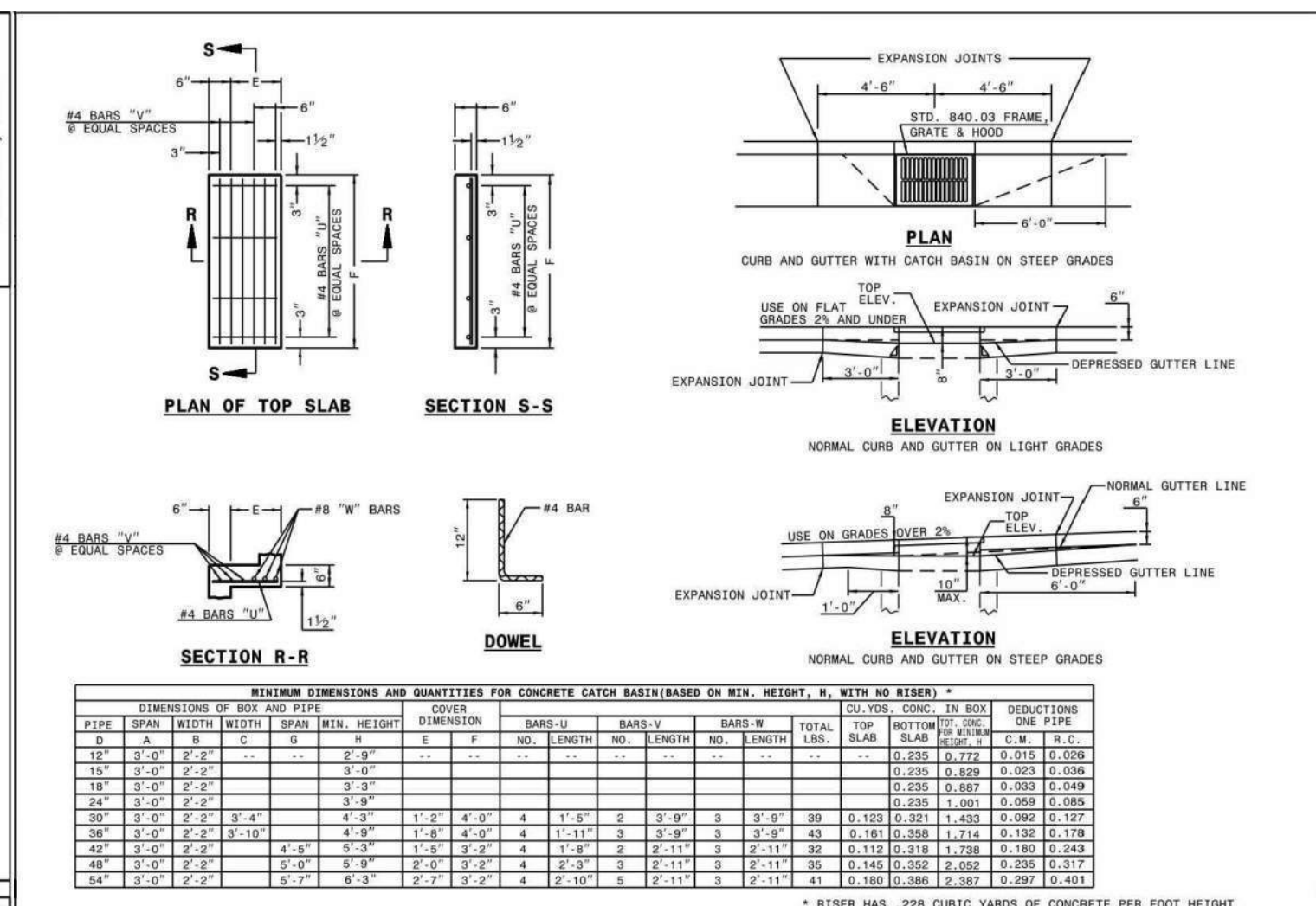
UNIVERSITY PLACE
PHASE 1D
ZONING COMPLIANCE PERMIT
CHAPEL HILL, NC 27514



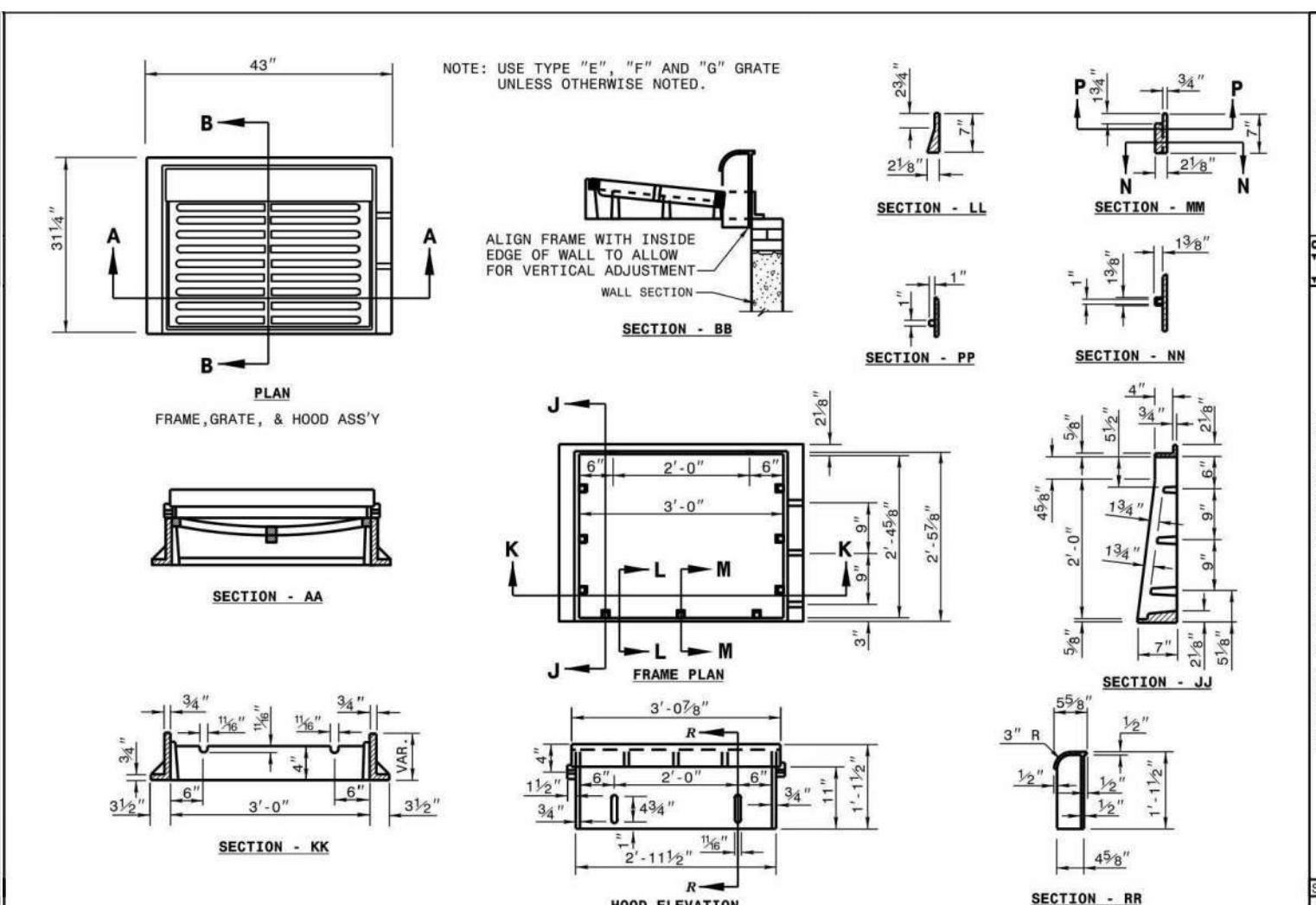
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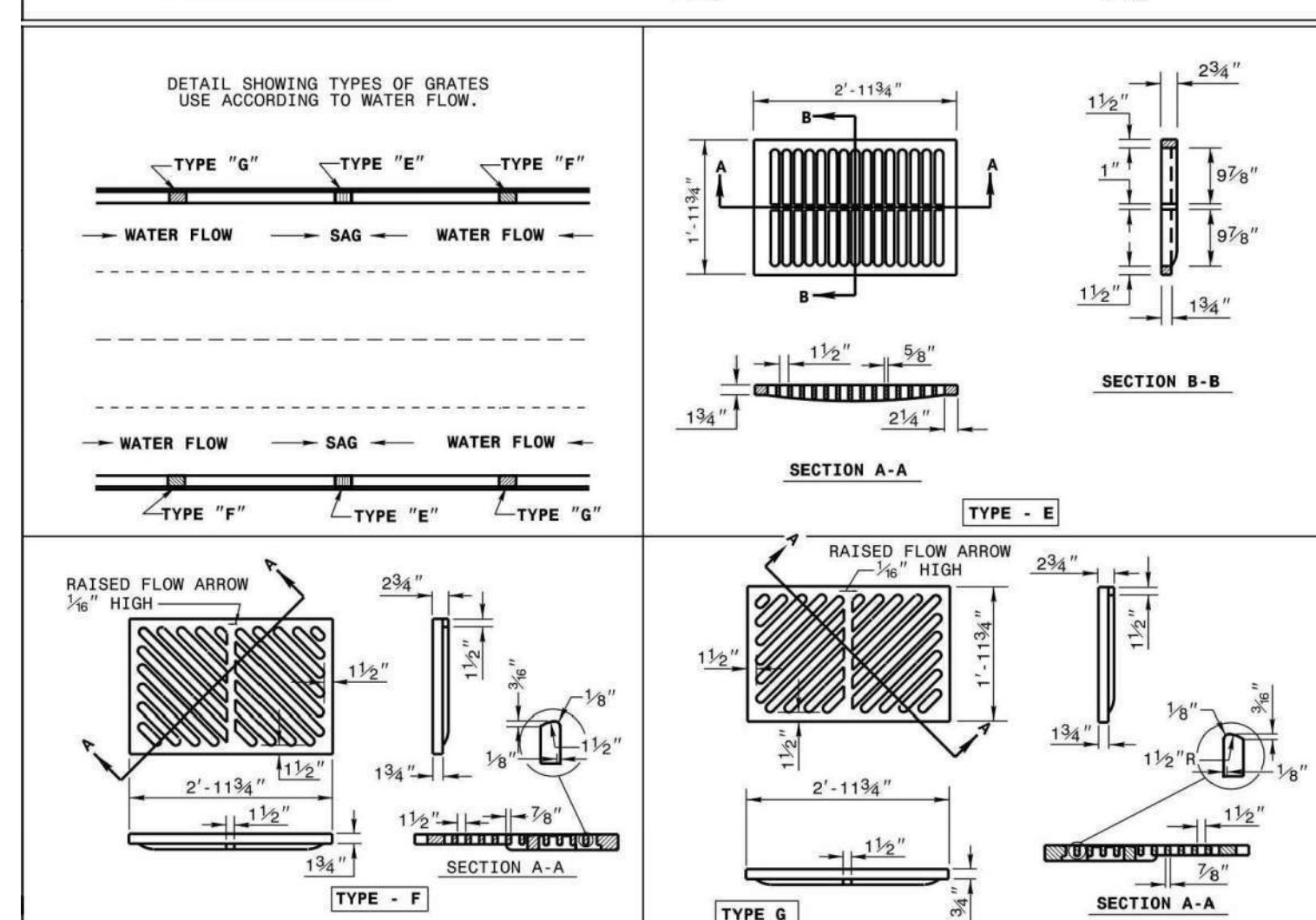
ROADWAY STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE
SHEET 1 OF 2
840.02



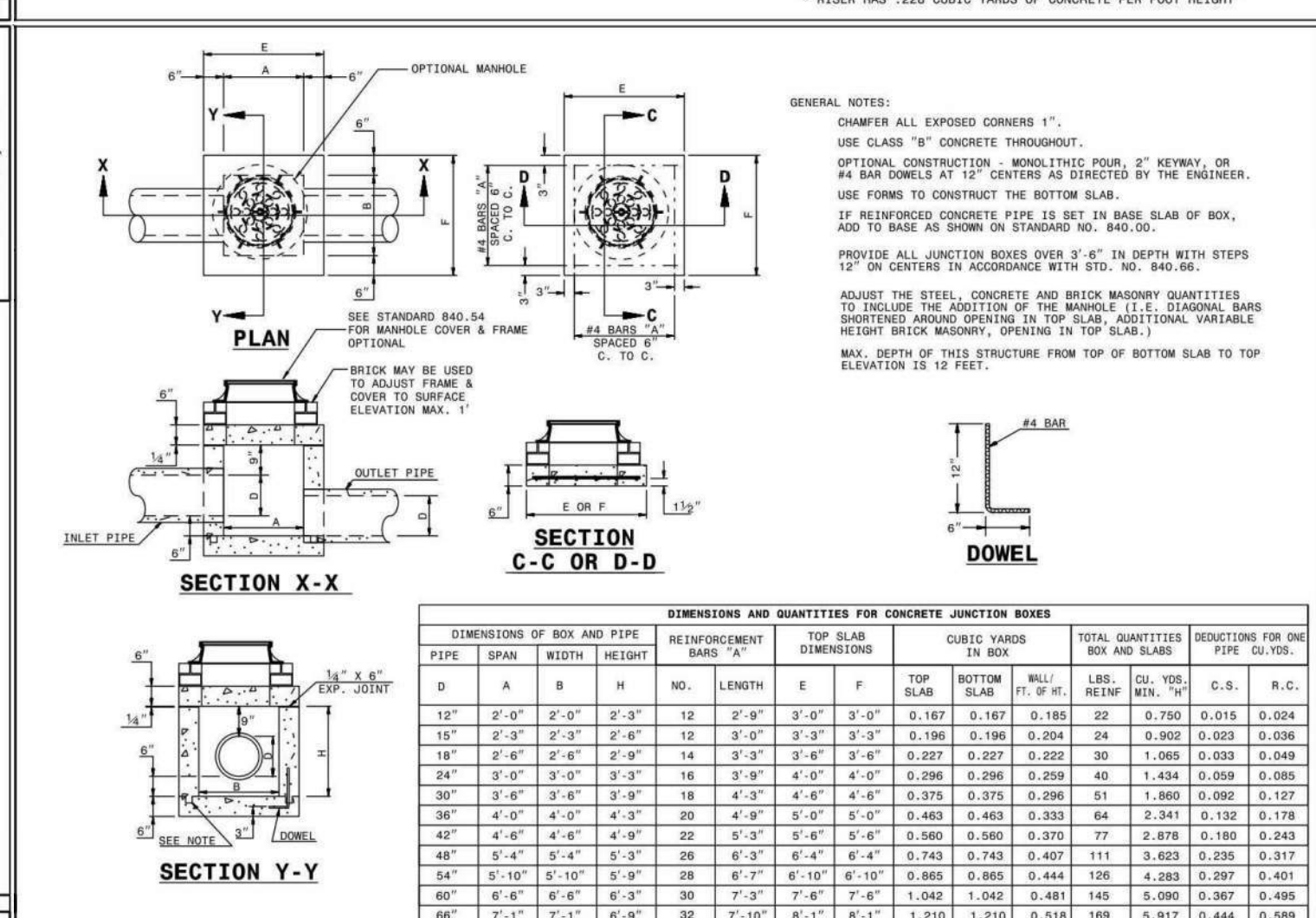
ROADWAY STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE
SHEET 2 OF 2
840.02



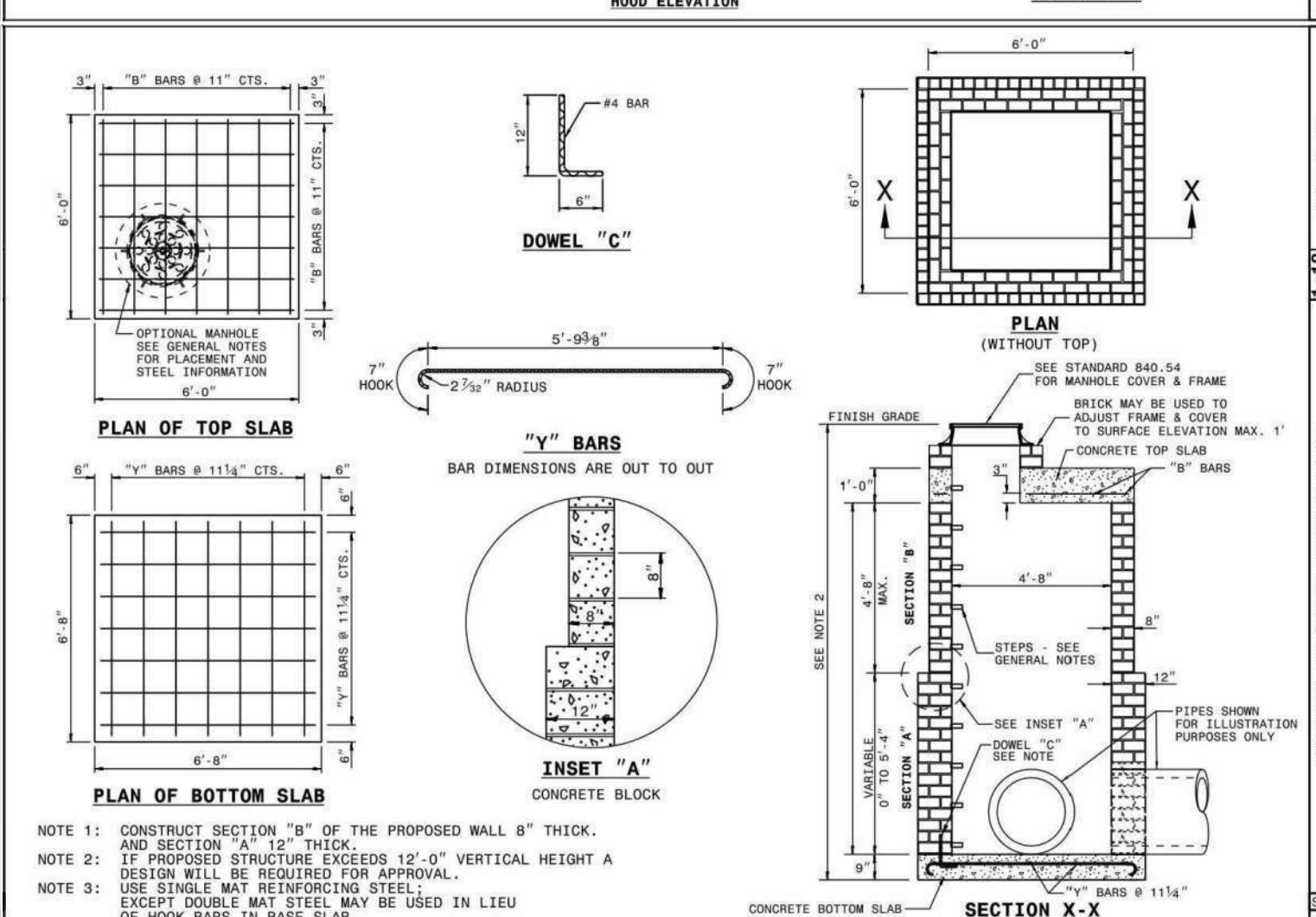
ROADWAY STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
FOR USE ON STANDARD CATCH BASIN
SHEET 1 OF 2
840.03



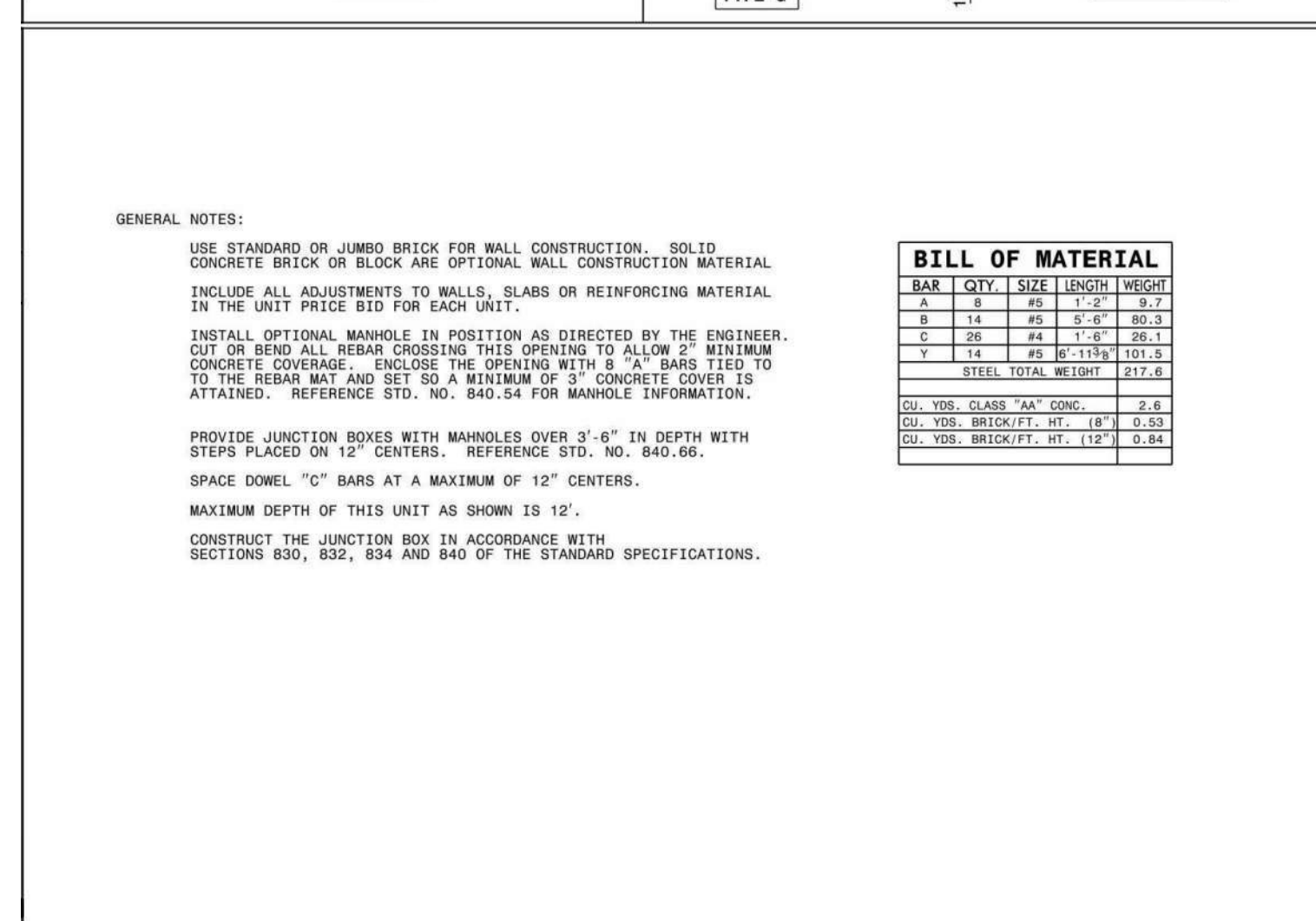
ROADWAY STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
FOR USE ON STANDARD CATCH BASIN
SHEET 2 OF 2
840.03



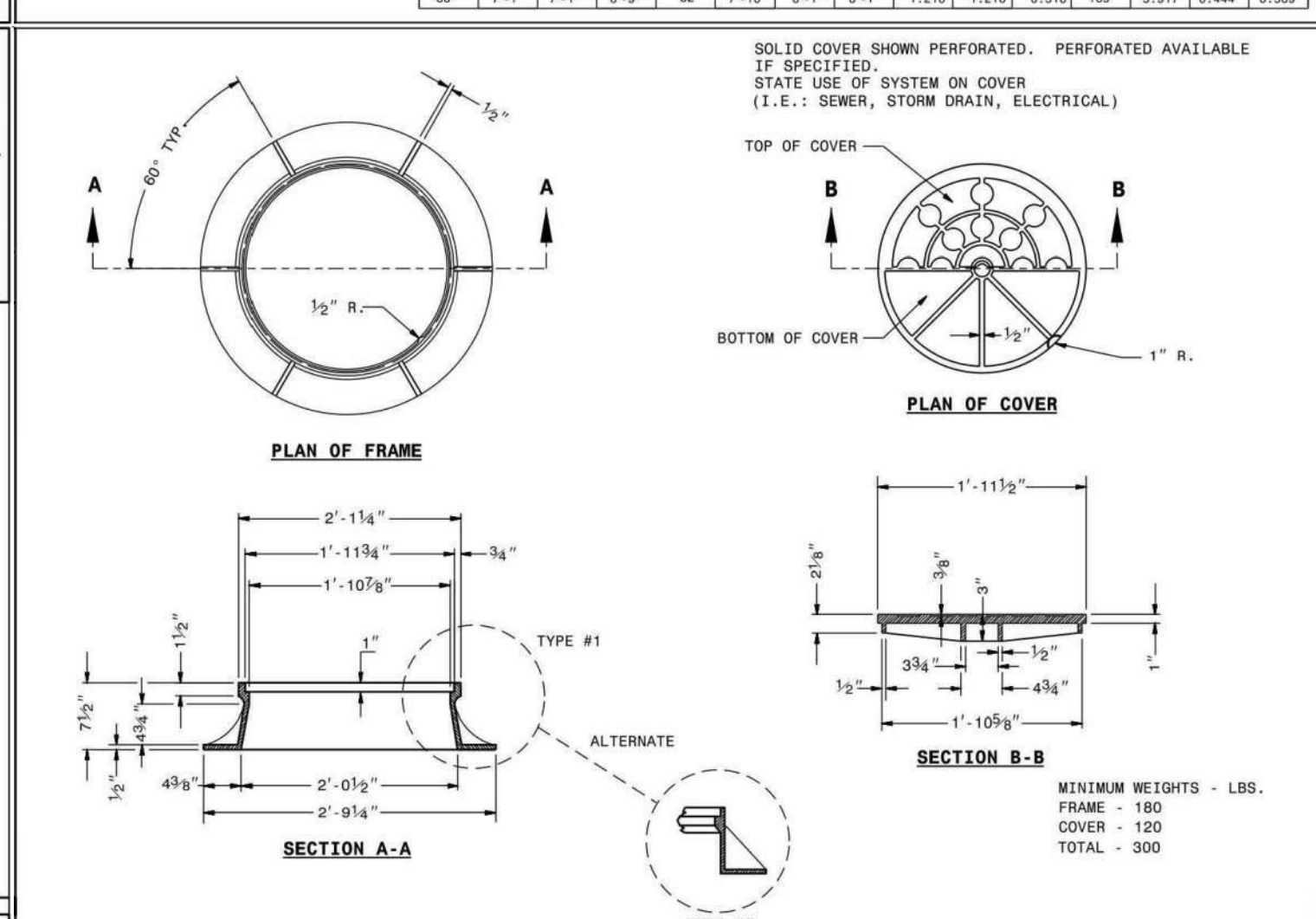
ROADWAY STANDARD DRAWING FOR
CONCRETE JUNCTION BOX
(WITH OPTIONAL MANHOLE)
SHEET 1 OF 2
840.31



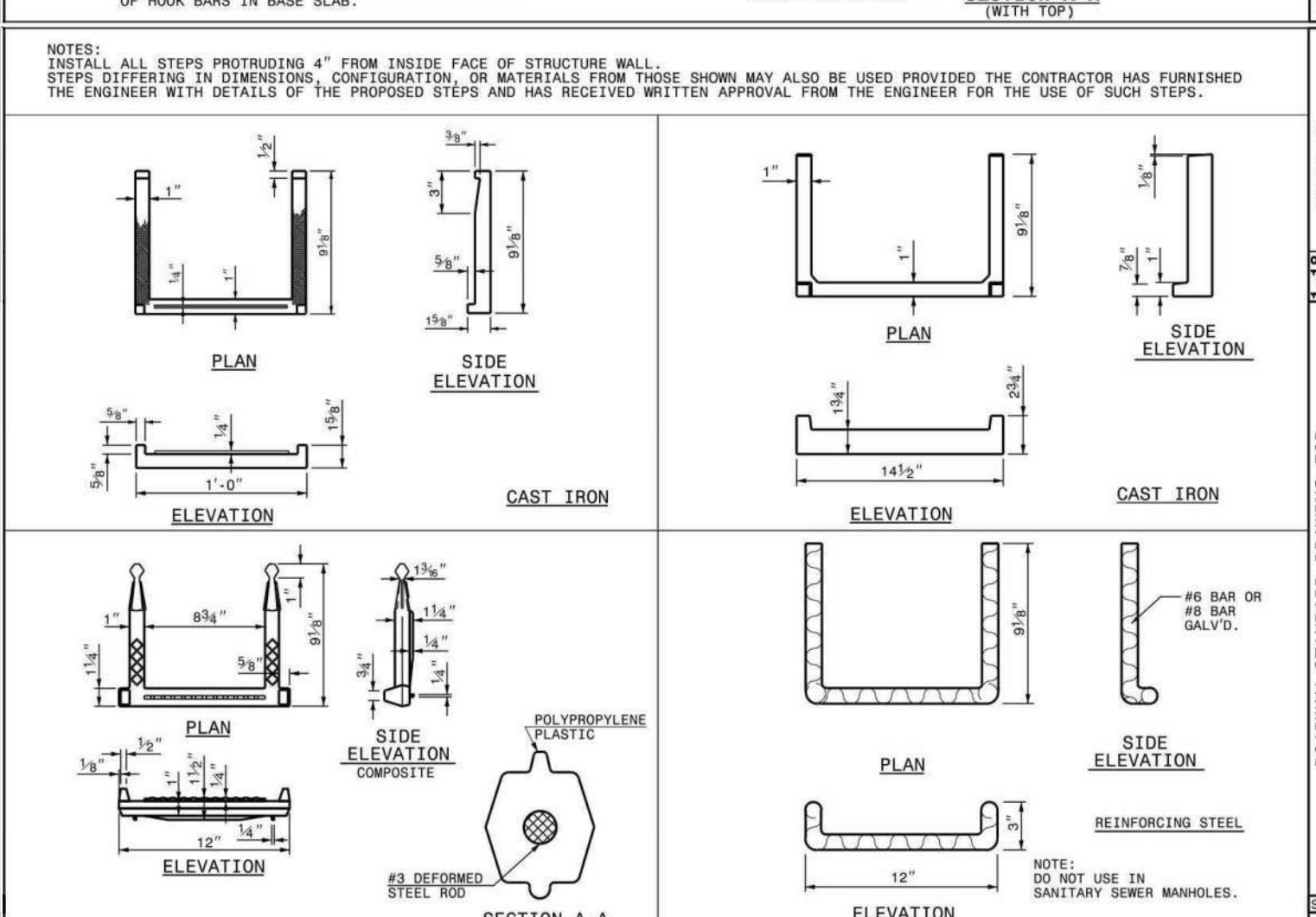
ROADWAY STANDARD DRAWING FOR
TRAFFIC BEARING JUNCTION BOX
FOR USE WITH PIPES 42" AND UNDER
SHEET 2 OF 2
840.34



ROADWAY STANDARD DRAWING FOR
TRAFFIC BEARING JUNCTION BOX
FOR USE WITH PIPES 42" AND UNDER
SHEET 2 OF 2
840.34



ROADWAY STANDARD DRAWING FOR
MANHOLE FRAME AND COVER
SHEET 1 OF 2
840.54



ROADWAY STANDARD DRAWING FOR
DRAINAGE STRUCTURE STEPS
SHEET 1 OF 2
840.66

REVISIONS

Table with 3 columns: NO., DATE, DESCRIPTION. Contains 3 revision entries.

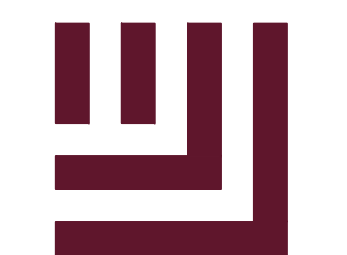
PLAN INFORMATION

Table with 2 columns: PROJECT NO., FILENAME, CHECKED BY, DRAWN BY, SCALE, DATE. Contains project details.

SHEET

STORM DRAINAGE
DETAILS

C8.02-1D



McADAMS

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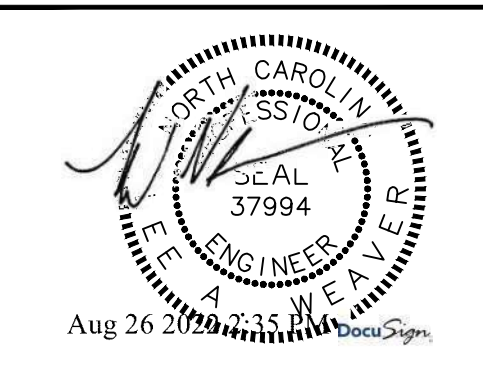
www.mcadamsco.com

CLIENT

RAM REALTY
127 W. WORTHINGTON AVE, SUITE 290
CHARLOTTE, NORTH CAROLINA 28203



UNIVERSITY PLACE
PHASE 1D
ZONING COMPLIANCE PERMIT
CHAPEL HILL, NC 27514



REVISIONS

Table with 3 columns: NO., DATE, DESCRIPTION. Contains 3 revision entries.

PLAN INFORMATION

PROJECT NO. RAM-19000
FILENAME RAM19000-D1
CHECKED BY LAW
DRAWN BY MRO
SCALE N/A
DATE 11.12.2021

SHEET
OWASA DETAILS

C8.03-1D

TEST PRESSURE = 150 P.S.I. Table with columns for PIPE SIZE, TYPE FITTING, DIMENSIONS (F.L.), and VOLUME CONCRETE. Includes CHART NOTES and OWASA logo.

ORANGE WATER AND SEWER AUTHORITY
BLOCKING DETAIL FOR HORIZONTAL BENDS AND TEE. Includes diagrams for ALL BEND FITTINGS and TEE FITTING, and SECTION A-A. Includes OWASA logo.

ORANGE WATER AND SEWER AUTHORITY
STANDARD VERTICAL BEND DETAIL. Includes PROFILE VIEW diagram and OWASA logo.

ORANGE WATER AND SEWER AUTHORITY
DETAIL OF ROCK EXCAVATION. Includes cross-section diagram and OWASA logo.

ORANGE WATER AND SEWER AUTHORITY
STANDARD SCREW VALVE BOX DETAIL. Includes detailed diagram of valve box assembly and OWASA logo.

ORANGE WATER AND SEWER AUTHORITY
THRUST FOOTING DETAIL. Includes diagrams for FLANGE & FLANGE 90° DIP BEND and FLANGE & PLAIN END DIP RISER. Includes OWASA logo.

ORANGE WATER AND SEWER AUTHORITY
BLOCKING DETAIL FOR HORIZONTAL BENDS AND TEE. Includes table for TEST PRESSURE = 250 P.S.I. and OWASA logo.

ORANGE WATER AND SEWER AUTHORITY
BLOCKING DETAIL FOR HORIZONTAL BENDS AND TEE. Includes table for TEST PRESSURE = 200 P.S.I. and OWASA logo.

ORANGE WATER AND SEWER AUTHORITY
DOUBLE DETECTOR CHECK VALVE/ RPDA ASSEMBLY (INDOOR). Includes diagrams for EXTERIOR and INTERIOR views and OWASA logo.

ORANGE WATER AND SEWER AUTHORITY
DOUBLE CHECK VALVE/ RPZ ASSEMBLY (INDOOR). Includes diagrams for EXTERIOR and INTERIOR views and OWASA logo.

ORANGE WATER AND SEWER AUTHORITY
DETECTOR METER INSTALLATION (FIRE SYSTEM). Includes diagrams for FIELD AND EASEMENT OR SIDE OF ROAD LOCATION and IN STREET LOCATION. Includes OWASA logo.

ORANGE WATER AND SEWER AUTHORITY
VALVE BOX STABILIZING PAD DETAILS. Includes diagrams for FIELD AND EASEMENT OR SIDE OF ROAD LOCATION and IN STREET LOCATION. Includes OWASA logo.

X:\Projects\RAM\RAM-19000\04-Production\Engineering\Construction\Drawings\Detail\2-Current\Drawing\RAM19000-D1.dwg, 8/12/2022 10:48:25 AM, Lee Weaver

ALTERNATE THRU FLOOR ACCESS

PART	MANUFACTURER MODEL / Cst. No.
1 BACKFLOW PREVENTER, AS APPLICABLE	USC & ASSE APPROVED
2 GASKET GATE VALVE WITH RESILIENT SEATS	TO BE APPROVED BY OWASA
3 DIP FLANGE x FLANGE PIPE (VERIFY LENGTH)	AMERICAN CAST IRON PIPE, or GRIFIN PIPE CO. TO BE APPROVED BY OWASA
4 CSIP OR PVC SCH 40 PIPE	SIZE & TYPE DETERMINED BY NC PE.
5 CSIP OR PVC SCH 40 "P" TRAP	---
6 FLOOR DRAIN	---
7 MASONRY BLOCK	---
8 WALL SLEEVE WITH LINK SEAL	TO BE APPROVED BY OWASA
9 METER BOX WITH ERT AND METER	PURCHASED FROM OWASA
10 METER BOX x FLANGE ELBOW	AMERICAN CAST IRON PIPE, or GRIFIN PIPE CO. or UNION-TYLER PIPE CO., or U.S. PIPE & FOUNDRY
11 WEDGE ACTION RESTRAINER GLAND JOINT RESTRAINT	SEAL IRON SALES, INC. FORD
12 90° DIP M.J. x M.J. ELBOW	AMERICAN CAST IRON PIPE, GRIFIN PIPE CO., UNION-TYLER PIPE CO., U.S. PIPE & FOUNDRY
13 DIP FLANGE x PE PIPE (VERIFY LENGTH)	AMERICAN CAST IRON PIPE, GRIFIN PIPE CO., UNION-TYLER PIPE CO., U.S. PIPE & FOUNDRY
14 3" THRU 10" DIP	---

ORANGE WATER AND SEWER AUTHORITY
 2 1/2" to 10" DCV, DDCV, RPZ, RPDA ASSEMBLY (INDOOR)

3" METER ASSEMBLY SCHEMATIC

ORANGE WATER AND SEWER AUTHORITY
 3" to 8" WATER METER WITH BYPASS (UNDER GROUND VAULT)

3" METER ASSEMBLY SCHEMATIC

ORANGE WATER AND SEWER AUTHORITY
 3" to 8" WATER METER WITH BYPASS (UNDER GROUND VAULT)

PART	MANUFACTURER MODEL / Cst. No.
1 COMPOUND METER OR TURNING METER	TO BE APPROVED BY OWASA
2 GASKET GATE VALVE WITH RESILIENT SEATS	TO BE APPROVED BY OWASA
3 STRAINER	TO BE APPROVED BY OWASA
4 DIP CLASS 350	SIZE & TYPE DETERMINED BY NC PE
5 DIP CLASS 300	SIZE & TYPE DETERMINED BY NC PE
6 FLOOR DRAIN WITH STRAINER	SIZE & TYPE DETERMINED BY NC PE BASED ON SIZE OF WATER MAIN (TO BE APPROVED BY OWASA)
7 MORTARED MASONRY BLOCK PIPE SUPPORTS (MINIMUM 4 REQUIRED)	---
8 PRECAST CONCRETE UTILITY VAULT BOX. VERIFY FITTINGS WILL FIT INSIDE BOX BEFORE ORDERING	STAY-RIGHT PRECAST VAULT, H20 LOAD RATING (OR APPROVED EQUIVALENT)
9 DIP FLANGED TEE	AMERICAN CAST IRON PIPE, UNION-TYLER PIPE CO., or U.S. PIPE & FOUNDRY
10 4"-0" MIN. WIDTH (O.D.) x 4'-0" LONG (L.D.) RISER. SEE SHEET 2 OF 3 FOR MINIMUM LENGTH.	STAY-RIGHT PRECAST VAULT, H20 LOAD RATING (OR APPROVED EQUIVALENT)
11 4" WIDE x 4" LONG DOOR CAST INTO RISER (DRAIN TO OUTSIDE). SEE SHEET 2 OF 3 FOR MINIMUM LENGTH.	BLOD OR HALDAY PRODUCTS DOUBLE LEAF ACCESS DOOR. USE H20 LOADING IN ALL AREAS: DRAIN TO OUTSIDE (OR APPROVED EQUAL)
12 WALL SLEEVE WITH LINK SEAL (OR APPROVED EQUIVALENT)	TO BE APPROVED BY OWASA
13 REMOVE METER READOUT (N GALLONS)	---
14 DIP FLANGE x FLANGE SPOOL PIPE OR THREADED END FOR FLANGE (VERIFY LENGTH)	AMERICAN CAST IRON PIPE, U.S. PIPE & FOUNDRY
15 DIP FLANGED 90° ELBOW (SHORT RADII)	AMERICAN CAST IRON PIPE, UNION-TYLER PIPE CO., or U.S. PIPE & FOUNDRY
16 4" or 6" or 8" DIP FLANGED x PE PIPE (USE 1 FULL LENGTH JOINT PIPE)	AMERICAN CAST IRON PIPE, UNION-TYLER PIPE CO., or U.S. PIPE & FOUNDRY
17 FLANGED ADAPTOR	(TO BE APPROVED BY OWASA)
18 DIP FLANGED 4"x3" REDUCER	AMERICAN CAST IRON PIPE, UNION-TYLER PIPE CO., or U.S. PIPE & FOUNDRY
19	---
20 GASKET GATE VALVE WITH RESILIENT SEATS	DRILL STEM FOR SEALING IN CLOSED POSITION (TO BE APPROVED BY OWASA)
21 METER BOX	CSB SYSTEMS CORP. / WADA-111B-120; MID-STATES P.LASTING, INC. / HMC-1116-12

ORANGE WATER AND SEWER AUTHORITY
 3" to 8" WATER METER WITH BYPASS (UNDER GROUND VAULT)

ORANGE WATER AND SEWER AUTHORITY
 STANDARD WATER MANHOLE FRAME and COVER

APPROVED MODELS	EAST JORDAN IRON WORKS V-1384	US FOUNDRY USF-669 MH-2001	CAPROL FOUNDRY MH-2001
COVER WEIGHT	135 Lbs.	125 Lbs.	120 Lbs.
FRAME WEIGHT	180 Lbs.	190 Lbs.	190 Lbs.
LOAD RATING	HEAVY DUTY	HEAVY DUTY	HEAVY DUTY
MATERIAL	ASTM A 48 CLASS 35B	ASTM A 48 CLASS 35B	ASTM A 48 CLASS 35B
TINISH	UNCOATED	UNCOATED	UNCOATED

ORANGE WATER AND SEWER AUTHORITY
 SANITARY SEWER BEDDING DETAIL

ORANGE WATER AND SEWER AUTHORITY
 STANDARD ECCENTRIC CONE MANHOLE DETAIL

ORANGE WATER AND SEWER AUTHORITY
 STANDARD ECCENTRIC FLAT TOP MANHOLE DETAIL

ORANGE WATER AND SEWER AUTHORITY
 STANDARD ECCENTRIC MANHOLE DETAIL

ORANGE WATER AND SEWER AUTHORITY
 STANDARD SEWER INVERT PLANS FOR MANHOLE

ORANGE WATER AND SEWER AUTHORITY
 SANITARY SEWER MANHOLE FRAME and COVER

APPROVED MODELS	EAST JORDAN IRON WORKS V-1384	US FOUNDRY USF-669 MH-2001	CAPROL FOUNDRY MH-2001
COVER WEIGHT	135 Lbs.	125 Lbs.	120 Lbs.
FRAME WEIGHT	180 Lbs.	190 Lbs.	190 Lbs.
LOAD RATING	HEAVY DUTY	HEAVY DUTY	HEAVY DUTY
MATERIAL	ASTM A 48 CLASS 35B	ASTM A 48 CLASS 35B	ASTM A 48 CLASS 35B
TINISH	UNCOATED	UNCOATED	UNCOATED

REVISIONS

NO.	DATE	DESCRIPTION
1	04/22/2022	REVISED PER TOCH COMMENTS
2	06/29/2022	REVISED PER TOCH COMMENTS
3	08/16/2022	FINAL SUBMITTAL

PLAN INFORMATION

PROJECT NO.	RAM-19000
FILENAME	RAM19000-D1
CHECKED BY	LAW
DRAWN BY	MRO
SCALE	N/A
DATE	11. 12. 2021

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STORMWATER CONTROL MEASURE 'A' CONSTRUCTION SPECIFICATIONS

GENERAL NOTES

- PRIOR TO CONSTRUCTION, ANY DISCREPANCIES IN THE PLANS AND NOTES SHALL BE BROUGHT TO THE DESIGN ENGINEER'S ATTENTION IMMEDIATELY.
- THE FINAL CERTIFICATION FOR THIS FACILITY WILL INCLUDE A CERTIFICATION BY THE ON-SITE GEOTECHNICAL ENGINEER THAT THE PROJECT WAS CONSTRUCTED PER THE APPROVED PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE ON-SITE GEOTECHNICAL ENGINEER FOR OBSERVATION AND TESTING SUCH THAT THE ON-SITE GEOTECHNICAL ENGINEER CAN CERTIFY THE CONSTRUCTION OF THE DAM EMBANKMENT AND SPILLWAY. THIS CERTIFICATION MUST ADDRESS THE TESTING FOR MATERIALS AND COMPACTION OF THE DAM EMBANKMENT AND SPILLWAY.
- ALL CONSTRUCTION ACTIVITY RELATED TO THE PROPOSED STORMWATER CONTROL MEASURE SHALL BE PER THE DETAILS AND SPECIFICATIONS SHOWN IN THESE DRAWINGS. SOILS, COMPACTION, AND OTHER MISCELLANEOUS DETAILS AND SPECIFICATIONS MAY BE MODIFIED PER THE RECOMMENDATIONS OF THE ON-SITE GEOTECHNICAL ENGINEER. HOWEVER, PRIOR TO IMPLEMENTATION, THE DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DEVIATION FROM THESE DESIGN DRAWINGS, INCLUDING SHOP DRAWINGS FOR ANY PROPOSED MODIFICATION.
- DURING THE INITIAL STAGES OF CONSTRUCTION, THE STORMWATER CONTROL MEASURE MAY BE USED AS A SEDIMENT BASIN FOR EROSION CONTROL PURPOSES. IF SO, THE CONTRACTOR SHALL FOLLOW THE GENERAL CONSTRUCTION SEQUENCE BELOW:
 - THE CONTRACTOR SHALL CONSTRUCT THE ENTIRE FACILITY (PERMANENT OUTLET STRUCTURE, DAM, KEY TRENCH, ETC.) WITH THE EXCEPTION OF THE INTERIOR FINE GRADING AND THE TOPSOIL FOR THE FACILITY. THE INTERIOR FINE GRADING AND TOPSOIL WILL BE CONSTRUCTED ONCE THE EROSION CONTROL PHASE IS COMPLETE.
 - HORSESHOE INLET PROTECTION SHALL BE INSTALLED AROUND THE RISER STRUCTURE.
 - ONCE THE UPSTREAM DRAINAGE AREA IS STABILIZED AND THE EROSION CONTROL INSPECTOR APPROVES THE REMOVAL OF THE SEDIMENT BASIN, THE CONTRACTOR SHALL REMOVE THE TEMPORARY DRAW DOWN RISER (OR SKIMMER) AND CLEAN OUT THE BASIN. ALL SEDIMENT, TRASH, ETC. SHALL BE DISPOSED OF PROPERLY (I.E. - PLACED IN A LANDFILL) AND NOT STOCKPILED IN AN AREA WHERE WATER QUALITY COULD BE ADVERSELY AFFECTED.
 - ONCE THE BASIN IS CLEANED OUT, AND ALL EROSION CONTROL DEVICES REMOVED, THE CONTRACTOR SHALL CONSTRUCT THE INTERIOR GRADING SHOWN ON THIS SHEET.
 - ONCE THE GRADING IS COMPLETE, THE CONTRACTOR SHALL REQUEST AN ON-SITE INSPECTION AND AN AS-BUILT SURVEY PRIOR TO INSTALLATION OF THE STORMWATER CONTROL MEASURE PLANTS. IF THE CONTRACTOR PLANTS THE PROPOSED VEGETATION PRIOR TO AN AS-BUILT SURVEY (AND SUBSEQUENT APPROVAL), ANY CHANGES TO THE GRADING / RE-PLANTING OF PLANTS WILL BE AT THE CONTRACTOR'S EXPENSE.
 - ONCE THE ENGINEER HAS APPROVED THE AS-BUILT GRADING, THE CONTRACTOR SHALL PLANT THE PROPOSED STORMWATER CONTROL MEASURE PLANTS SHOWN ON THE LANDSCAPE PLAN FOR THE FACILITY. AFTER COMPLETION OF THE PLANTING, THE LANDSCAPE CONTRACTOR SHALL PROVIDE A LETTER TO THE ENGINEER CERTIFYING THAT THE PLANTS HAVE BEEN INSTALLED PER THE APPROVED STORMWATER CONTROL MEASURE PLANTING PLAN. THE CONTRACTOR SHALL PROVIDE A ONE-YEAR WARRANTY FOR ALL PLANTS INSTALLED.
- ALL OSHA REQUIREMENTS FOR EXCAVATIONS (SHORING, DEPTH, ETC.) ARE THE RESPONSIBILITY OF THE CONTRACTOR. IF REQUIRED, THE CONTRACTOR SHALL PROVIDE AN EXCAVATION PLAN TO BE SEALED BY A P.E. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE IF AN EXCAVATION PLAN IS REQUIRED. THE JOHN R. MCADAMS COMPANY ASSUMES NO RESPONSIBILITY FOR ANY EXCAVATION DESIGN RELATED TO SAFETY OR OSHA REQUIREMENTS.
- ON-SITE GEOTECHNICAL ENGINEER TO DETERMINE IF IN-SITU SOILS ENCOUNTERED WOULD MAINTAIN A STORMWATER CONTROL MEASURE PERMANENT POOL AT DESIGN ELEVATION. IF HIGHLY PERMEABLE SOILS ARE ENCOUNTERED THAT WOULD NOT MAINTAIN THE PERMANENT POOL ELEVATION AS DESIGNED, A CLAY LINER MAY BE REQUIRED TO MAINTAIN A PERMANENT POOL OF WATER IN THE STORMWATER CONTROL MEASURE. FINAL DETERMINATION IF A CLAY LINER IS NEEDED SHALL BE THE RESPONSIBILITY OF THE ON-SITE GEOTECHNICAL ENGINEER. UPON DETERMINATION OF HIGHLY PERMEABLE SOIL CONDITIONS, ON-SITE GEOTECHNICAL ENGINEER WILL INFORM THE DESIGN ENGINEER AND RECOMMEND LINER SPECIFICATIONS.
- IT IS ANTICIPATED THAT DEWATERING WILL BE NECESSARY IN THE EXCAVATION AREAS (E.G. - EMBANKMENT SUB GRADE, INTERIOR PORTIONS OF THE STORMWATER CONTROL MEASURE, KEY TRENCH, ETC.). THEREFORE, THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ANY PUMPING EQUIPMENT, ETC. NEEDED FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE STORMWATER CONTROL MEASURE SITE. DURING PLACEMENT OF FILL WITHIN THESE AREAS, THE CONTRACTOR SHALL KEEP THE WATER LEVEL BELOW THE BOTTOM OF THE EXCAVATION / CONSTRUCTION AREAS. THE MANNER IN WHICH THE WATER IS REMOVED SHALL BE SUCH THAT THE EXCAVATION BOTTOM AND SIDE SLOPES ARE STABLE, WITH NO SEDIMENT DISCHARGED FROM THE SITE (I.E. PUMPED WATER MAY NEED TO BE DIRECTED TO AN APPROVED EROSION CONTROL DEVICE SUCH AS A DIRT BASIN (A/C ENVIRONMENTAL), OR ENGINEER APPROVED EQUIVALENT, PRIOR TO DISCHARGE).
- THE GRADES SHOWN ON THIS PLAN ARE FINISHED GRADES. IF THE EXISTING SOIL LAYER AFTER CONSTRUCTION / COMPACTION IS NOT DETERMINED SUITABLE BY A LANDSCAPE PROFESSIONAL FOR THE WETLAND PLANTINGS, THEN THE CONTRACTOR SHALL AMEND THE PLANTING AREA OF THE WETLAND AS DIRECTED BY A LANDSCAPE PROFESSIONAL.
- PRIOR TO TOPSOIL INSTALLATION, THE CONTRACTOR SHALL SCARIFY THE TOP 2" - 3" OF THE BERM SECTION TO PROMOTE BONDING OF THE TOPSOIL WITH THE COMPACTED FILL. THE TOPSOIL DEPTH SHALL RANGE FROM 3" - 4" ON THE DAM EMBANKMENT AND WETLAND. PLEASE NOTE THE TOPSOIL SHALL BE AMENDED, AS DIRECTED BY A LANDSCAPE PROFESSIONAL, PRIOR TO INSTALLATION ON THE EMBANKMENT AND WETLAND.
- THE CONTRACTOR SHALL REFER TO THE LANDSCAPE PLAN FOR THE PERMANENT PLANTING PLAN/SCHEDULE FOR THIS FACILITY. CONTRACTOR SHALL COORDINATE WITH A LANDSCAPE PROFESSIONAL REGARDING SCHEDULING FOR PLANT INSTALLATION. PLEASE NOTE THAT NO TREES/SHRUBS OF ANY TYPE MAY BE PLANTED ON THE PROPOSED DAM EMBANKMENT (FILL AREAS).

OUTLET STRUCTURE MATERIAL SPECIFICATIONS

- THE 24" RCP OUTLET BARREL SHALL BE CLASS III RCP, MODIFIED BELL AND SPIGOT, MEETING THE REQUIREMENTS OF ASTM C76-LATEST. THE PIPES SHALL HAVE CONFINED O-RING RUBBER GASKET JOINTS MEETING ASTM C-443-LATEST. THE PIPE JOINTS SHALL BE TYPE R-4.
- THE STRUCTURAL DESIGN FOR THE 4' X 4' (INTERNAL DIMENSIONS) RISER BOX WITH EXTENDED BASE SHALL BE BY OTHERS. PRIOR TO ORDERING THE STRUCTURES, THE CONTRACTOR SHALL PROVIDE, TO THE DESIGN ENGINEER FOR REVIEW, SHOP DRAWINGS AND SUPPORTING STRUCTURAL CALCULATIONS SEALED BY A P.E. REGISTERED IN NORTH CAROLINA DEMONSTRATING THE PERTINENT VERTICAL LOADS ARE SUPPORTED BY THE CONCRETE RISER STRUCTURE.
- THE RISER BOX OUTLET STRUCTURE SHALL BE PROVIDED WITH STEPS 16" ON CENTER. STEPS SHALL BE PROVIDED ON THE INNER WALL OF THE RISER BOX. STEPS SHALL BE IN ACCORDANCE WITH NCDOT STD. 840.66. PLEASE REFER TO SHEET C9.01A FOR LOCATION OF THE RISER STEPS. NOTE THE STEPS SHALL LINE UP WITH THE ACCESS HATCH OF THE TRASH RACK.
- THE CONCRETE ANTI-FLOTATION BLOCK SHALL BE CAST-IN-PLACE. STEEL REINFORCEMENT AND CONNECTION TO THE RISER SHALL BE PROVIDED IN ACCORDANCE WITH THE DETAIL ON SHEET C9.02A. THE CONTRACTOR SHALL ENSURE THE WEIGHT OF THE ENTIRE RISER STRUCTURE IS GREATER THAN OR EQUAL TO 750 LBS. IN LIEU OF CAST-IN-PLACE, THE CONTRACTOR MAY OPT FOR A PRECAST ANTI-FLOTATION BLOCK. SHOP DRAWINGS FOR THE PRECAST BLOCK SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THE PRECAST ANTI-FLOTATION BLOCK SHALL HAVE A SHIPPING WEIGHT OF 14,818 LBS.
- THE RISER BOX JOINTS SHALL BE SEALED USING BUTYL RUBBER SEALANT CONFORMING TO ASTM C990-LATEST. IF NECESSARY, THE CONTRACTOR SHALL INCORPORATE A WATERSTOP INTO THE RISER BOX JOINT TO ENSURE A WATERTIGHT CONNECTION. THE CONTRACTOR SHALL PARGE JOINTS ON BOTH THE INSIDE AND OUTSIDE WITH NON-SHRINK GROUT. JOINT STRAPS SHALL BE PROVIDED PER THE DETAIL ON C9.01A.
- PRIOR TO ORDERING, THE CONTRACTOR SHALL SUBMIT TRASH RACK SHOP DRAWINGS TO THE ENGINEER FOR REVIEW. CONTRACTOR SHALL ENSURE THAT AN ACCESS HATCH IS PROVIDED WITHIN THE TRASH RACK (SEE DETAIL FOR LOCATION) THAT WILL ALLOW FOR FUTURE MAINTENANCE ACCESS. CONTRACTOR SHALL ALSO PROVIDE A CHAIN AND LOCK FOR SECURING THE ACCESS HATCH. NOTE THE ACCESS HATCH SHALL LINE UP WITH THE ACCESS STEPS AFTER INSTALLATION.
- ALL POURED CONCRETE SHALL MEET THE FOLLOWING SPECIFICATIONS UNLESS OTHERWISE NOTED:
 - MINIMUM 3000 PSI (28 DAY)
 - SLUMP = 3" - 5"
 - ENTRAINED AIR = 5% - 7%
 PLEASE NOTE NO CONCRETE SHALL BE POURED WHEN THE AMBIENT AIR TEMPERATURES ARE EXPECTED TO BE ABOVE 85°F OR BELOW 40°F. CAST-IN-PLACE CONCRETE SHALL BE "WET CURED" AFTER FINISHING FOR A MINIMUM OF 48 HOURS.
- ON-SITE GEOTECHNICAL ENGINEER TO ENSURE AND CERTIFY ALL POURED CONCRETE MEETS THE ABOVE SPECIFICATIONS.
- GEOTEXTILE FABRIC FOR THE 24" RCP OUTLET BARREL JOINTS SHALL BE MIRAF1 180N OR ENGINEER APPROVED EQUAL (NON-WOVEN FABRIC).

TEMPORARY SEEDING SCHEDULE

SEEDING DATE	SEEDING MIXTURE	APPLICATION
JAN 1 - MAY 1	RYE (GRAIN)	120 LBS/AC
MAY 1 - AUG 15	GERMAN MILLET	40 LBS/AC
AUG 15 - DEC 30	RYE (GRAIN)	120 LBS/AC

SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/AC GROUND AGRICULTURE LIMESTONE AND 1,000 LB/AC 10-10-10 FERTILIZER (FROM AUG 15 - DEC 30, INCREASE 10-10-10 FERTILIZER TO 1,000 LB/AC).

MULCH
APPLY 4,000 LB/AC STRAW. ANCHOR STRAW BY TACKLING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
JAN 1 - AUG 15: REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.
AUG 15 - DEC 30: REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOP DRESS WITH 50 LB/AC OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/AC KOBE LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

NOTE: USE THE TEMPORARY SEEDING SCHEDULE ONLY WHEN DATE IS NOT CORRECT TO USE THE PERMANENT SEEDING SCHEDULE.

CONSTRUCTION SEQUENCE

- PRIOR TO CONSTRUCTION, THE OWNER SHALL OBTAIN A LAND DISTURBING (GRADING) PERMIT AND AN "APPROVAL TO CONSTRUCT" FROM THE TOWN OF CHAPEL HILL AND ALL OTHER NECESSARY PERMITS FROM APPLICABLE AGENCIES (E.G. 401 PERMITS)
- INSTALL ALL SEDIMENT AND EROSION CONTROL MEASURES PER THE APPROVED SEDIMENT AND EROSION CONTROL PLAN. THE CONTRACTOR SHALL MAINTAIN ALL APPROVED SEDIMENT AND EROSION CONTROL MEASURES THROUGHOUT THE ENTIRE PROJECT, AS REQUIRED. THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE EROSION CONTROL INSPECTOR, AS REQUIRED BY GOVERNING AGENCIES, PRIOR TO ANY CLEARING.
- CLEAR AND GRUB AREA WITHIN THE LIMITS OF THE PROPOSED DAM CONSTRUCTION. ALL TREES AND THEIR ENTIRE ROOT SYSTEMS MUST BE REMOVED FROM THE DAM FOOTPRINT AREA AND BACKFILLED WITH SUITABLE SOIL MATERIAL. THE BACKFILLED AREAS SHALL BE COMPACTED TO THE SAME STANDARDS AS THE DAM EMBANKMENT. THE REMAINING AREA OF THE EMBANKMENT SHALL BE STRIPPED TO A SUITABLE DEPTH AS DIRECTED BY THE ON-SITE GEOTECHNICAL ENGINEER. ANY RESIDUAL SOILS TO BE LEFT IN PLACE MUST BE WELL SCARIFIED TO PROMOTE BONDING OF THE NEW EMBANKMENT FILL. NO EMBANKMENT MATERIAL SHALL BE PLACED FOR THE DAM OR KEY TRENCH UNTIL APPROVAL OF THE DAM SUBGRADE IS OBTAINED FROM THE ON-SITE GEOTECHNICAL ENGINEER.
- PRIOR TO INSTALLATION, SUBGRADE CONDITIONS ALONG THE SPILLWAY PIPES SHOULD BE EVALUATED BY THE ON-SITE GEOTECHNICAL ENGINEER TO ASSESS WHETHER SUITABLE BEARING CONDITIONS EXIST AT THE SUBGRADE LEVEL. SHOULD SOFT OR OTHERWISE UNSUITABLE CONDITIONS BE ENCOUNTERED ALONG THE PIPE ALIGNMENTS, THESE MATERIALS SHOULD BE UNDERCUT AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE UNDERCUT MATERIALS SHALL BE REPLACED WITH ADEQUATELY COMPACTED STRUCTURAL FILL, LEAN CONCRETE OR FLOWABLE FILL AS DIRECTED BY THE ON-SITE GEOTECHNICAL ENGINEER.
- BEGIN CONSTRUCTION OF THE NEW EMBANKMENT. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8" THICK LIFTS PRIOR TO COMPACTION, UNLESS DIRECTED OTHERWISE BY THE ON-SITE GEOTECHNICAL ENGINEER. FILL LIFTS SHALL BE CONTINUOUS OVER THE ENTIRE LENGTH OF FILL. IF IT IS NECESSARY, THE EMBANKMENT FILL MATERIAL WILL BE OVERBUILT IN HORIZONTAL LIFTS AND CUT BACK TO FINAL GRADE IN ORDER TO ACHIEVE PROPER COMPACTION.
- CONSTRUCT EMBANKMENT PER SPECIFICATIONS LISTED IN THE SECTION TITLED "BERM AND SOIL COMPACTION SPECIFICATIONS" AND REQUIREMENTS OF THE ON-SITE GEOTECHNICAL ENGINEER. ALL CHARACTERISTICS OF THE EMBANKMENT FILL MATERIAL SHALL MEET THE STANDARDS SET FORTH IN "BERM AND SOIL COMPACTION SPECIFICATIONS", INCLUDING COMPACTION AND MOISTURE REQUIREMENTS. IF NECESSARY TO ACHIEVE PROPER COMPACTION, THE EMBANKMENT FILL MATERIAL WILL BE OVERBUILT IN HORIZONTAL LIFTS AND CUT BACK TO PROPER FINAL GRADE. ANY HAND COMPACTION ACTIVITY AROUND SPILLWAY OR DRAIN STRUCTURES SHALL BE CONDUCTED IN 4-INCH LOOSE LIFTS AND BE TO THE SAME COMPACTION AND MOISTURE REQUIREMENTS AS THE ENTIRE EMBANKMENT. ALL COMPACTION AND MOISTURE TESTING SHALL BE CARRIED OUT AS DIRECTED BY THE ON-SITE GEOTECHNICAL ENGINEER AND AS LISTED IN THE SECTION TITLED "BERM AND SOIL COMPACTION SPECIFICATIONS".
- UPON COMPLETION OF DAM EMBANKMENT, PROMPTLY STABILIZE AND SEED DAM EMBANKMENT PER SEEDING SCHEDULE. PERMANENT GROUND COVER SHALL BE ESTABLISHED PER THE PERMANENT SEEDING SCHEDULE FOUND ON SHEET C9.00A.
- SCHEDULE A FINAL AS-BUILT INSPECTION AND AS-BUILT SURVEY WITH THE ENGINEER AND SURVEYOR. AN AS-BUILT INSPECTION AND SURVEY SHALL BE SCHEDULED BEFORE IMPOUNDING WATER IN THE FACILITY AND A MINIMUM OF 60 DAYS PRIOR TO THE ANTICIPATED DATE OF CERTIFICATION APPROVAL. ANY COMMENTS OR DEFICIENCIES IN THE SCM CONSTRUCTION MUST BE CORRECTED TO THE SATISFACTION OF THE ENGINEER AND OWNER BEFORE CERTIFICATION SHALL BE GRANTED.

BERM AND SOIL COMPACTION SPECIFICATIONS

- PRIOR TO CONSTRUCTION, THE ON-SITE GEOTECHNICAL ENGINEER SHALL IDENTIFY BORROW / FILL AREAS AND VERIFY THEIR SUITABILITY FOR USE WITHIN THE DAM EMBANKMENT. ALSO, THE ON-SITE GEOTECHNICAL ENGINEER SHALL PERFORM STANDARD PROCTORS ON THE PROPOSED BORROW MATERIAL TO ENSURE THAT OPTIMUM MOISTURE CONTENT AND COMPACTION CAN BE ACHIEVED / CONTROLLED DURING CONSTRUCTION.
- ALL FILL MATERIALS TO BE USED FOR THE DAM EMBANKMENT SHALL BE TAKEN FROM BORROW AREAS APPROVED BY THE ON-SITE GEOTECHNICAL ENGINEER. THE FILL MATERIAL SHALL BE FREE FROM ROOTS, STUMPS, WOOD, STONES GREATER THAN 6", AND FROZEN OR OTHER OBJECTIONABLE MATERIAL. THE FOLLOWING SOIL TYPES ARE SUITABLE FOR USE AS FILL WITHIN THE DAM EMBANKMENT AND KEY TRENCH: ML AND CL. ALL FILL MATERIALS SHALL BE APPROVED BY THE ON-SITE GEOTECHNICAL ENGINEER FOR THE INTENDED USE.
- FILL PLACEMENT FOR THE EMBANKMENT SHALL NOT EXCEED A MAXIMUM 8" LIFT (UNCOMPACTED). EACH LIFT SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF EMBANKMENT. BEFORE PLACEMENT OF FILL FOR THE BERM SECTION, ALL UNSUITABLE MATERIAL SHALL BE REMOVED AND THE SURFACE PROPERLY PREPARED FOR FILL PLACEMENT. FILL MATERIAL ADJACENT TO ALL SPILLWAY AND DRAINAGE STRUCTURES SHALL BE PLACED IN 4-INCH (UNCOMPACTED) LIFTS AND HAND-COMPACTED TO THE SAME COMPACTION AND MOISTURE REQUIREMENTS AS THE ENTIRE EMBANKMENT.
- ALL FILL SOILS USED IN THE EMBANKMENT CONSTRUCTION SHALL BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698). THE FILL SOILS SHALL BE COMPACTED AT A MOISTURE CONTENT WITHIN -1 TO +3 PERCENT OF ITS OPTIMUM MOISTURE CONTENT. COMPACTION TESTS SHALL BE PERFORMED BY THE ON-SITE GEOTECHNICAL ENGINEER DURING CONSTRUCTION TO VERIFY THAT THE PROPER COMPACTION LEVEL HAS BEEN REACHED. THE FILL SHOULD BE COMPACTED USING A SHEEPSFOOT TYPE COMPACTOR. IN ORDER TO PREVENT DAMAGE TO THE PIPE, NO COMPACTION EQUIPMENT SHALL CROSS ANY PIPE UNTIL MINIMUM COVER IS ESTABLISHED ALONG THE PIPE.
- THE DESIGN ENGINEER SHALL BE PROVIDED WITH REPORTS AND CERTIFICATION, BY THE ON-SITE GEOTECHNICAL ENGINEER, THAT THE GEOTECHNICAL ASPECTS OF THE FACILITY HAVE BEEN CONSTRUCTED PER PLAN. THIS CERTIFICATION MUST ADDRESS THE TESTING FOR MATERIALS AND COMPACTION OF THE DAM EMBANKMENT AND SPILLWAY. THESE REPORTS AND CERTIFICATION WILL BE NEEDED DURING THE AS-BUILT CERTIFICATION PROCESS FOR THIS STORMWATER CONTROL MEASURE. THEREFORE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE TESTING AND OBSERVATION WITH THE ON-SITE GEOTECHNICAL ENGINEER.
- TESTING OF THE NEW FILL MATERIALS SHALL BE PERFORMED TO VERIFY THAT THE RECOMMENDED LEVEL OF COMPACTION IS ACHIEVED DURING CONSTRUCTION. THEREFORE, ONE DENSITY TEST SHALL BE PERFORMED FOR EVERY 2,500 SQUARE FEET OF AREA FOR EVERY LIFT OF FILL OR AS RECOMMENDED BY THE ON-SITE GEOTECHNICAL ENGINEER.
- TESTING WILL BE REQUIRED ALONG THE 24" RCP OUTLET BARREL AT A FREQUENCY OF ONE TEST PER 25 LF OF PIPE PER VERTICAL FOOT OF FILL OR AS DIRECTED BY THE ON-SITE GEOTECHNICAL ENGINEER.

STAGE STORAGE FUNCTION - ABOVE NORMAL POOL

Contour (Feet)	Stage (feet)	Contour Area (SF)	Average Contour Area (SF)	Incremental Contour Volume (CF)	Accumulated Contour Volume (CF)	Estimated Stage w/S-S Fxn (Feet)
254.00	0.00	4,046				
255.10	1.10	6,377	5,212	5,733	5,733	1.11
256.00	2.00	7,524	6,951	6,255	11,988	1.98
257.00	3.00	8,835	8,180	8,180	20,168	2.98
258.00	4.00	10,233	9,534	9,534	29,702	4.04

WETLAND ZONE TABULATION

Zone	Elevation (ft)	Measured Area (sf)	Portion of Wetland Surface Area
Deep Pool - Forebay	253.50 to 251	690	10.80%
Deep Pool - Non Forebay	253.50 to 251	662	10.40%
Shallow Water	254 to 253.50	2,694	42.20%
Shallow Land	255.10 to 254	2,331	36.60%

PERMANENT SEEDING SCHEDULE (DAM EMBANKMENTS)

SEEDING DATE	SEEDING MIXTURE	APPLICATION
AUG 25 - OCT (BEST)	TALL FESCUE	200 LBS/AC
FEB - APR 15 (POSSIBLE)		

SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 4,000 LB/AC GROUND AGRICULTURE LIMESTONE AND 1,000 LB/AC 10-10-10 FERTILIZER.

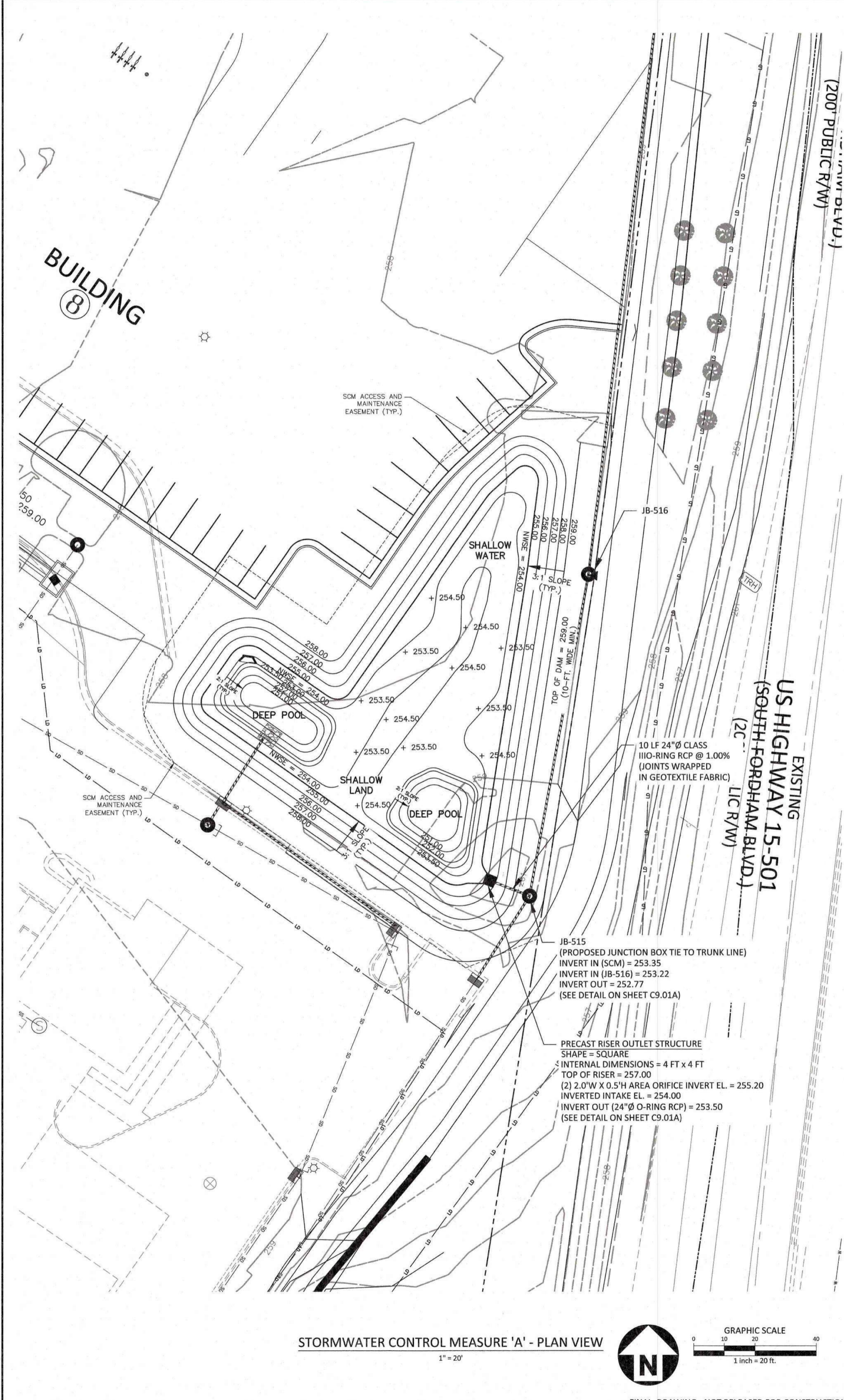
MULCH
APPLY 4,000 LB/AC STRAW. ANCHOR STRAW BY TACKLING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
INSPECT AND REPAIR MULCH FREQUENTLY. REFERTILIZE IN LATE WINTER OF THE FOLLOWING YEAR; USE SOIL TESTS OR APPLY 150 LB/AC 10-10-10 FERTILIZER. MOW REGULARLY TO A HEIGHT OF 2-4 INCHES.

NOTE: PERMANENT SEEDING SCHEDULE IS FOR SLOPES OF THE BASIN AND TOP OF BERM.

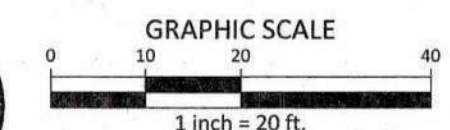
STATEMENT OF RESPONSIBILITY

ALL REQUIRED MAINTENANCE AND INSPECTIONS OF THIS FACILITY SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER, PER THE EXECUTED OPERATION AND MAINTENANCE AGREEMENT FOR THIS FACILITY.



STORMWATER CONTROL MEASURE 'A' - PLAN VIEW

1" = 20'



FINAL DRAWING - NOT RELEASED FOR CONSTRUCTION

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PHASE 1D
ZONING COMPLIANCE PERMIT**
CHAPEL HILL, NC 27514



REVISIONS

NO.	DATE	DESCRIPTION
1	04/22/2022	REVISED PER TOCH COMMENTS
2	06/29/2022	REVISED PER TOCH COMMENTS

PLAN INFORMATION

PROJECT NO. RAM-19000
FILENAME RAM19000-SW
CHECKED BY HCF
DRAWN BY NB
SCALE 1" = 20'
DATE 06.27.22

**STORMWATER CONTROL
MEASURE 'A' PLAN VIEW
C9.00A**

L:\Projects\Projects\BAM\19000\04-Production\Water Resources\Phase 1\Current Drawings\CD\RAM19000 - SCA A.dwg, 6/29/2022 1:00:28 PM, Marilee Robinson

