

PROJECT GEKKO

PARAGON WAY

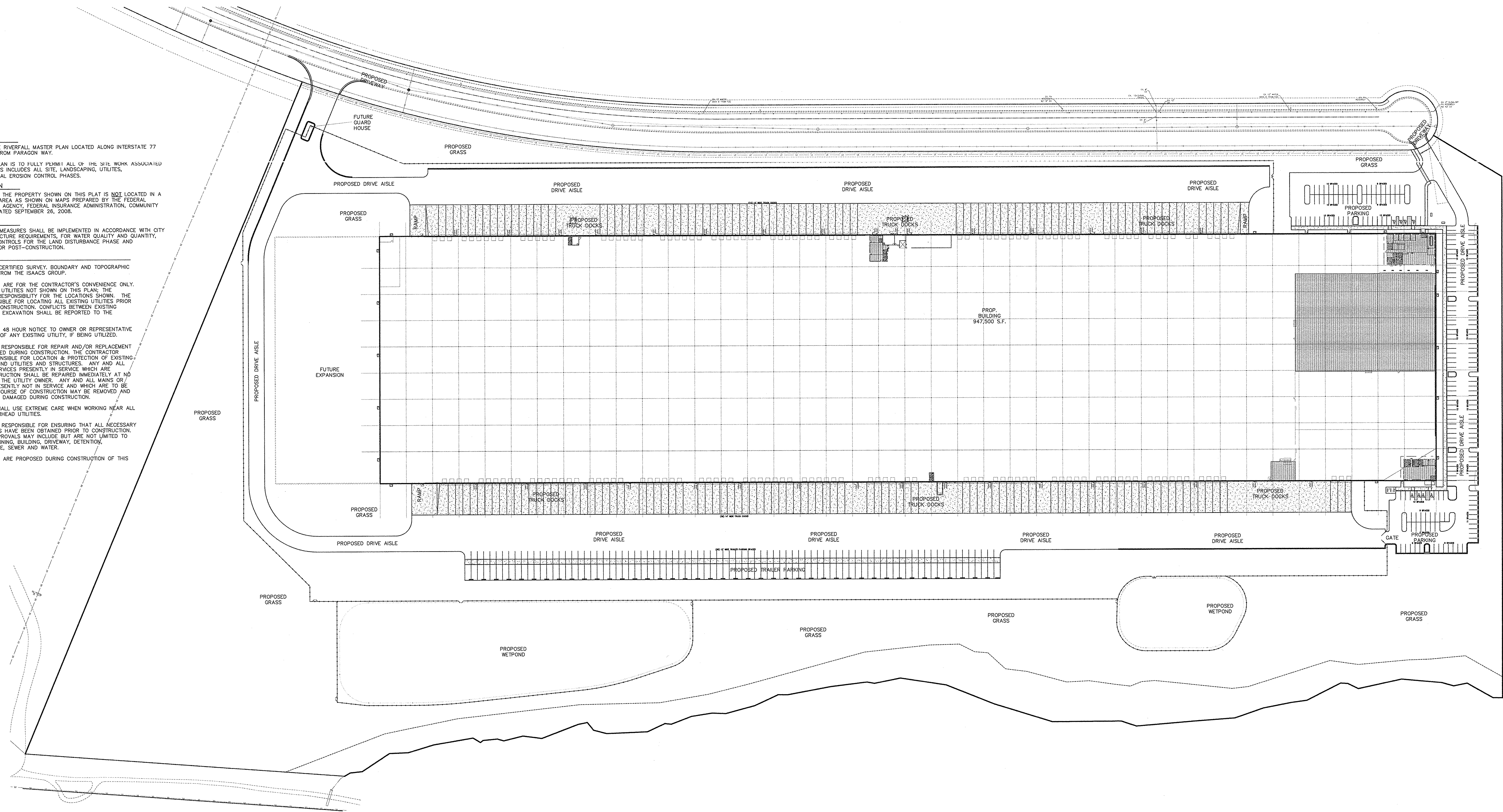
ROCK HILL, SOUTH CAROLINA

PROJECT NARRATIVE
 THE SITE IS PART OF THE RIVERFALL MASTER PLAN LOCATED ALONG INTERSTATE 77 WITH ACCESS PROVIDED FROM PARAGON WAY.
 THE PURPOSE OF THIS PLAN IS TO FULLY PERMIT ALL OF THE SITE WORK ASSOCIATED WITH THE BUILDING. THIS INCLUDES ALL SITE, LANDSCAPING, UTILITIES, GRADING/STORM, AND FINAL EROSION CONTROL PHASES.

FLOOD CERTIFICATION
 THIS IS TO CERTIFY THAT THE PROPERTY SHOWN ON THIS PLAN IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON MAPS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE ADMINISTRATION, COMMUNITY NUMBER 450910328E, DATED SEPTEMBER 26, 2008.

STORMWATER NOTE
 STORMWATER MITIGATION MEASURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH CITY OF ROCK HILL INFRASTRUCTURE REQUIREMENTS, FOR WATER QUALITY AND QUANTITY, INCLUDING TEMPORARY CONTROLS FOR THE LAND DISTURBANCE PHASE AND PERMANENT MEASURES FOR POST-CONSTRUCTION.

- NOTES:**
1. THIS MAP IS NOT A CERTIFIED SURVEY, BOUNDARY AND TOPOGRAPHIC INFORMATION OBTAINED FROM THE ISAACS GROUP.
 2. THE UTILITIES SHOWN ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THIS PLAN; THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONFLICTS BETWEEN EXISTING UTILITIES AND PROPOSED EXCAVATION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
 3. PROVIDE MINIMUM OF 48 HOUR NOTICE TO OWNER OR REPRESENTATIVE PRIOR TO INTERRUPTION OF ANY EXISTING UTILITY, IF BEING UTILIZED.
 4. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY UTILITIES DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATION & PROTECTION OF EXISTING ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES. ANY AND ALL MAINS OR INDIVIDUAL SERVICES PRESENTLY IN SERVICE WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AT NO ADDITIONAL EXPENSE TO THE UTILITY OWNER. ANY AND ALL MAINS OR INDIVIDUAL SERVICES PRESENTLY NOT IN SERVICE AND WHICH ARE TO BE REPLACED DURING THE COURSE OF CONSTRUCTION MAY BE REMOVED AND LEGALLY DISPOSED OF IF DAMAGED DURING CONSTRUCTION.
 5. THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR ALL UNDERGROUND AND OVERHEAD UTILITIES.
 6. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION. THESE PERMITS AND APPROVALS MAY INCLUDE BUT ARE NOT LIMITED TO GRADING, DEMOLITION, ZONING, BUILDING, DRIVEWAY, DETENTION, SUBDIVISION, SPECIAL USE, SEWER AND WATER.
 7. NO WETLAND IMPACTS ARE PROPOSED DURING CONSTRUCTION OF THIS DEVELOPMENT.

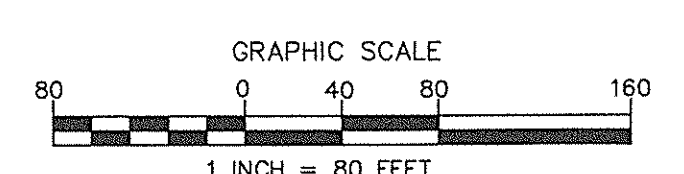
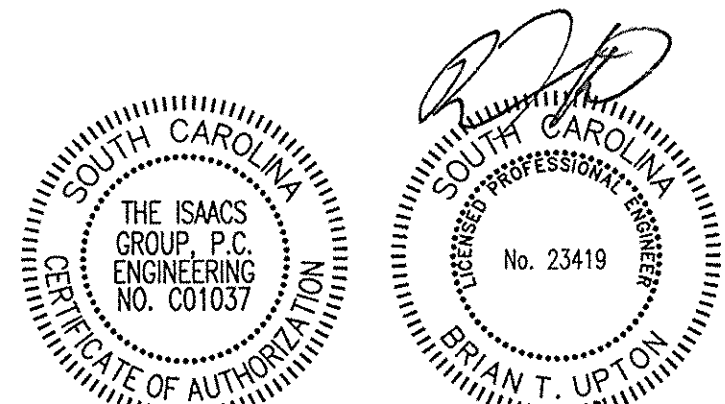


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C1.0D	SITE PLAN
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C1.1B	LANDSCAPE PLAN
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C4.2C	EROSION CONTROL-PH.3
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DA2.0	



NO.	BY	DATE	REVISION
1	FBL	06/13/13	PER CITY COMMENTS
2	FBL	06/18/13	PER CITY COMMENTS
3	CBH	06/26/13	FOR FULL SUBMITTAL
4	FBL	06/05/13	PER CITY COMMENTS
5	FBL	05/15/13	PER CONTRACTOR COMMENTS
6	FBL	05/17/13	CONSTRUCTION DRAWINGS

Project: **PROJECT GEKKO**
 996 PARAGON WAY
 ROCK HILL, SOUTH CAROLINA

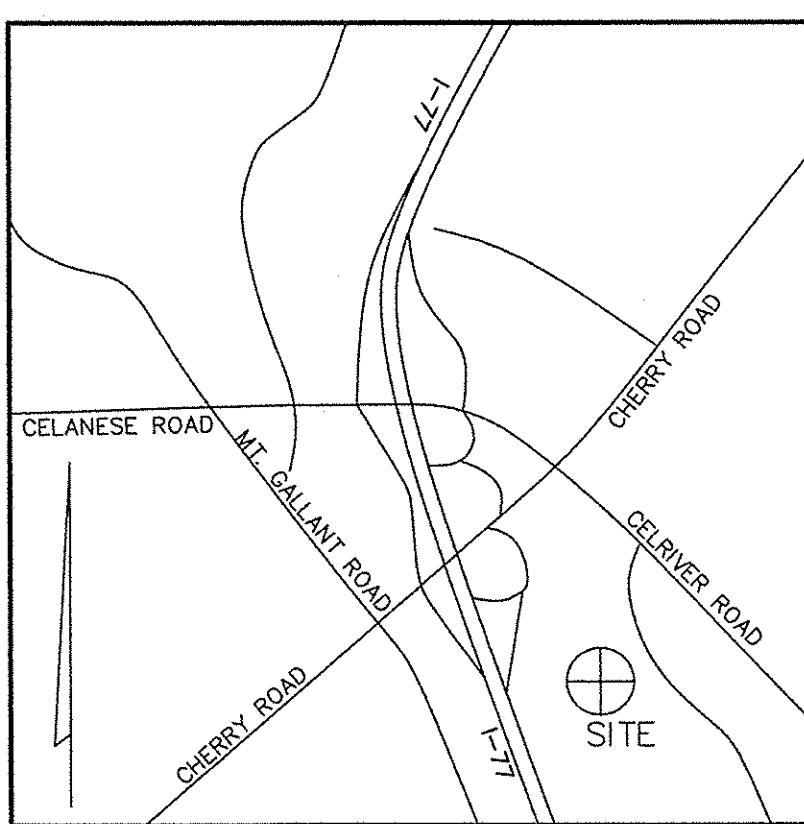
Sheet: **COVER SHEET**

ISAACS
 ENGINEERING DESIGN AND LAND SURVEYING GROUP

8720 RED OAK BOULEVARD, SUITE 420
 CHARLOTTE, N.C. 28217
 PHONE (704) 527-3440 FAX (704) 527-8335

Project Egr: B.T.U.
 Design By: F.B.L.
 Drawn By: F.B.L.
 Scale: 1"=80'

C0.0



VICINITY MAP
NOT TO SCALE

DEVELOPMENT SUMMARY

PROJECT NAME: PROJECT GEKKO
 PLANS PREPARED FOR: ISACCS, INC. PHONE #: 614-869-9362
 ADDRESS: 570 POLARIS PARKWAY WESTERVILLE, OHIO 43082
 PLANS PREPARED BY: THE ISAACS GROUP, P.C. PHONE #: 704-527-3440
 ADDRESS: 8720 RED OAK BLVD., SUITE 420 CHARLOTTE, NC 28217
 ZONING: PD-MEC JURISDICTION: ROCK HILL
 TAX PARCEL NUMBER: 6620701132

YARD REQUIREMENTS:
 SETBACK (FRONT): 0 FT. FROM R/W
 SIDE YARD (L): 0 FT. SIDE YARD (R): 0
 REAR YARD: VARIOUS PER ZONING ORDINANCE
 TOTAL PARCEL SIZE: 2,834.97/85.08 SQ. FEET/ACRES
 PARKING REQUIRED: (CITY OF ROCK HILL ZONING ORDINANCE):
 PROVIDED: 211 HANDICAP: 8
 BIKE PARKING REQUIRED: (CITY OF ROCK HILL ZONING ORDINANCE):
 1 BIKE SPACE PER 20 PARKING SPACES = 11 SPACES REQUIRED
 12 SPACES PROVIDED BY 3 WAVE RACKS

SIGN SCHEDULE

- *SEE SHEET CS.3 FOR SIGN DETAILS
- Ⓢ RESERVED PARKING-MAX PENALTY \$250 (MUTCD R7-8 & R7-8D)
- Ⓢ NO PARKING, DISABLED PASSENGER LOADING SIGN (MUTCD R7-1)(STD. NO. 5010A)
- Ⓢ VAN ACCESSIBLE HANDICAPPED PARKING SIGN (MUTCD R7-8, R7-8A, & R7-8D)

LEGEND

- ▭ PROPOSED LIGHT DUTY PAVEMENT (LDP)
- ▭ PROPOSED MEDIUM DUTY PAVEMENT (MDP)
- ▭ PROPOSED HEAVY DUTY PAVEMENT (HDP)
- ▭ PROPOSED CONCRETE

PAVING SPECIFICATIONS

- LIGHT DUTY PAVEMENT (LDP):**
 6" COMPACTED AGGREGATE BASE COURSE (CABC)
 2" BINDER COURSE, TYPE H
 1.5" WEARING COURSE
- MEDIUM DUTY PAVEMENT (MDP):**
 8" COMPACTED AGGREGATE BASE COURSE (CABC)
 3" BINDER COURSE, TYPE H
 2.5" WEARING COURSE
- HEAVY DUTY PAVEMENT (HDP):**
 12" COMPACTED AGGREGATE BASE COURSE (CABC)
 4" BINDER COURSE, TYPE H
 2.5" WEARING COURSE
- DOCK APRON:**
 8" COMPACTED STONE BASE COURSE
 7" 4000 PSI REINFORCED CONCRETE
- DECK STRIPS:**
 8" COMPACTED STONE BASE COURSE
 7" 4000 PSI REINFORCED CONCRETE

- CONCRETE SIDEWALK:**
 5" COMPACTED STONE BASE COURSE (NCDOT TYPE 57M)
 4" 3000 PSI CONCRETE WITH 6" X 6" WIRE MESH REINFORCEMENT(10 GAUGE)

NOTES:
 1. ALL FILL USED FOR RAISING SITE GRADES OR FOR REPLACEMENT OF MATERIAL THAT IS UNDERCUT SHOULD BE UNIFORMLY COMPACTED IN THIN LIFTS TO AT LEAST 98 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698). IN ADDITION, AT LEAST THE UPPER 18 INCHES OF SUBGRADE FILL BENEATH PAVEMENTS AND FLOOR SLABS AND 24 INCHES BELOW PAVEMENTS SUBJECT TO TRUCK TRAFFIC SHOULD BE COMPACTED TO 98 PERCENT OF THE SAME SPECIFICATION. THE ABOVE COMPACTION SPECIFICATION IS A RECOMMENDATION ONLY. SPECIFIC PAVEMENT OR FLOOR SLAB DESIGNS MAY REQUIRE A DIFFERENT COMPACTION STANDARD. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SITE WORK MEASURES IN STRICT ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS IN THE PROJECT SOILS REPORT AND/OR ON-SITE RECOMMENDATIONS PROVIDED BY A QUALIFIED GEOTECHNICAL ENGINEER DURING CONSTRUCTION.

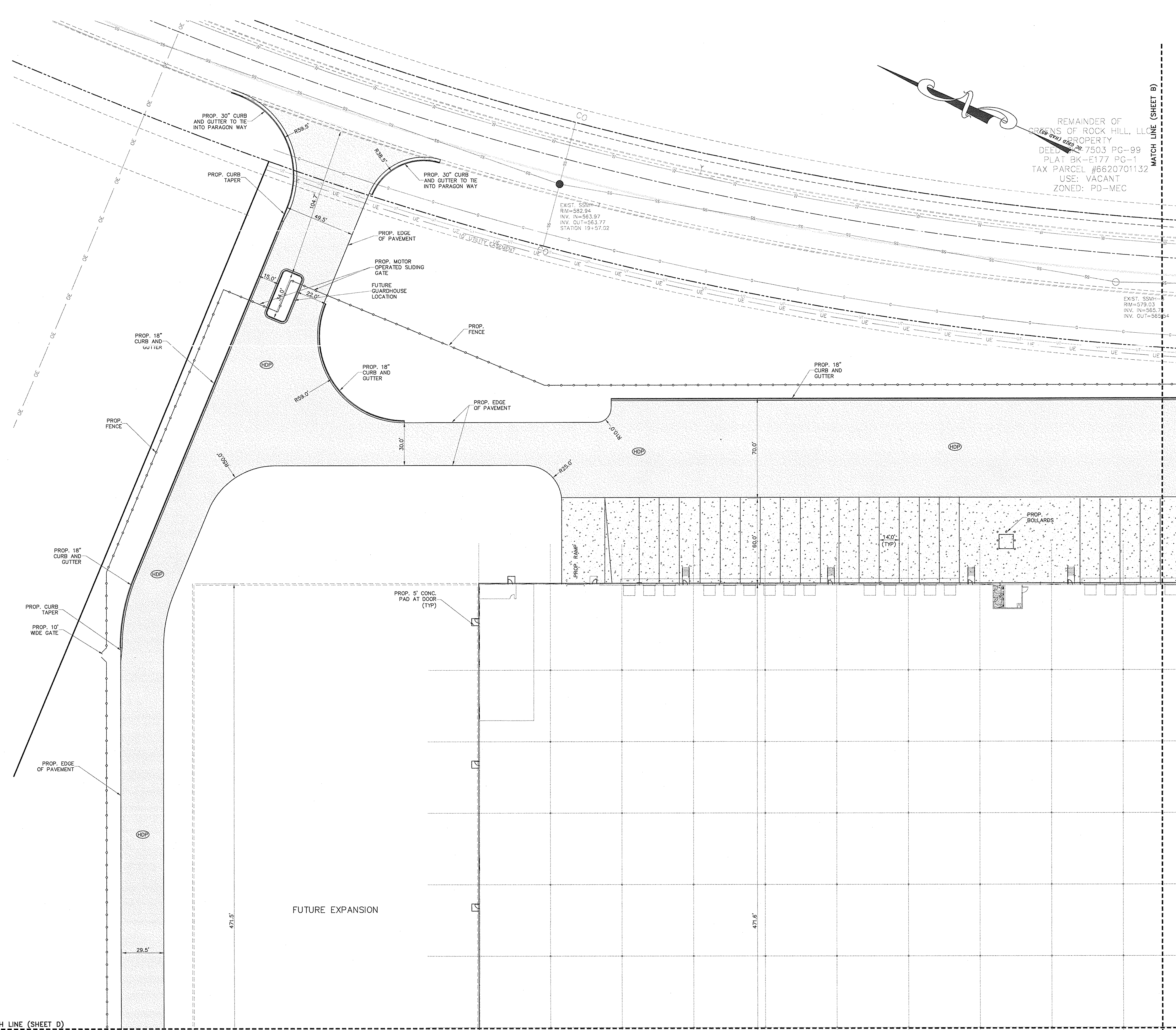
2. PAVEMENT SPECIFICATIONS LISTED ABOVE ARE RECOMMENDATIONS ONLY AND ARE SUBJECT TO CHANGE BASED UPON PROJECT CONDITIONS OR RECOMMENDATIONS CONTAINED WITHIN THE SOILS REPORT. PRIOR TO COMMENCEMENT OF PAVING, THE OWNER OR CONTRACTOR SHOULD HIRE A GEOTECHNICAL ENGINEER TO PROVIDE A PAVEMENT DESIGN BASED UPON ANTICIPATED VEHICULAR TRAFFIC AND PROJECT SOIL CONDITIONS. THE ISAACS GROUP ASSUMES NO RESPONSIBILITY FOR THE ADEQUACY OF THE PAVEMENT SPECIFICATION PROVIDED ABOVE.

STRIPING NOTE:
 ANY PAVEMENT MARKINGS IN THE PUBLIC R/W ARE REQUIRED TO BE THERMOPLASTIC, PAINT IS NOT ACCEPTABLE.

SUBMITTAL NOTES:
 1. FIVE (5) SETS OF CIVIL SITE CONSTRUCTION PLANS AND ONE (1) SET OF CALCULATIONS (SWPP REPORT) SHALL BE SUBMITTED FOR FINAL APPROVAL. AFTER ALL COMMENTS AND REVISIONS HAVE BEEN ADDRESSED, A CD (DIGITAL FILE) WITH PLANS AND CALCULATIONS IN PDF FORMAT IS ALSO REQUIRED.
 2. ONCE THE PLANS HAVE BEEN APPROVED BY THE INFRASTRUCTURE DEPARTMENT, TWO ADDITIONAL "SITE PLAN" SHEETS MUST BE SUBMITTED FOR THE EASEMENT AND/OR ROW ACQUISITION PROCESS. ONE SHEET SHALL HAVE ALL OF THE VARIOUS EASEMENTS/ROW, PUBLIC AND PRIVATE, INDIVIDUALLY HIGHLIGHTED WITH WIDTHS IDENTIFIED. SEE THE CITY'S "CIVIL SITE CONSTRUCTION PLANS CHECKLIST", SITE PLAN SECTION, FOR SITE PLAN REQUIREMENTS.

ADDITIONAL ADVISORY NOTES:
 1. ANY CHANGES OR REVISION TO THE APPROVED PLAN WILL REQUIRE A PLAN REVIEW SUBMITTED BY THE ARCHITECT/ENGINEER OF RECORD FOR APPROVAL.
 2. A LIST OF THIRD PARTY INSPECTIONS REQUIRED BY THE IRC ALONG WITH A COPY OF THE INSPECTOR'S SC LICENSE MUST BE PROVIDED TO THE CITY PRIOR TO ISSUANCE OF THE BUILDING PERMIT.
 3. ALL BUILDING SIGNAGE WILL REQUIRE A SEPARATE PLAN REVIEW AND PERMIT SUBMITTAL. THE SIGNAGE PLAN MUST PROVIDE A DIMENSION FROM FIXED LOCATIONS (BACK OF CURB, BUILDING, ETC.) FOR ALL SITE SIGNAGE TO ASSURE PROPER LOCATION OF ALL/ANY MONUMENT SIGNS.
 4. ALL SIGNAGE AND FENCING IS TO BE PERMITTED SEPARATELY.

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 5. THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR ALL UNDERGROUND AND OVERHEAD UTILITIES.
 6. HANDICAP SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH A.D.A STANDARDS AT H/C PARKING SPACES SHOWN.
 7. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 8. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION. THESE PERMITS AND APPROVALS MAY INCLUDE BUT ARE NOT LIMITED TO GRADING, DEMOLITION, ZONING, BUILDING, DRIVEWAY, DETENTION, SUBDIVISION, SPECIAL USE, SEWER AND WATER.
 9. INTERNATIONAL BUILDING CODE, LATEST EDITION REQUIRES SEPARATE PERMITS FOR RETAINING WALLS, FOUR FEET IN HEIGHT AND GREATER, AND STAND-ALONE WALLS FENCES OF 6 FEET IN HEIGHT AND GREATER.



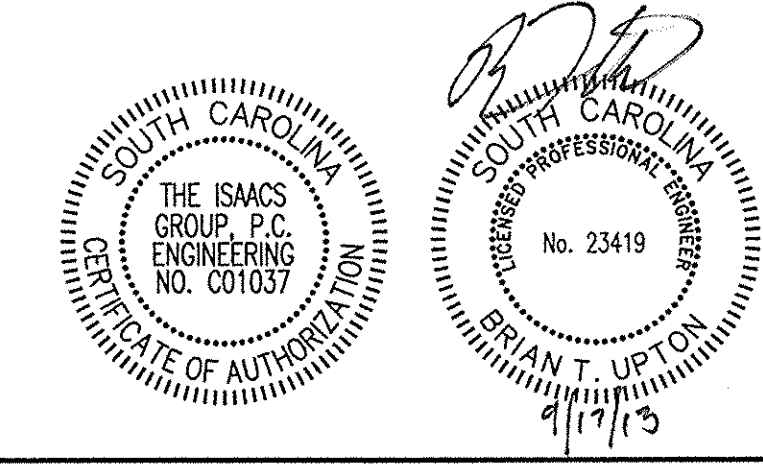
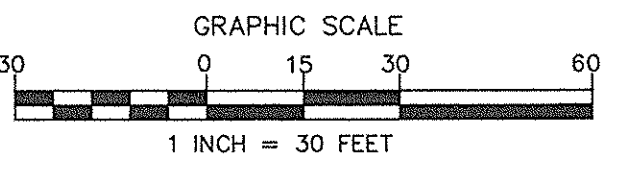
REMAINDER OF
 GREENS OF ROCK HILL, L.L.
 PROPERTY
 DEED # 2007-00128
 PLAT BK-E177 PG-99
 TAX PARCEL #6620701132
 USE: VACANT
 ZONED: PD-MEC

MATCH LINE (SHEET B)

MATCH LINE (SHEET B)

MATCH LINE (SHEET D)

MATCH LINE (SHEET D)



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/13/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

PROJECT: PROJECT GEKKO
 996 PARAGON WAY
 ROCK HILL, SOUTH CAROLINA

SITE PLAN

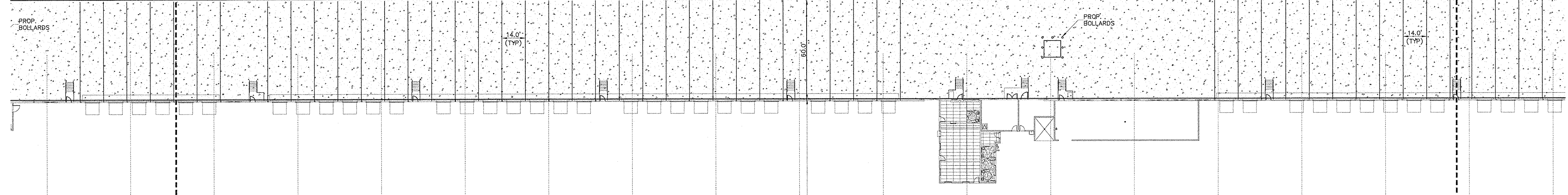
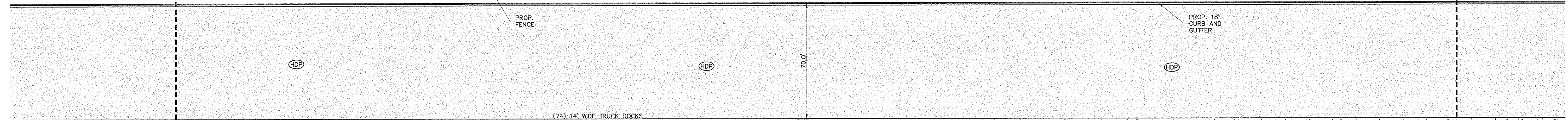
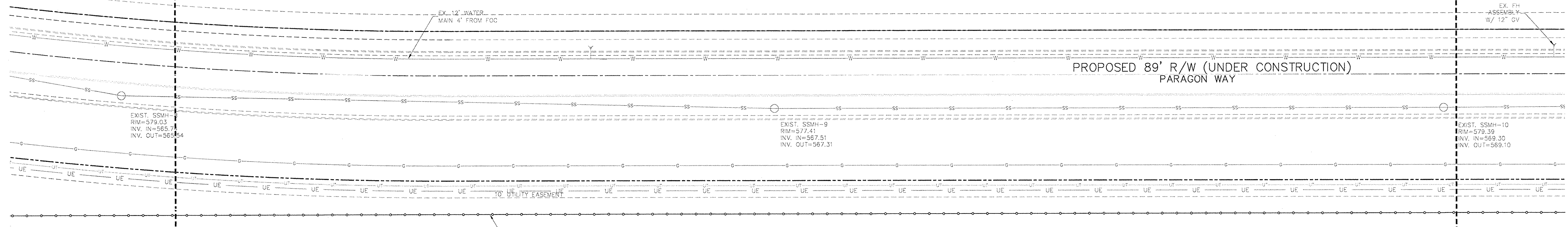
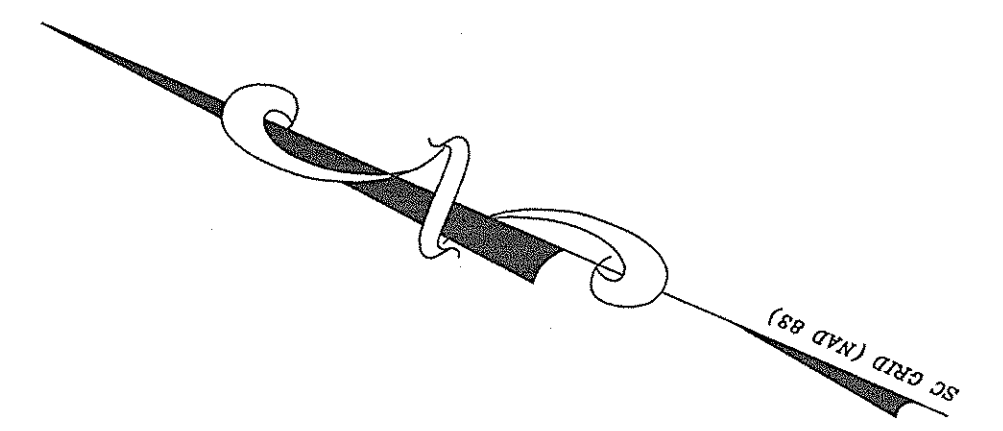
ISAACS ENGINEERING
 8720 RED OAK BOULEVARD, SUITE 420
 CHARLOTTE, N.C. 28217
 PHONE (704) 527-3440 FAX (704) 527-8335

Project Egr: BTLU
 Design By: FBL
 Drawn By: FBL
 Scale: 1"=30'

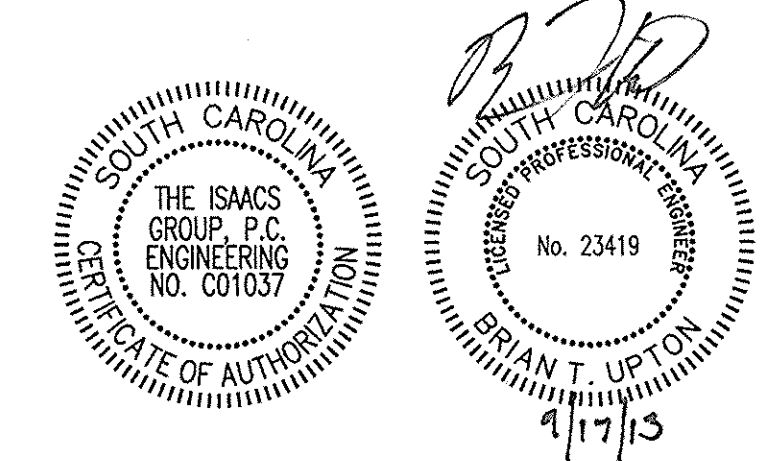
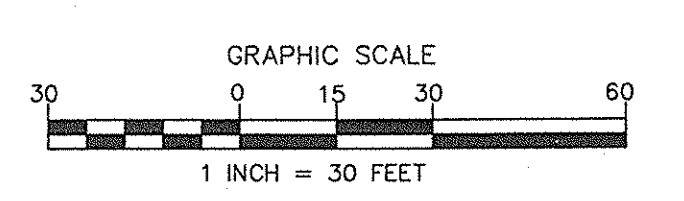
C1.0A

REMAINDER OF
GREENS OF ROCK HILL, LLC
PROPERTY
DEED BK-7503 PG-99
PLAT BK-E177 PG-1
TAX PARCEL #6620701132
USE: VACANT
ZONED: PD-MEC

REMAINDER OF
GREENS OF ROCK HILL, LLC
PROPERTY
DEED BK-7503 PG-99
PLAT BK-E177 PG-1
TAX PARCEL #6620701132
USE: VACANT
ZONED: PD-MEC



PROP. BUILDING
947,500 S.F.
FFE=579.25



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/13/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

Project: **PROJECT GEKKO**
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

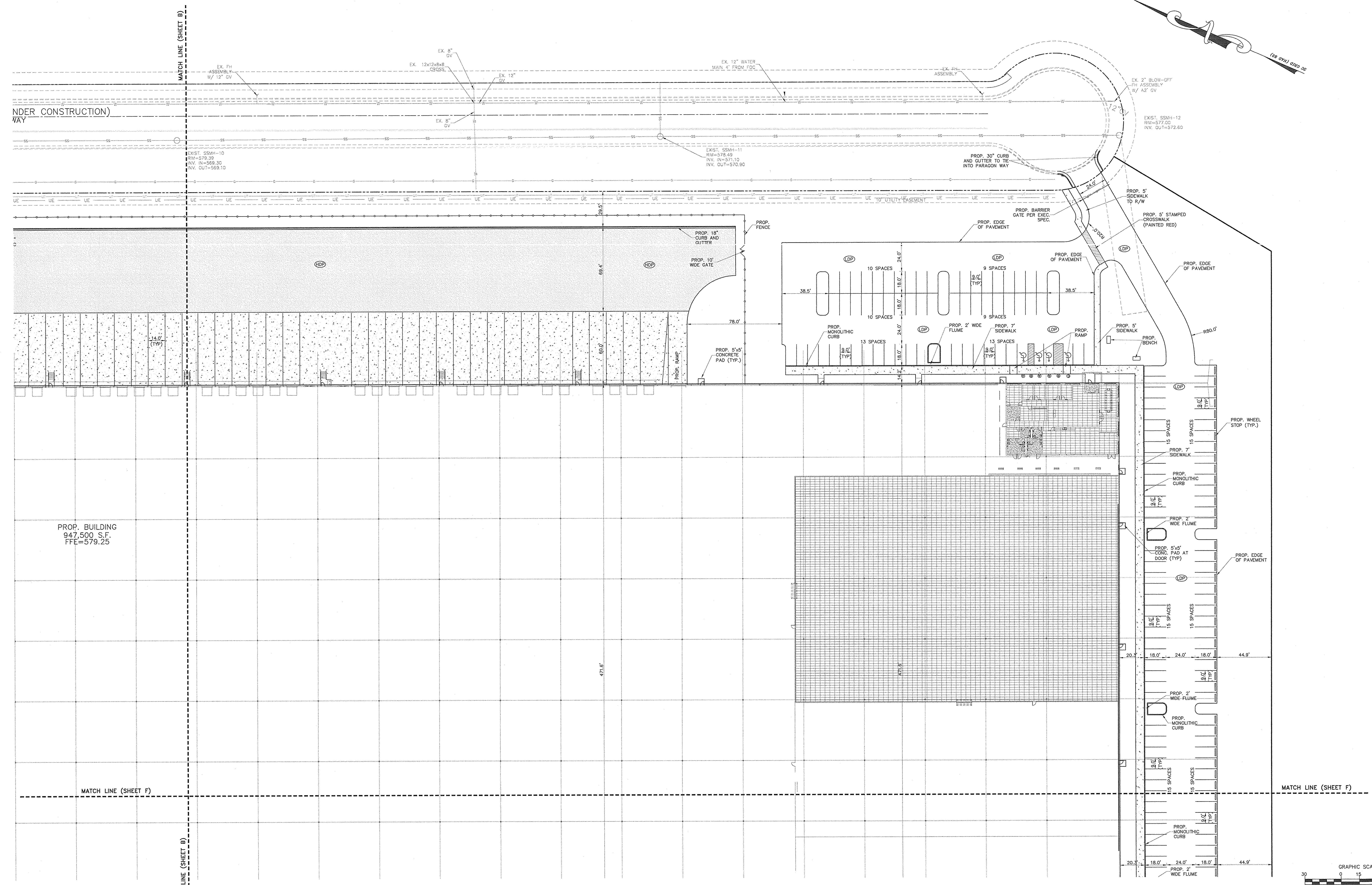
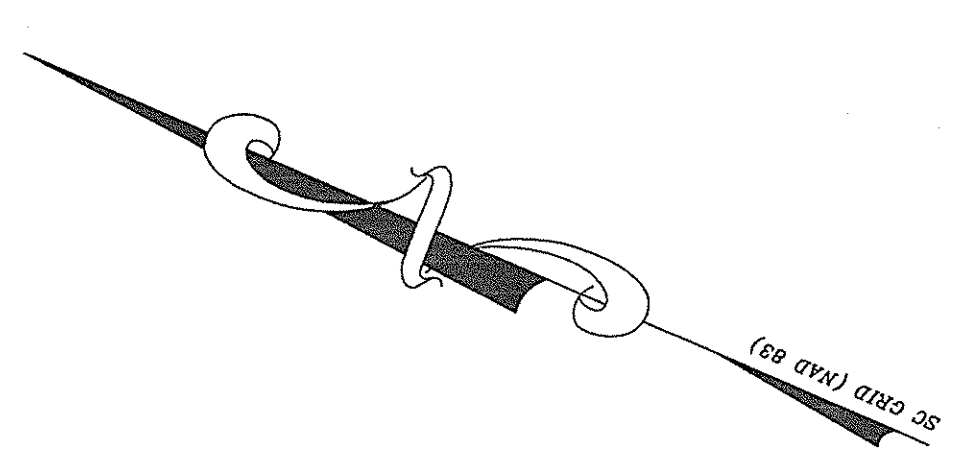
Title: **SITE PLAN**

File # 1000-PB-04 Date: 05/26/13 Project Egr: B.T.U.

ISAACS SD
INC. ENGINEERING DESIGN AND LAND SURVEYING CO.
Design By: FBL
Drawn By: FBL
Scale: 1"=30'

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

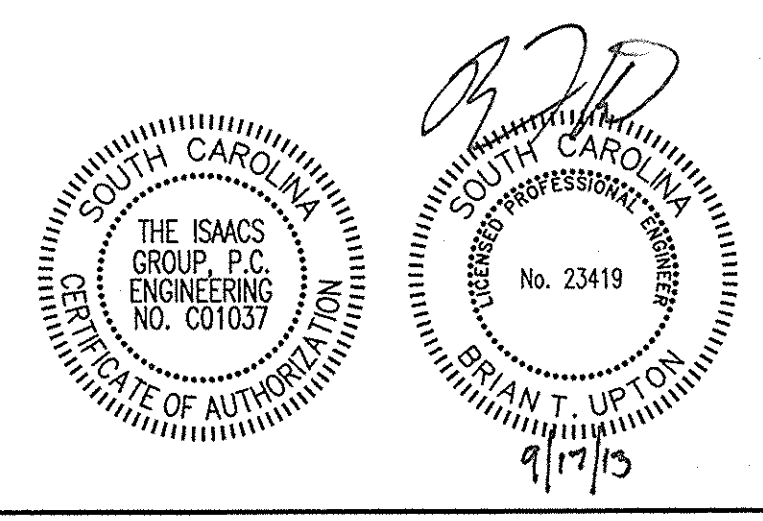
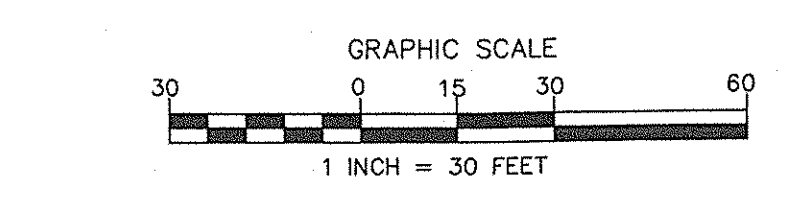
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UNDER CONSTRUCTION)
WAY

PROP. BUILDING
947,500 S.F.
FFE=579.25

MATCH LINE (SHEET D)
MATCH LINE (SHEET B)



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/13/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

Project: **PROJECT GEKKO**
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

Title: **SITE PLAN**

File #: 13202-FB.dwg | Date: 08/26/13 | Project Egr: BTU
Design By: FBL
Drawn By: FBL
Scale: 1"=30'

ISAACS
INC. ENGINEERING DESIGN AND SURVEYING

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8355

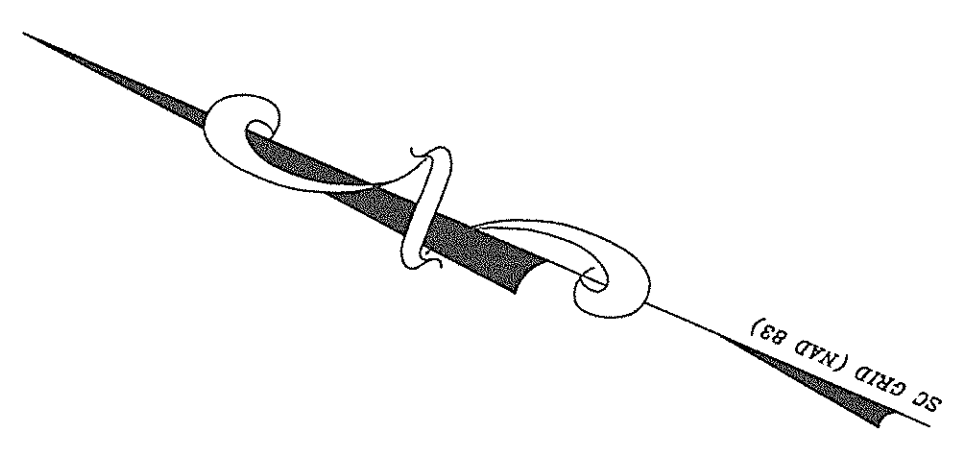
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MATCH LINE (SHEET A)

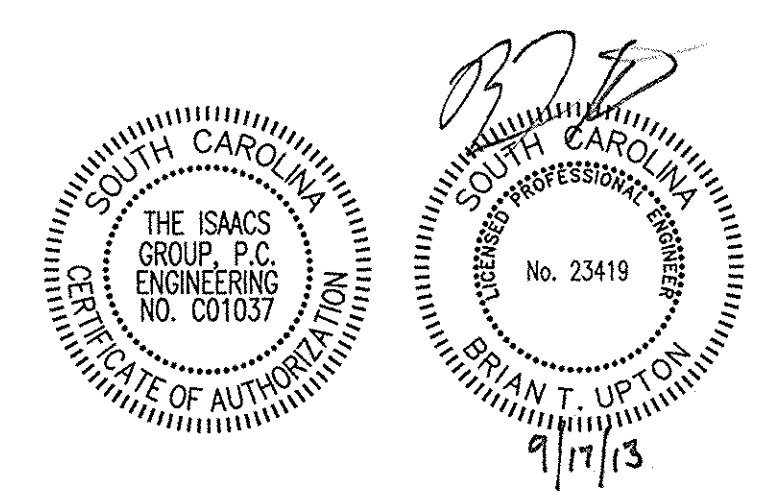
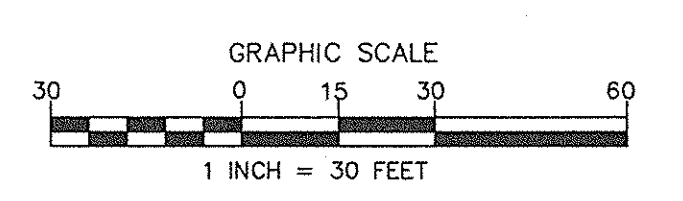
MATCH LINE (SHEET A)

MATCH LINE (SHEET E)

MATCH LINE (SHEET E)



PROP. STORMWATER BASIN



NO.	BY	DATE	REVISION
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5	FBL	08/13/13	PER CONTRACTOR COMMENTS
6	FBL	08/17/13	CONSTRUCTION DRAWINGS

Project: **PROJECT GEKKO**
 996 PARAGON WAY
 ROCK HILL, SOUTH CAROLINA

Title: **SITE PLAN**

File #: 13000-PB.dwg Date: 08/26/13 Project Egr: BTU

ISAACS GROUP
 6720 RED OAK BOULEVARD, SUITE 420
 CHARLOTTE, N.C. 28217
 PHONE (704) 527-3440 FAX (704) 527-8335

Scale: 1" = 30'

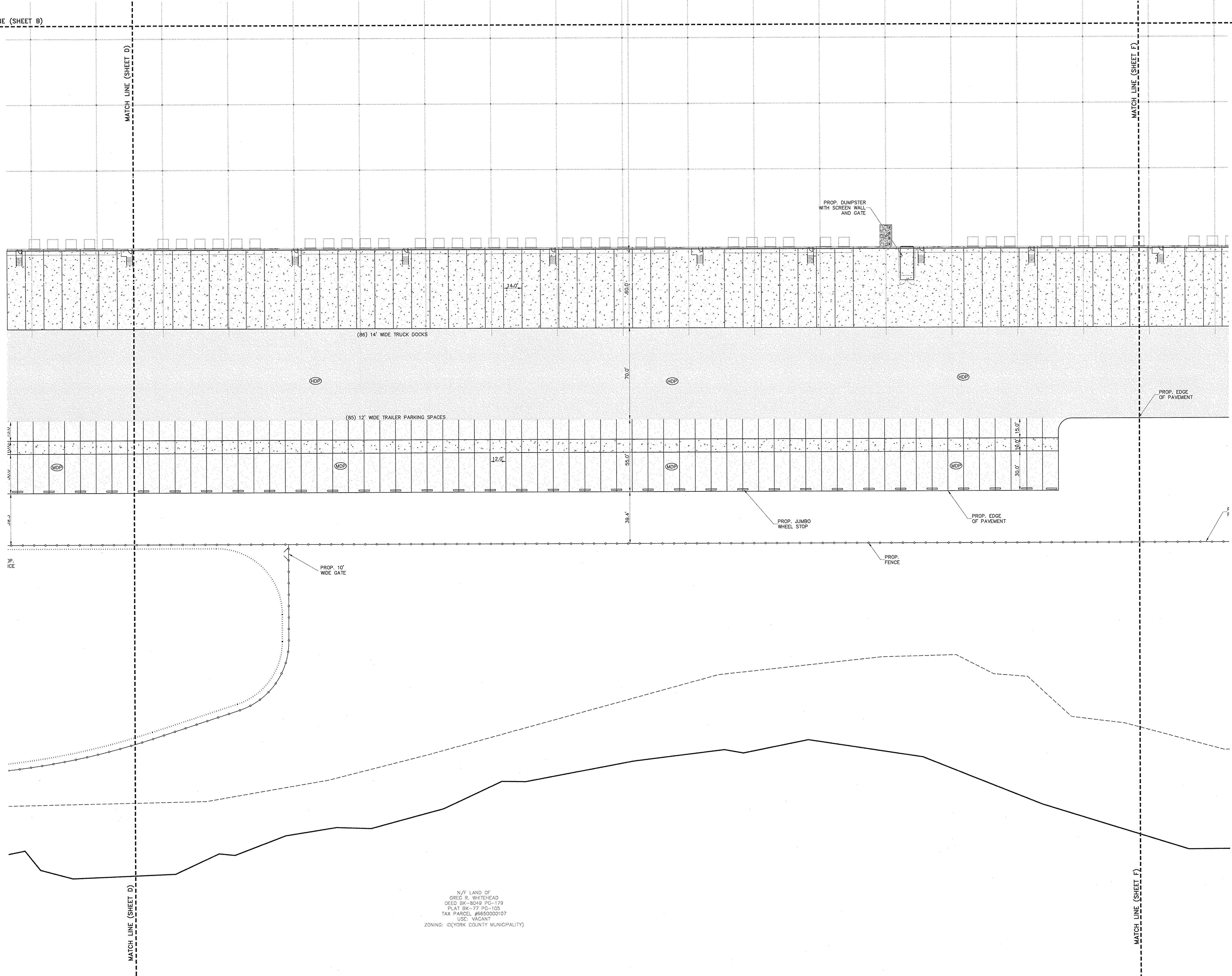
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MATCH LINE (SHEET B)

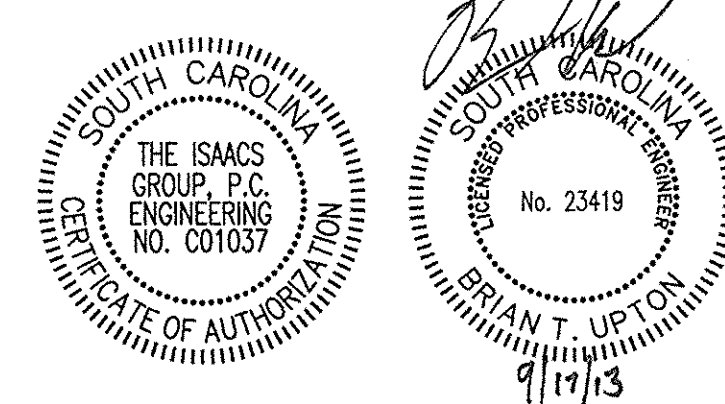
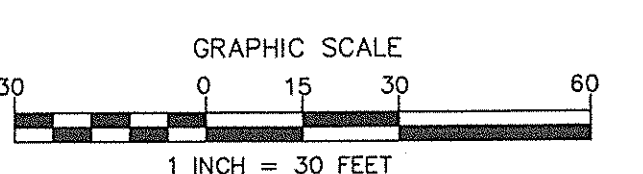
MATCH LINE (SHEET B)

MATCH LINE (SHEET D)

MATCH LINE (SHEET F)



N/F LAND OF
 GREG R. WHITEHEAD
 DRED BK-8049 PG-179
 PLAT BK-77 PG-105
 TAX PARCEL #6650000107
 USE: VACANT
 ZONING: ID(YORK COUNTY MUNICIPALITY)



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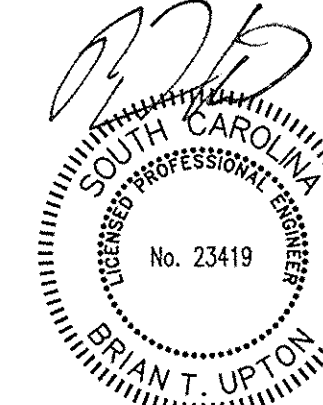
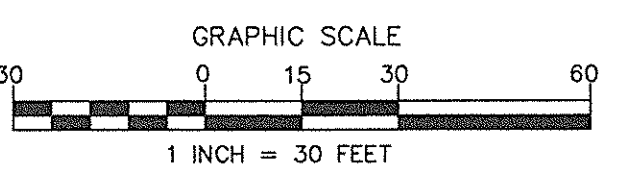
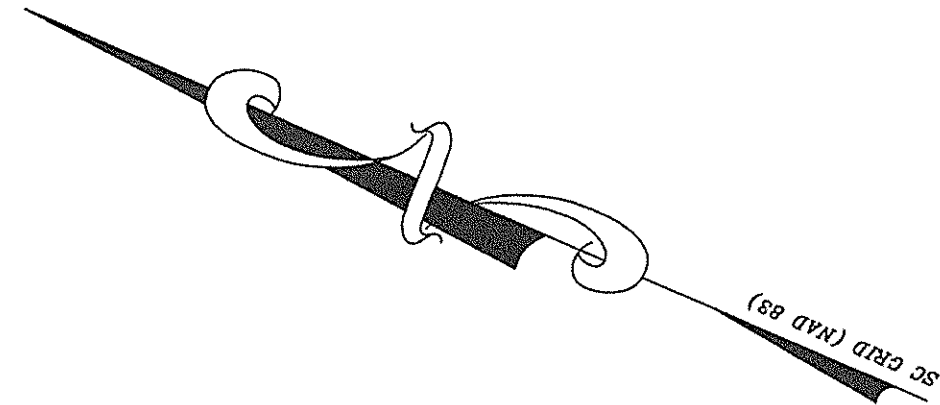
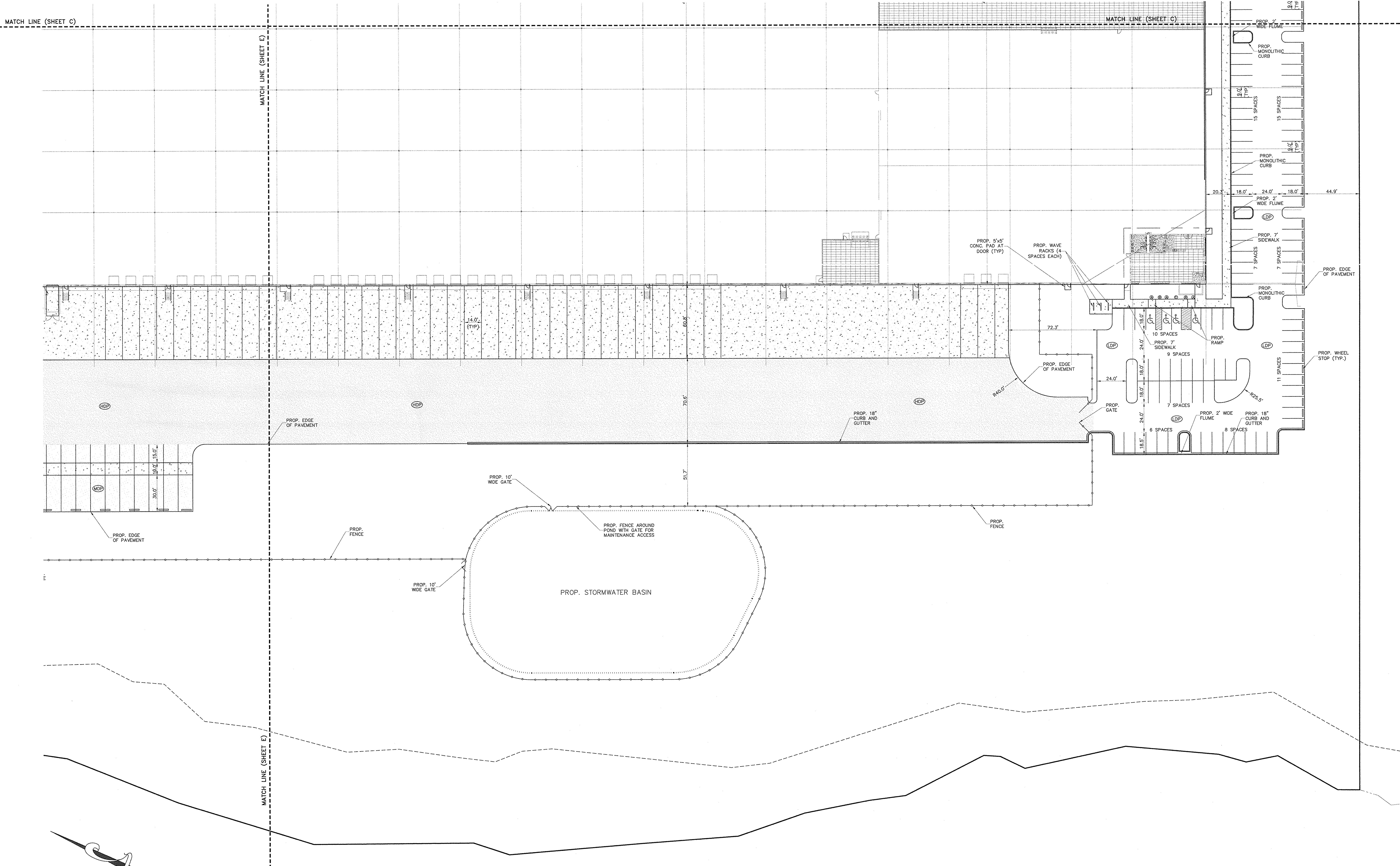
Site: **SITE PLAN**

File #: 13020-PB.dwg Date: 05/26/13 Project Egr: BTU
 Design By: FBL
 Drawn By: FBL
 Scale: 1"=30'

ISAACS
 CIVIL ENGINEERING DESIGN AND LAND SURVEYING

8720 RED OAK BOULEVARD, SUITE 420
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C1.0E



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5	FBL	09/13/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

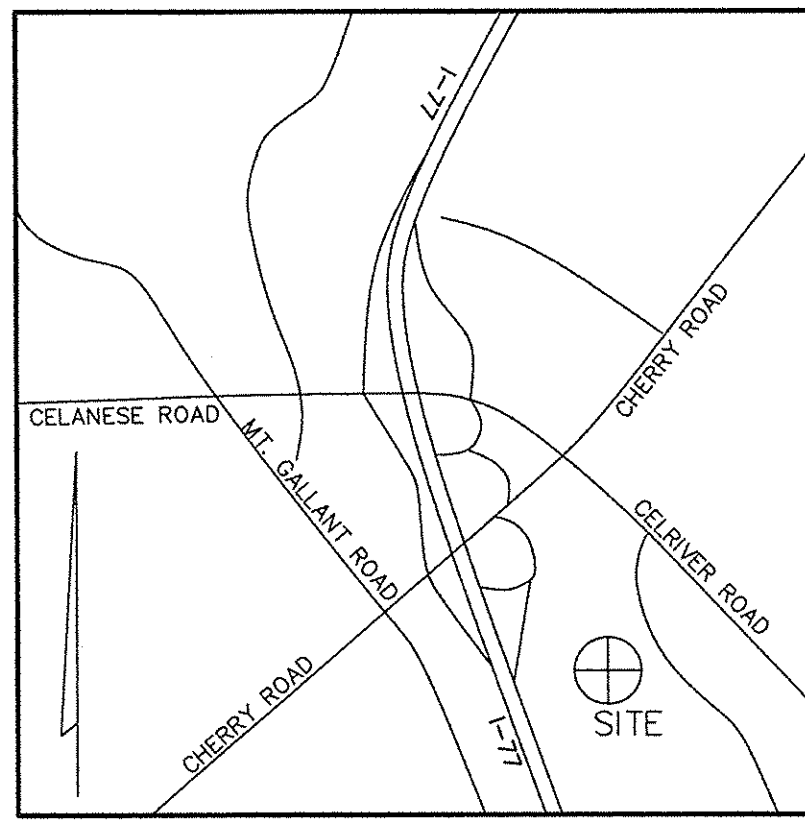
Project: **PROJECT GEKKO**
 998 PARAGON WAY
 ROCK HILL, SOUTH CAROLINA

Title: **SITE PLAN**

Date: 06/26/13
 Project Egr: B.T.U.
 Design By: F.B.L.
 Drawn By: F.B.L.
 Scale: 1"=30'

THE ISAACS GROUP
 ENGINEERING AND SURVEYING
 8720 RED OAK BOULEVARD, SUITE 420
 CHARLOTTE, N.C. 28217
 PHONE (704) 527-3440 FAX (704) 527-8335

C1.0F



- UTILITY NOTES:**
- EXACT LOCATIONS OF WATER SERVICE CONNECTIONS ARE REQUIRED FOR AS-BUILT RECORDS.
 - MINIMUM COVER OF 36" FOR WATER AND SEWER LINES.
 - D.I.P. REQUIRED FOR WATER AND SEWER LINES IF FOLLOWING CONDITIONS ARE NOT MET:
 -12" CLEARANCE FROM STORM DRAINS, GAS MAINS, TELEPHONE DUCT BANKS AND UNDERGROUND CABLES.
 -18" VERTICAL CLEARANCE FOR WATER LINE INSTALLED ABOVE SEWER LINE.
 -WATER LINE CROSSING UNDER SEWER LINE.
 -10' HORIZONTAL SEPARATION FOR WATER PARALLEL TO SEWER LINE.
 - SIZE AND LOCATION OF EXISTING WATER AND SEWER LINES TO BE VERIFIED BY THE CONTRACTOR.
 - CONTRACTOR SHALL COORDINATE THE PROPOSED WATER AND SEWER LINE WORK WITH THE INFRASTRUCTURE DIVISION (803-329-5612).
 - MATERIAL AND WORKMANSHIP REQUIREMENTS TO BE IN ACCORDANCE WITH THE ROCK HILL UTILITY DEPARTMENT WATER AND SEWER POLICIES, PROCEDURES, STANDARDS AND SPECIFICATIONS FOR PUBLIC AND PRIVATE WATER AND SEWER LINES.
 - ALL 6" SANITARY SEWER LATERALS SHALL HAVE MIN. 1.0% SLOPE.
 - CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ISAACS GROUP A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO THE CONSTRUCTION OF WATER AND SEWER LINES TO ALLOW A REPRESENTATIVE FROM THE ISAACS GROUP TO PERIODICALLY BE ON-SITE DURING INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN AS-BUILT SURVEY OF THE WATER AND SEWER LINES TO THE ISAACS GROUP UPON COMPLETION OF INSTALLATION.
 - PROVIDE MINIMUM OF 48 HOUR NOTICE TO OWNER OR REPRESENTATIVE.
 - THE CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY UTILITY DAMAGED DURING CONSTRUCTION.
 - THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR ALL UNDERGROUND AND OVERHEAD UTILITIES.
 - PROP. EMPTY CONDUITS AND LATERALS TO BE CAPPED AND MARKED AT EACH END WITH 1/2" REBAR DRIVEN 3' INTO THE GROUND AND FLAGGED (TYP.)
 - THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPT. CONNECTION POINTS, OR OTHER WATER-USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND ITS ROCK HILL-REQUIRED BACKFLOW PREVENTER.
 - EACH ROCK HILL-REQUIRED BACKFLOW PREVENTION ASSEMBLY IS REQUIRED TO BE TESTED BY A ROCK HILL-APPROVED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM IN SERVICE.

- ADDITIONAL ADVISORY NOTES:**
- A TEMPORARY FIRE ACCESS/EMERGENCY ROAD MUST BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PROCESS. THE FIRE ACCESS/EMERGENCY SHOULD EXTEND FROM THE SITE POINT OF ENTRANCE TO WITHIN 50' OF THE BUILDING. THE REQUIREMENT IS SEPARATE BUT CAN BE USED IN CONJUNCTION WITH THE CONSTRUCTION DRIVE REQUIREMENTS.
 - ALL IRRIGATION SYSTEM WILL REQUIRE A SEPARATE PLUMBING PERMIT. ALL IRRIGATION BACKFLOW DEVICES MUST BE INSTALLED BY A SC LICENSED PLUMBER WITH CITY OF ROCK HILL BUSINESS LICENSE.
 - CITY OF ROCK HILL INSPECTORS ARE TO INSPECT ALL ELECTRICAL DITCHES AND LIGHT POLE BASES FOR SITE LIGHTING PRIOR TO COVERING THE DITCH OR PLACING CONCRETE IN THE LIGHT POLE BASES.
 - THE FIRE DEPARTMENT ACCESS ROAD IS NOT EXCEED 150' TRAVEL DISTANCE WITHOUT SOME TYPE OF TURNAROUND. THE FDAR MUST BE WITHIN THE 500' TRAVEL DISTANCE OF A FIRE HYDRANT. THE FDAR MUST ALSO BE A MINIMUM OF 20' WIDE AND SUITABLE TO SUPPORT AN 80,000 POUND EMERGENCY VEHICLE. THE FDAR SHALL NOT EXCEED 10 PERCENT IN GRADE.
 - THE CONTRACTOR, PRIOR TO POURING THE BUILDING SLAB AND FOUNDATION, SHALL VERIFY THE ACCESSIBILITY OF THE SANITARY SEWER SERVICE AND OBTAIN CONFIRMATION FROM THE DESIGN ENGINEER REGARDING SANITARY SEWER SERVICE FUNCTIONALITY.
 - THE DEVELOPER/CONTRACTOR IS RESPONSIBLE FOR FLOW TESTING PRIVATE FIRE HYDRANTS. FLOW TEST RESULTS FOR PRIVATE HYDRANTS MUST BE SHOWN ON THE "AS-BUILT" PLANS.
 - ALL MATERIALS, CONSTRUCTION, AND PLANS ARE TO COMPLY WITH CURRENT CITY OF ROCK HILL STANDARD SPECIFICATIONS AND DETAILS.
 - CONTACT PALMETTO UTILITY PROTECTION SERVICE (PUPS) @ 811 OR 888-721-7877, A MINIMUM OF 72 HOURS BEFORE DIGGING.

FIRE HYDRANT NOTE:
ALL PRIVATE HYDRANTS ARE TO BE PAINTED RED.

FLOOR DRAIN NOTE:
INTERNAL BUILDING FLOOR DRAINS AND MOP SINKS MUST DISCHARGE INTO THE SANITARY SEWER SYSTEM, VIA AN APPROVED SERVICE CONNECTION AND BE EQUIPPED WITH AN ON-SITE OIL/GRIIT SEPARATOR, WHERE USE INVOLVES OIL/GREASE (COOKING) AND/OR POTENTIAL FOR GRIIT/DEBRIS TO ENTER THE SEWER SYSTEM. SEE PLUMBING PLAN FOR LOCATION.

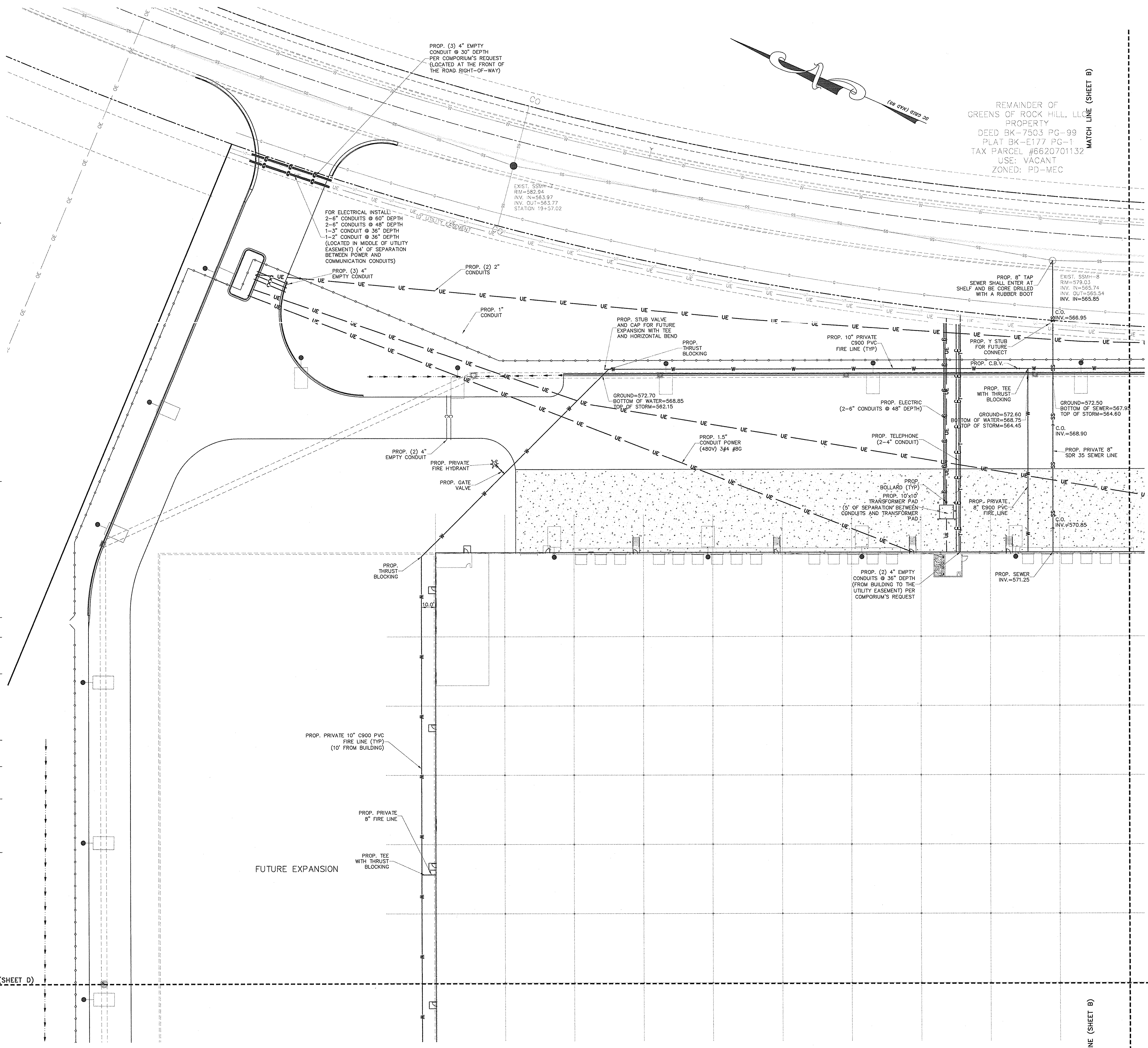
- AS-BUILT NOTES:**
- THE DEVELOPER, ENGINEER, AND/OR CONTRACTOR MUST SUBMIT TO PAC A COMPLETE SET OF "AS-BUILT" DRAWINGS FOR ROADWAY, WATER, SANITARY SEWER, AND STORM DRAINAGE UTILITIES (INCLUDING DETENTION BASINS AND WATER QUALITY FACILITIES). FOR REVIEW AND APPROVAL. AS-BUILT DRAWINGS ARE REQUIRED FOR ALL PUBLIC AND PRIVATELY OWNED UTILITIES. EASEMENTS MUST BE SHOWN ON THE FINAL PLAT, AS APPLICABLE. IF NO FINAL PLAT IS REQUIRED, THEN ALL EASEMENTS MUST BE RECORDED AT THE YORK COUNTY COURTHOUSE AND IDENTIFIED ON THE AS-BUILT PLAN WITH D.B. AND P.G. NUMBERS. SEE CRH WEB-SITE FOR AS-BUILT CONSTRUCTION CHECK LIST.
 - AS-BUILTS MUST BE APPROVED BEFORE ISSUANCE OF FINAL PLAT AND/OR CERTIFICATE OF OCCUPANCY (C.O.)
 - THE "STORMWATER MITIGATION MAINTENANCE PLAN" MUST BE INCLUDED AS PART OF THE STORMWATER "AS-BUILTS"

EMPLOYMENT NOTES:
THERE WILL BE 200 EMPLOYEES/SHIFT.
THERE WILL NOT BE A KITCHEN OR SHOWERS IN THE BUILDING.

- COORDINATION NOTES:**
- POWER AND COMMUNICATIONS CONDUITS TO BE COORDINATED WITH THE COMPORIUM ENGINEERING DEPARTMENT AT 803-329-6109.
 - ELECTRIC DESIGN AND INSTALLATION TO BE COORDINATED WITH DAVID HALL AT 803-329-5525.

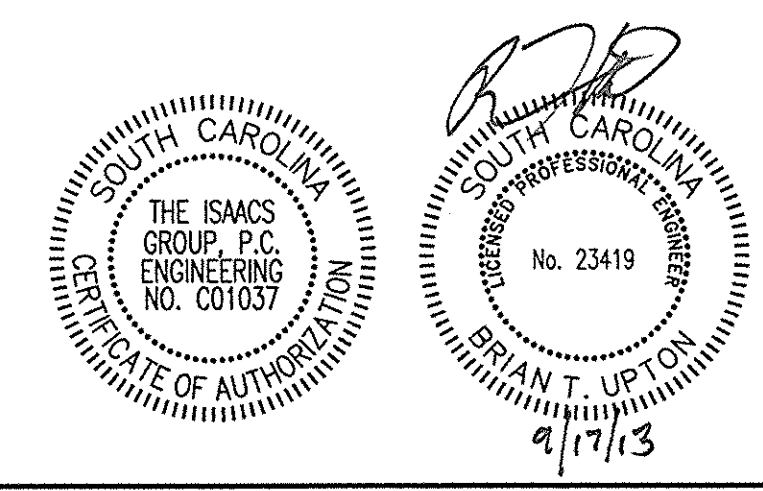
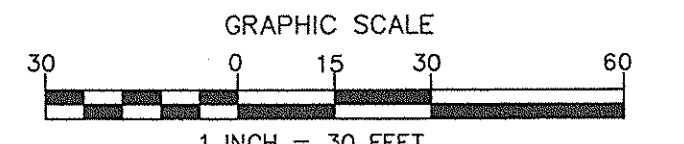
COMPORIUM NOTES:
ALL CONDUITS MUST BE SCH 40 PVC INSTALLED AT SPECIFIED SIZE AND DEPTH
CONTACT INFO:
GEORGE STEWART
COMPORIUM ROCK HILL TELEPHONE COMPANY
O: 803-329-6082
C: 803-389-5558
EMAIL: GEORGE.STEWART@COMPORIUM.COM

ELECTRICAL NOTES:
ALL CONDUITS MUST BE GRAY SCH 40 PVC INSTALLED AT SPECIFIED SIZE AND DEPTH
CONTACT INFO:
DAVID HOPE
CITY OF ROCK HILL ELECTRICAL ENGINEERING
O: 803-329-5525



REMAINDER OF
GREENS OF ROCK HILL, LLC
PROPERTY
DEED BK-7503 PG-99
PLAT BK-E177 PG-1
TAX PARCEL #6620701132
USE: VACANT
ZONED: PD-MEC

MATCH LINE (SHEET D)



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/10/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

Project: **PROJECT GEKKO**
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

Title: **UTILITY PLAN**

File #: 15020-PB.dwg | Date: 06/26/13 | Project Egr: BTJ

ISAACS GROUP
DESIGN ENGINEERS AND LAND SURVEYORS

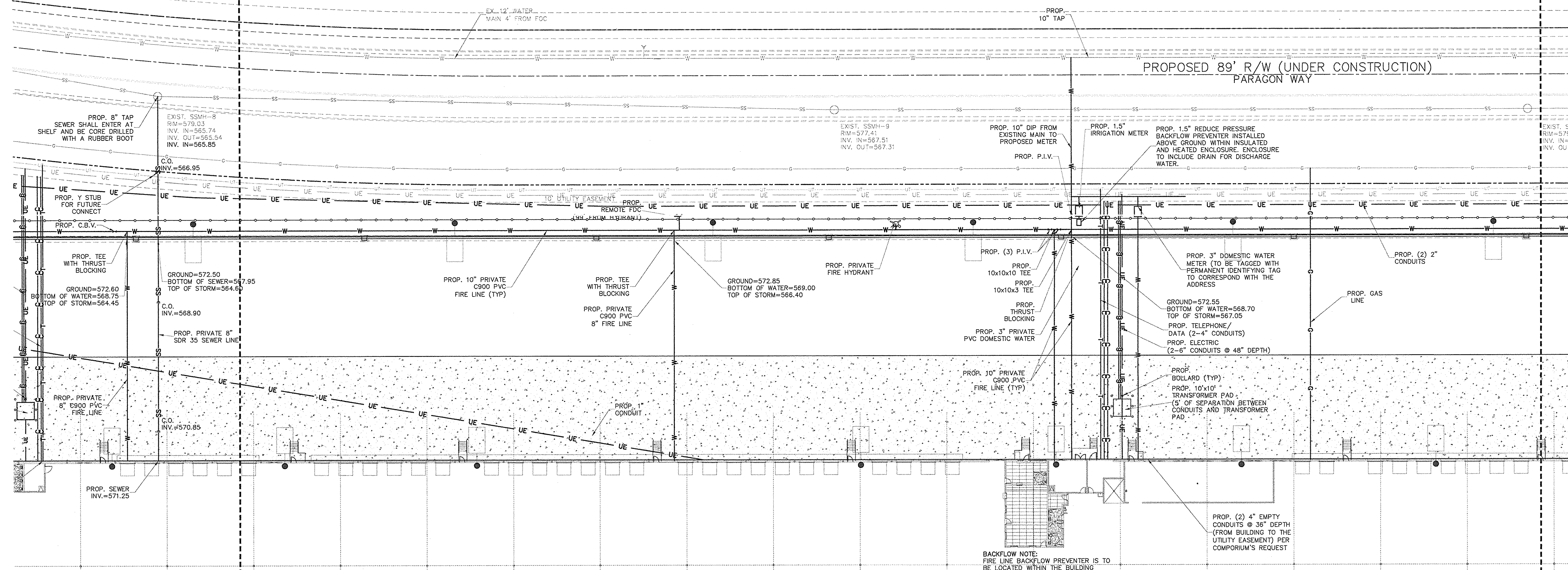
Design By: FBL
Drawn By: FBL
Scale: 1"=30'

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8355

C2.0A

REMAINDER OF
GREENS OF ROCK HILL, LLC
PROPERTY
DEED BK-7503 PG-99
PLAT BK-E177 PG-1
TAX PARCEL #8620701132
USE: VACANT
ZONED: PD-MEC

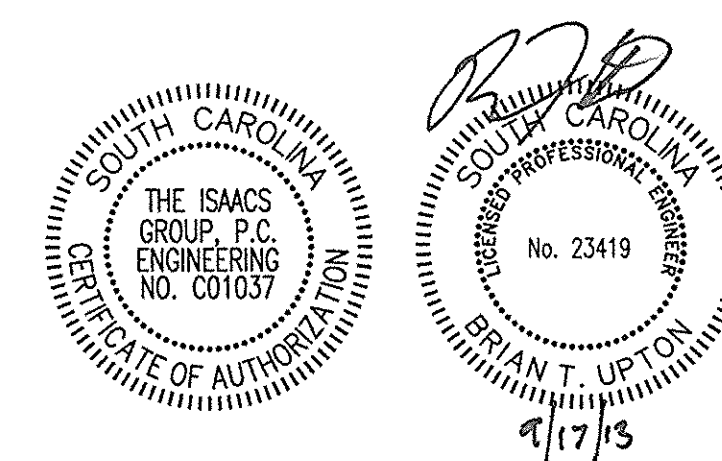
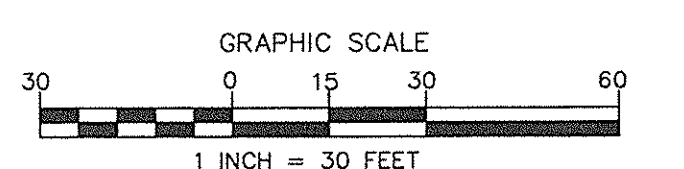
REMAINDER OF
GREENS OF ROCK HILL, LLC
PROPERTY
DEED BK-7503 PG-99
PLAT BK-E177 PG-1
TAX PARCEL #8620701132
USE: VACANT
ZONED: PD-MEC



PROP. BUILDING
947,500 S.F.
FFE=578.95

MATCH LINE (SHEET E)

MATCH LINE (SHEET E)



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/10/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

Project: **PROJECT GEKKO**
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

Title: **UTILITY PLAN**

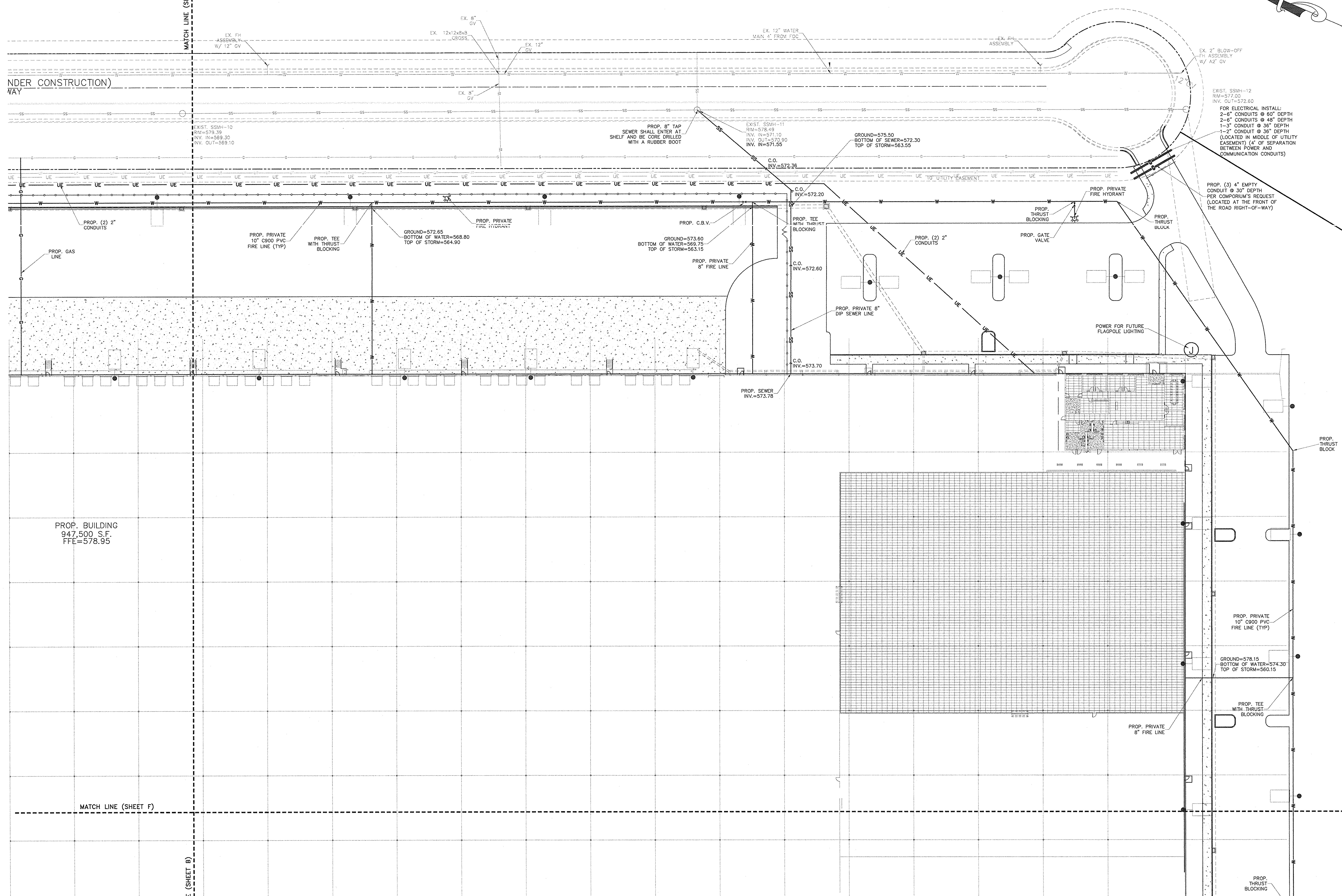
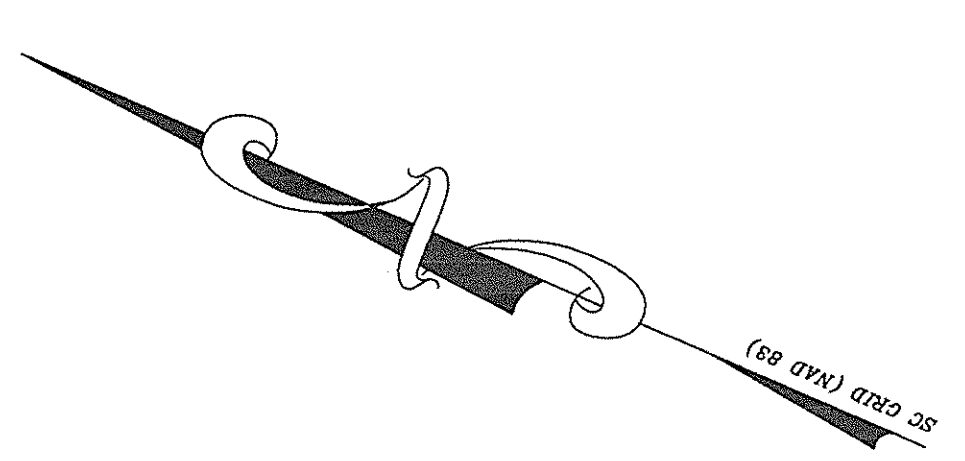
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Design By: FBL
Drawn By: FBL
Scale: 1"=30'

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

ISAACS
C2.0B

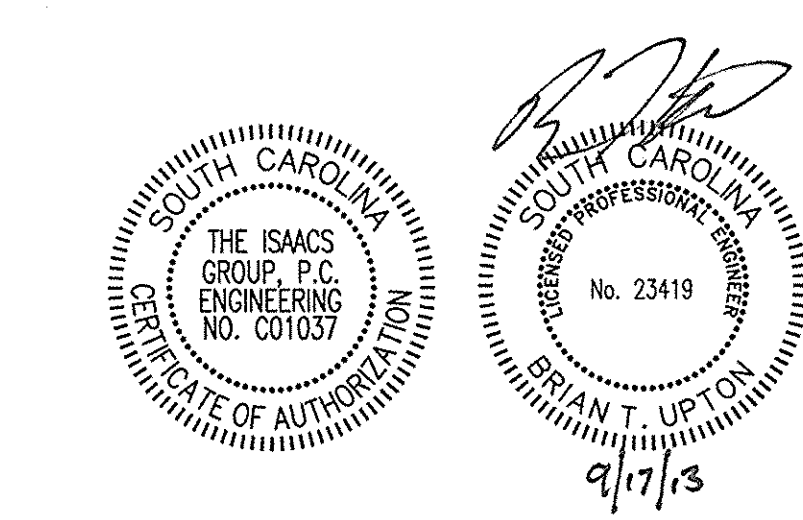
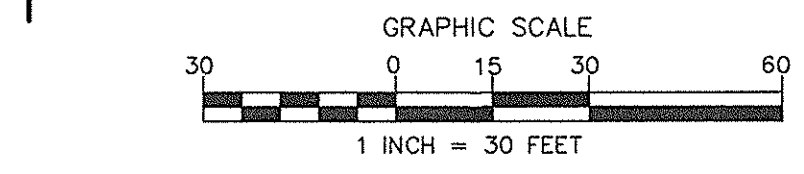
UNDER CONSTRUCTION)
WAY



EXIST. SSMH-12
RM=577.00
INV. OUT=572.60
FOR ELECTRICAL INSTALL:
2-6" CONDUITS @ 60" DEPTH
2-6" CONDUITS @ 48" DEPTH
1-3" CONDUIT @ 36" DEPTH
1-2" CONDUIT @ 36" DEPTH
(LOCATED IN MIDDLE OF UTILITY
EASEMENT) (4' OF SEPARATION
BETWEEN POWER AND
COMMUNICATION CONDUITS)

PROP. (3) 4" EMPTY
CONDUIT @ 30" DEPTH
PER COMPTON'S REQUEST
(LOCATED AT THE FRONT OF
THE ROAD RIGHT-OF-WAY)

PROP. BUILDING
947,500 S.F.
FFE=578.95



NO.	BY	DATE	REVISION
4	FBL	06/02/13	PER CITY COMMENTS
5	FBL	09/10/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

Project: **PROJECT GEKKO**
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

Utility Plan

File #: 13000-PS.dwg | Date: 05/26/13 | Project Egr: BTU

ISAACS
INC. ENGINEERS DESIGN AND LAND SURVEYING

Design By: FBL
Drawn By: FBL
Scale: 1" = 30'

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

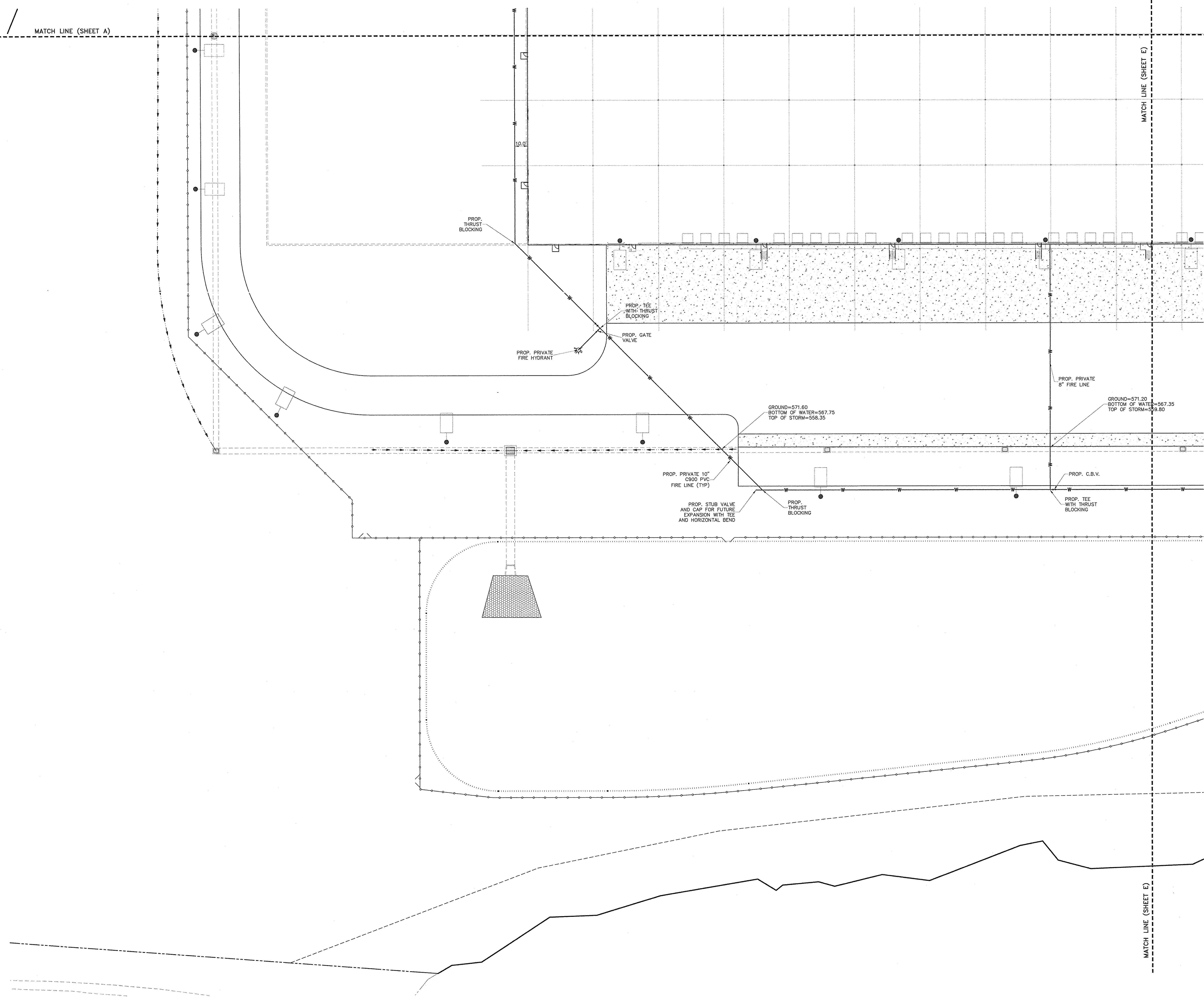
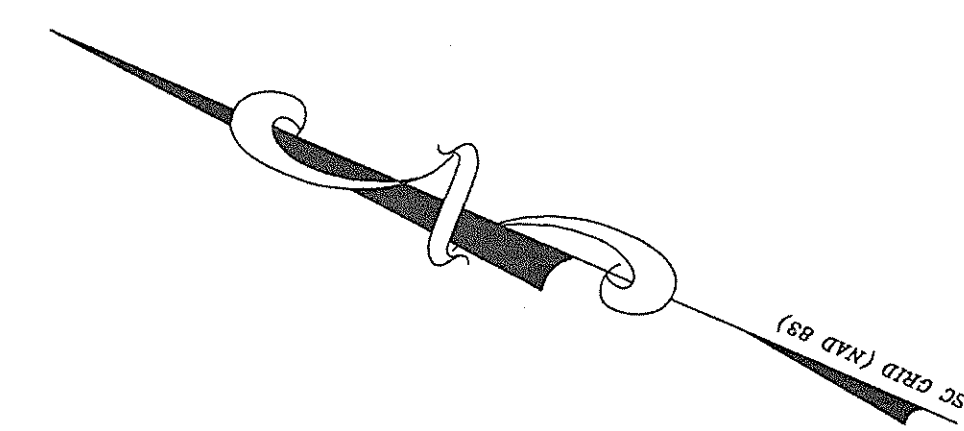
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MATCH LINE (SHEET A)

MATCH LINE (SHEET A)

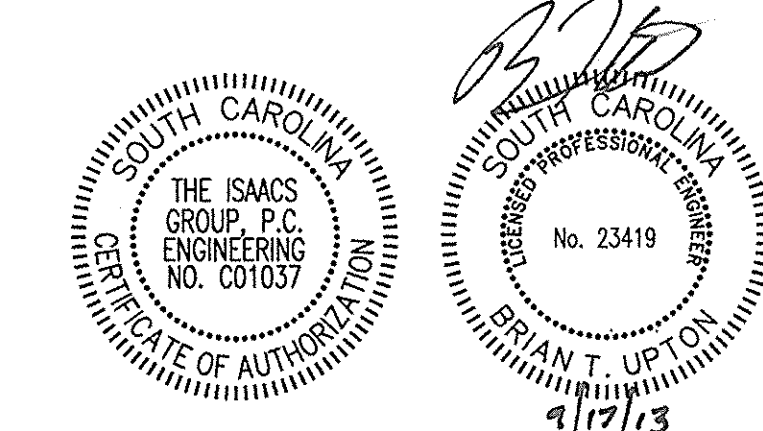
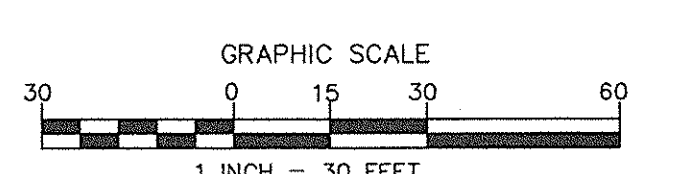
MATCH LINE (SHEET E)

MATCH LINE (SHEET E)



GROUND=571.60
BOTTOM OF WATER=567.75
TOP OF STORM=558.35

GROUND=571.20
BOTTOM OF WATER=567.35
TOP OF STORM=559.80



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/10/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

Project: **PROJECT GEKKO**
 996 PARAGON WAY
 ROCK HILL, SOUTH CAROLINA

Title: **UTILITY PLAN**

File #: 13023-PB.dwg Date: 06/26/13 Project Egr: BTU
 Design By: FBL
 Drawn By: FBL
 Scale: 1"=30'

ISAACS
 CIVIL ENGINEERING DESIGN AND LAND SURVEYING

8720 RED OAK BOULEVARD, SUITE 420
 CHARLOTTE, N.C. 28217
 PHONE (704) 527-3440 FAX (704) 527-8335

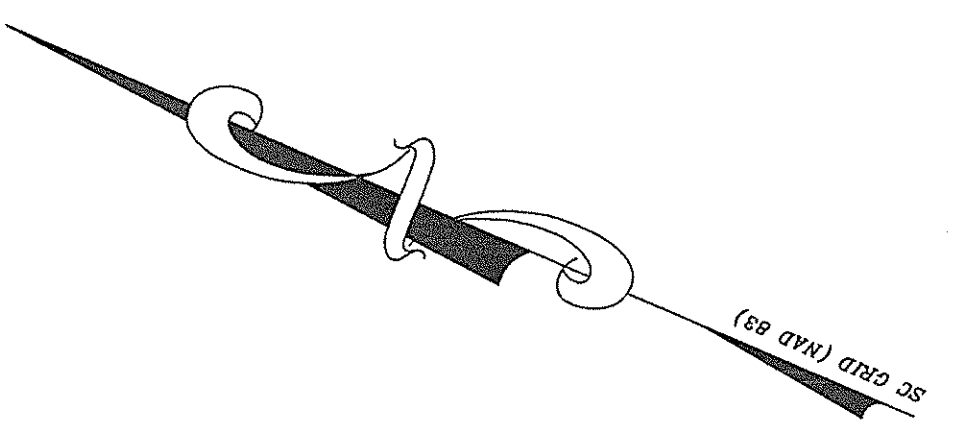
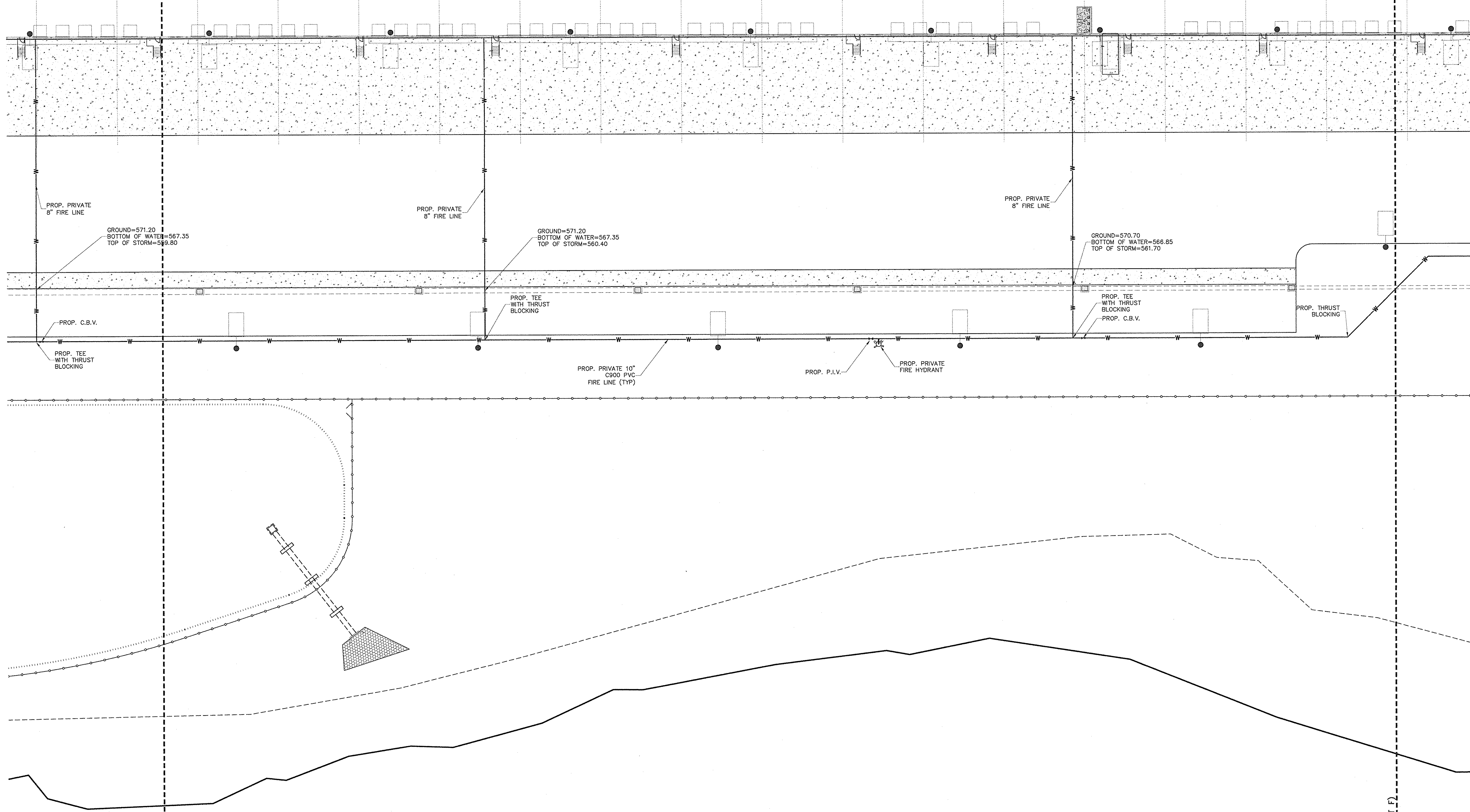
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MATCH LINE (SHEET B)

MATCH LINE (SHEET B)

MATCH LINE (SHEET D)

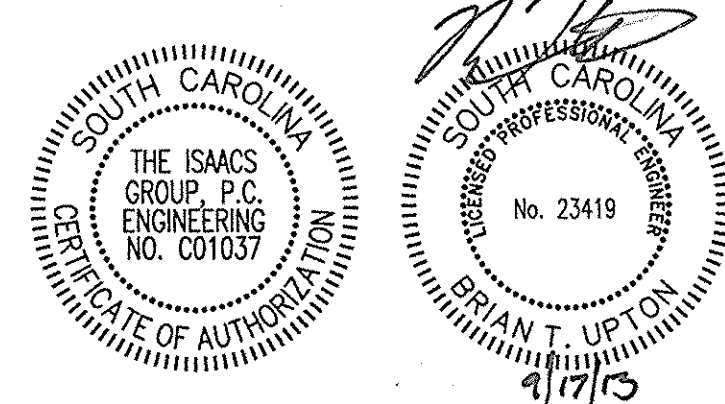
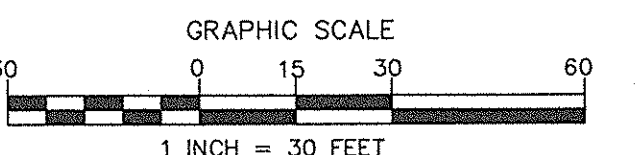
MATCH LINE (SHEET F)



MATCH LINE (SHEET D)

MATCH LINE (SHEET F)

N/E LAND OF
 GREG R. WHITEHEAD
 DEED BK-8049 PG-179
 PLAT BK-77 PG-105
 TAX PARCEL #6650000107
 USE: VACANT
 ZONING: ID(YORK COUNTY MUNICIPALITY)



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/10/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

Project: **PROJECT GEKKO**
 996 PARAGON WAY
 ROCK HILL, SOUTH CAROLINA

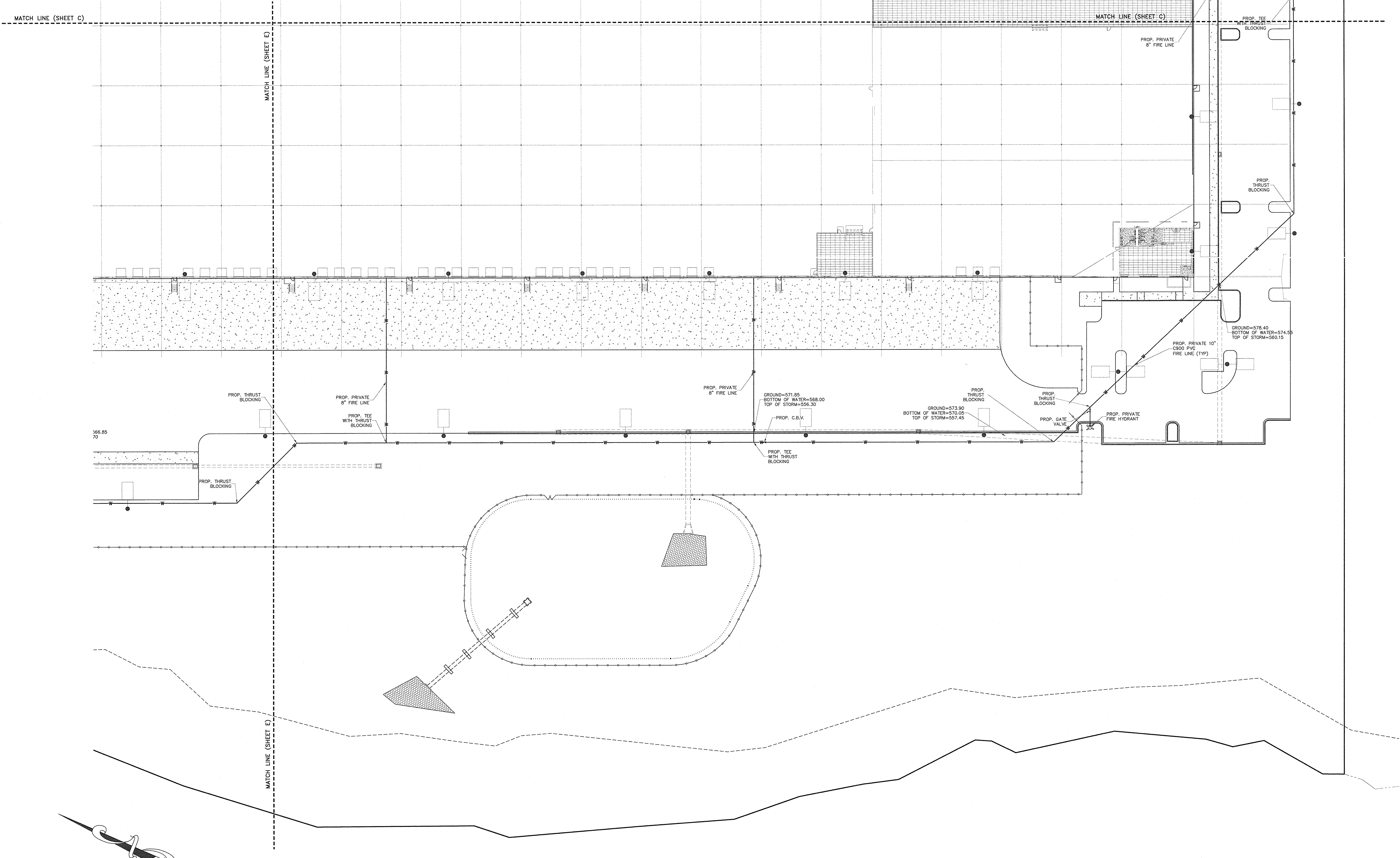
Title: **UTILITY PLAN**

File #: 13020-PB.dwg Date: 06/26/13 Project Egr: B.T.U.
 Design By: F.B.L.
 Drawn By: F.B.L.
 Scale: 1"=30'

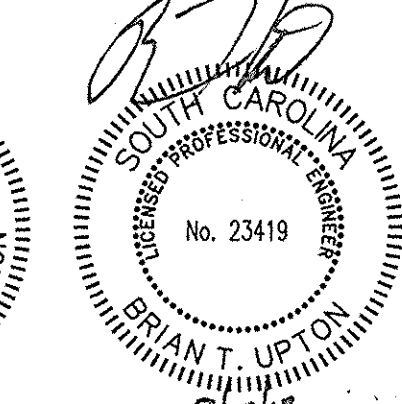
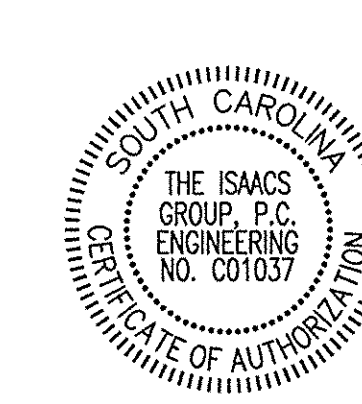
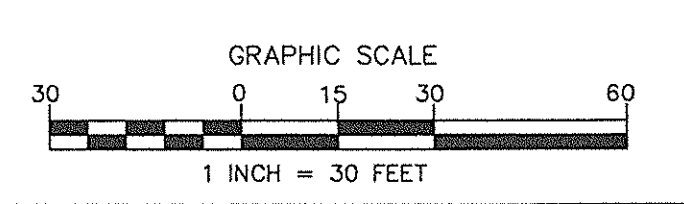
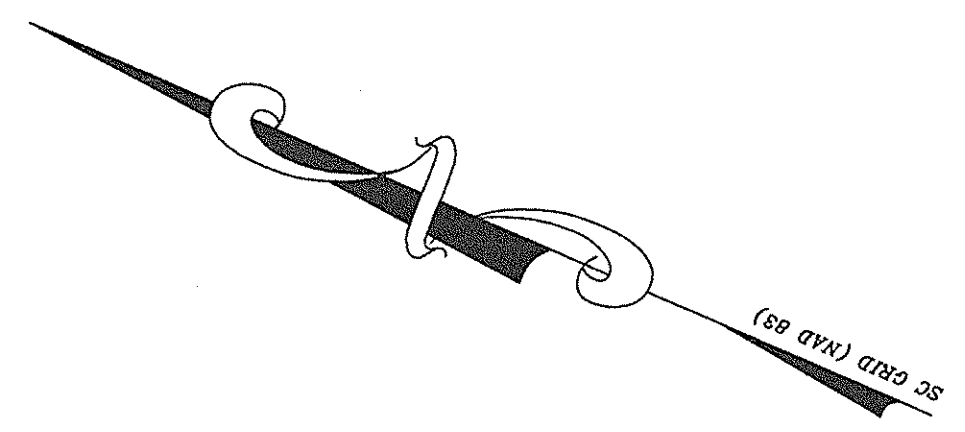
ISAACS
 CIVIL ENGINEERING DESIGN AND LAND SURVEYING

8720 RED OAK BOULEVARD, SUITE 420
 CHARLOTTE, N.C. 28217
 PHONE (704) 527-3440 FAX (704) 527-8335

C2.0E

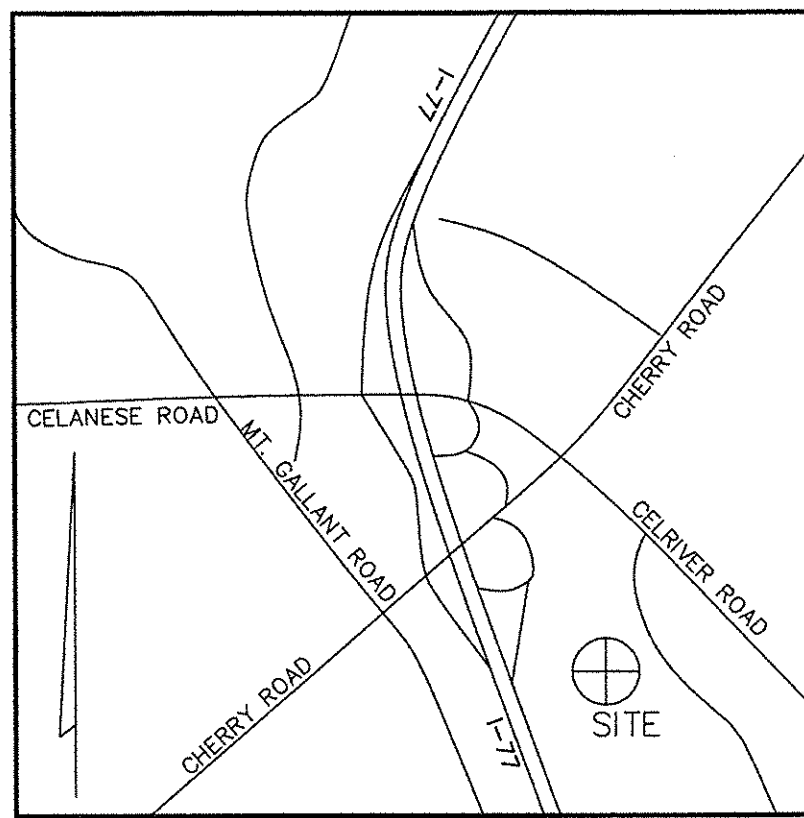


166.85
70
 PROP. THRUST BLOCKING
 PROP. PRIVATE 8" FIRE LINE
 PROP. TEE WITH THRUST BLOCKING
 PROP. PRIVATE 8" FIRE LINE
 GROUND=571.85
BOTTOM OF WATER=568.00
TOP OF STORM=556.30
PROP. C.B.V.
PROP. TEE WITH THRUST BLOCKING
 GROUND=573.90
BOTTOM OF WATER=570.05
TOP OF STORM=557.45
PROP. THRUST BLOCKING
 PROP. THRUST BLOCKING
 PROP. GATE VALVE
 PROP. PRIVATE FIRE HYDRANT
 GROUND=578.40
BOTTOM OF WATER=574.55
TOP OF STORM=560.15
 PROP. PRIVATE 10" CS90 PVC FIRE LINE (TYP)
 PROP. THRUST BLOCKING



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/10/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

Project: **PROJECT GEKKO**
 996 PARAGON WAY
 ROCK HILL, SOUTH CAROLINA
 Title: **UTILITY PLAN**
 File # 15000-PB.dwg Date: 05/26/13 Project Egr: BTL
 Design By: FBL
 Drawn By: FBL
 Scale: 1"=30'
ISAACS
 8720 RED OAK BOULEVARD, SUITE 420
 CHARLOTTE, N.C. 28217
 PHONE (704) 527-3440 FAX (704) 527-8335
C2.0F



- DRAINAGE NOTES:**
1. REVERSE CURB AND GUTTER TO BE USED IN AREAS NOT CHANNELING STORM WATER RUNOFF.
 2. THE PROPOSED CONTOURS WITHIN PAVED AREAS ARE GRAPHICAL REPRESENTATIONS ONLY. THE CONTRACTOR IS RESPONSIBLE FOR GRADING UNIFORMITY BETWEEN SPOT ELEVATIONS.
 3. CONTRACTOR TO GRADE ALL AREAS WITHIN PROJECT TO DRAIN STORM WATER. CARE SHALL BE TAKEN TO ENSURE THAT ALL AREAS WITHIN PARKING LOTS AND LANDSCAPED ISLANDS SHALL NOT HOLD WATER UPON PROJECT COMPLETION.
 4. MIN. SLOPE ON ALL ASPHALT TO BE 1.5%.
 5. MIN. SLOPE ON CURB AND GUTTER CARRYING STORM WATER TO BE 0.5%.
 6. MIN. SLOPE ON REVERSE CURB AND GUTTER CAN BE 0.0%.
 7. WATERTIGHT JOINTS SHALL BE PROVIDED FOR THE ENTIRE DRAINAGE SYSTEM.
 8. CLASS III RCP IS AN ACCEPTABLE SUBSTITUTE FOR HDPE.

- ADA NOTES:**
1. SLOPES IN THE HC PARKING SPACE/ACCESS AISLE AREA SHALL NOT EXCEED 2% IN ANY DIRECTION INCLUDING IN THE DIAGONAL.
 2. LANDINGS OUTSIDE ALL DOORS SHALL BE SIZED PER THE NORTH CAROLINA BUILDING CODE (NBC), BE AT THE SAME ELEVATION AS THE FFC, AND SHALL HAVE A MAX. 2% SLOPE IN ANY DIRECTION INCLUDING IN THE DIAGONAL.

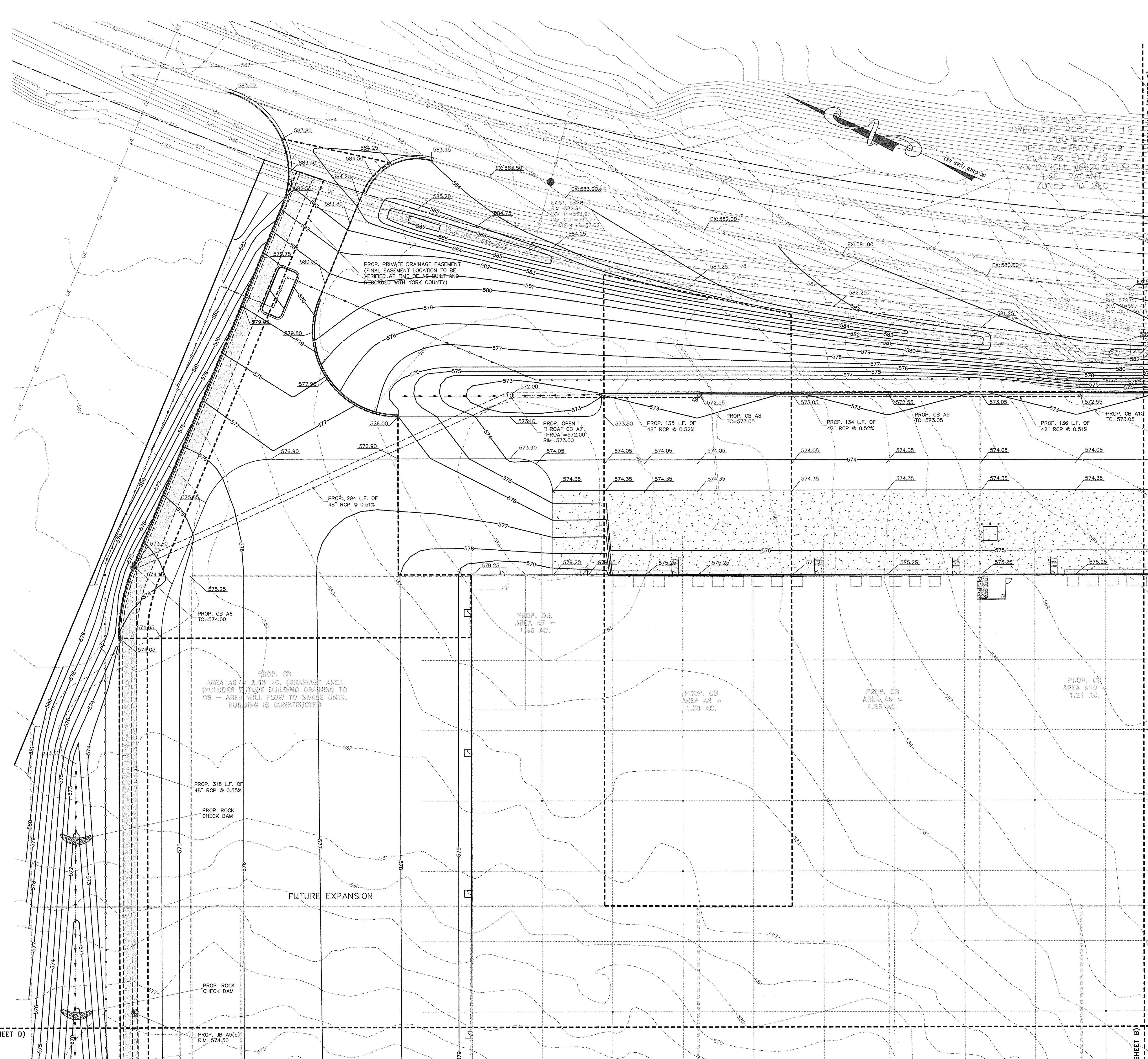
- SIDEWALK NOTES:**
1. SIDEWALK CROSS-SLOPE SHALL NOT EXCEED 2% AND THE RUNNING SLOPE ALONG THE TRAVEL PATH SHALL NOT EXCEED 5% EXCEPT AT DESIGNATED RAMPS.
 2. CROSS-SLOPES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO POURING CONCRETE FOR THE SIDEWALKS.
 3. IF AFOREMENTIONED SLOPES CAN NOT BE ATTAINED, THE ENGINEER SHOULD BE NOTIFIED PRIOR TO SIDEWALK INSTALLATION.
 4. IF RAMPS EXCEED 6' IN LENGTH WITHOUT A LANDING AREA OR THE RUNNING SLOPE ALONG THE TRAVEL PATH EXCEEDS 5%, HANDRAILS MAY BE REQUIRED. VERIFY WITH ENGINEER OR LOCAL INSPECTOR.

- ADDITIONAL NOTES:**
1. ALL MATERIALS, CONSTRUCTION, AND PLANS ARE TO COMPLY WITH CURRENT CITY OF ROCK HILL STANDARD SPECIFICATIONS AND DETAILS.
 2. CONTACT PALMETTO UTILITY PROTECTION SERVICE (PUPS) @ 811 OR 888-721-7877, A MINIMUM OF 72 HOURS BEFORE DIGGING.
 3. CONTRACTOR SHALL PROVIDE VEGETATION TO THE DESIGN ENGINEER THAT ALL SEDIMENT BASIN AND/OR POST CONSTRUCTION STORMWATER MITIGATION FACILITY CONFIGURATION, INCLUDING OUTLET STRUCTURE ELEVATIONS, DAM ELEVATIONS, SPILLWAY ELEVATIONS, AND BASIN VOLUMES ARE IN ACCORDANCE WITH APPROVED DESIGN. BASIN CONFIGURATION DOES NOT MEET THE INTENT OF THE APPROVED DESIGN, THEN THE BASIN FACILITY SHALL BE CORRECTED TO MEET COMPLIANCE OR A NEW REVISED ANALYSIS MUST BE SUBMITTED TO CRH DEVELOPMENT SERVICES INFRASTRUCTURE FOR REVIEW AND APPROVAL.
 4. THE DEVELOPER, ENGINEER, AND/OR CONTRACTOR MUST SUBMIT TO PAC A COMPLETE SET OF AS-BUILT DRAWINGS, FOR ROADWAY, WATER, SANITARY SEWER AND STORM DRAINAGE UTILITIES (INCLUDING DETENTION BASINS AND WATER QUALITY FACILITIES), FOR REVIEW AND APPROVAL. AS-BUILT DRAWINGS ARE REQUIRED FOR ALL PUBLIC AND PRIVATELY OWNED UTILITIES. EASEMENTS MUST BE SHOWN ON THE FINAL PLAN, AS APPLICABLE. IF NO FINAL PLAN IS REQUIRED, THEN ALL EASEMENTS MUST BE RECORDED AT THE YORK COUNTY COURTHOUSE AND IDENTIFIED ON THE AS-BUILT PLAN WITH D.B. AND PAGE NUMBERS. SEE CRH WEB-SITE FOR AS-BUILT CONSTRUCTION CHECK LIST.
 5. AS-BUILTS MUST BE APPROVED BEFORE ISSUANCE OF FINAL PLAN AND/OR CERTIFICATE OF OCCUPANCY.

- LEGEND**
- ELEV --- EXISTING CONTOUR
 - ELEV --- PROPOSED CONTOUR
 - ELEV / --- PROPOSED SPOT ELEVATION (ON ASPHALT)
 - SS --- EXISTING SANITARY SEWER LINE
 - W --- EXISTING WATER LINE
 - CB --- EXISTING CATCH BASIN
 - G --- EXISTING GAS LINE
 - --- EXISTING STORM DRAINAGE PIPE
 - --- PROPOSED STORM DRAINAGE PIPE
 - --- PROPOSED CATCH BASIN

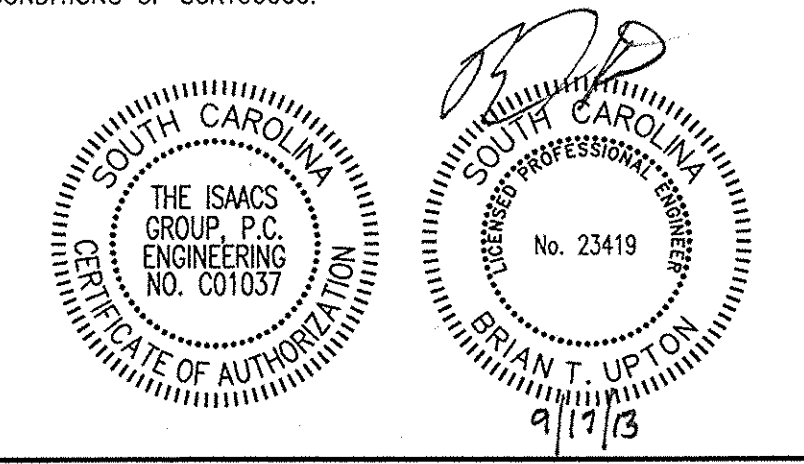
CATCH BASIN NOTE:
ALL STORMWATER CATCH BASINS, INLETS, MANHOLES, OUTLET STRUCTURES, ETC. SHALL BE PERMANENTLY LABELED AS "NO DUMPING, DRAINS TO RIVER" AND INCLUDE A FISH SYMBOL.

FROM	TO	CG	TY	AREA TO INLET	25 YR. Q	CUMUL. Q	LENGTH	PIPE DIA.	SLOPE	RIM ELEV.	UPPER INV.	LOWER INV.	PIPE	COVER
A16	A15	0.95	7.91	1.2	9.02	9.02	134.00	34	0.52	572.55	568.00	563.30	RCP	4.50
A15	A14	0.95	7.91	1.2	8.02	8.02	134.00	34	0.52	572.55	568.00	563.30	RCP	4.50
A14	A13	0.95	7.91	1.2	7.02	7.02	134.00	34	0.52	572.55	568.00	563.30	RCP	4.50
A13	A12	0.95	7.91	1.18	6.07	6.07	134.00	36	0.52	572.55	563.85	559.15	RCP	5.70
A12	A11	0.95	7.91	1.18	5.07	5.07	134.00	36	0.52	572.55	563.15	558.45	RCP	5.40
A11	A10	0.95	7.91	1.21	4.09	4.09	132.00	42	0.53	572.55	562.45	557.75	RCP	6.60
A10	A9	0.95	7.91	1.21	3.09	3.09	136.00	42	0.51	572.55	561.75	557.05	RCP	7.20
A9	A8	0.95	7.91	1.26	2.07	2.07	134.00	42	0.52	572.55	561.05	556.35	RCP	8.00
A8	A7	0.95	7.91	1.49	1.02	1.02	136.00	48	0.51	572.55	560.35	555.65	RCP	8.30
A7	A6	0.95	7.91	2.33	18.01	112.07	635.00	48	0.55	573.50	558.15	554.45	RCP	11.35
A6	A5	0.95	7.91	1.44	10.82	122.89	255.00	54	0.51	570.50	554.65	550.95	RCP	8.35
B10	B9	0.95	7.91	1.46	10.97	10.97	153.00	34	0.52	570.00	560.45	556.75	RCP	7.50
B9	B8	0.95	7.91	1.38	10.37	21.34	133.00	30	0.53	570.00	559.65	555.95	RCP	8.25
B8	B7	0.96	7.91	1.32	10.23	31.57	136.00	30	0.50	570.85	558.25	554.55	RCP	8.90
B7	B6	0.96	7.91	1.32	10.23	41.81	136.00	30	0.51	570.85	557.85	554.15	RCP	9.15
B6	B5	0.96	7.91	1.32	10.23	52.04	136.00	30	0.50	570.85	557.45	553.75	RCP	9.85
B5	B4	0.96	7.91	1.32	10.23	62.27	136.00	42	0.51	570.85	557.05	553.35	RCP	10.15
B4	B3	0.96	7.91	1.32	10.23	72.50	136.00	42	0.51	570.85	556.65	552.95	RCP	10.85
B3	B2	0.96	7.91	1.32	10.23	82.74	136.00	42	0.53	570.85	556.25	552.55	RCP	11.55
B2	B1	1.32	7.91	1.32	10.23	92.97	136.00	48	0.51	570.85	555.85	552.15	RCP	11.8
A4	A3-POND	0.98	7.91	3.14	24.34	249.30	86.00	66	0.52	568.10	553.50	549.00	RCP	10.1
C15	C14	0.95	7.91	1.17	8.8	8.8	134.00	34	0.60	572.55	563.00	562.20	RCP	7.55
C14	C13	0.95	7.91	1.19	8.9	17.7	134.00	34	0.60	572.55	562.20	561.40	RCP	8.25
C13	C12	0.95	7.91	1.47	11.0	28.7	134.00	30	0.58	572.55	561.40	560.60	RCP	8.60
C12	C11	0.95	7.91	0.48	3.6	33.3	137.00	30	0.62	572.55	560.60	560.00	RCP	9.2
C11	C10	0.95	7.91	0.92	6.9	47.3	115.00	36	0.61	576.05	560.00	559.40	RCP	10.00
C10	C9	0.95	7.91	0.92	6.9	47.3	115.00	36	0.61	576.05	559.40	558.70	RCP	10.65
C9	C8	0.95	7.91	0.31	2.4	48.7	108.00	36	0.63	577.42	558.70	557.75	RCP	11.7
C8	C7	0.95	7.91	0.36	2.9	55.4	240.00	42	0.56	577.75	558.25	557.90	RCP	18
C7	C6	0.95	7.91	0.55	4.3	59.7	251.00	42	0.54	574.85	554.50	553.50	RCP	15.45
C6	C5	0.95	7.91	2.21	17.1	76.8	191.00	42	0.55	571.85	553.55	552.50	RCP	14.6
C5	C4	0.95	7.91	0.81	6.4	8.1	109.00	18	1.01	571.85	553.60	553.00	RCP	18.25
C4	C3-POND	0.98	7.91	1.28	9.8	95.9	83.00	48	0.60	561.55	547.50	547.00	RCP	20.05



REMAINDER OF
ORLENS OF ROCK HILL, LLC
PROPERTY
DEED BK 7503 PG 89
PLAT BK E177 PG 1
TAX PARCEL #6820701132
USE: VACANT
ZONED: PD-M/C

ENGINEER'S CERTIFICATION:
I HAVE PLACED MY SIGNATURE AND SEAL ON THE DESIGN DOCUMENTS SUBMITTED SIGNIFYING THAT I ACCEPT RESPONSIBILITY FOR THE DESIGN OF THE SYSTEM. FURTHER, I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE DESIGN IS CONSISTENT WITH THE REQUIREMENTS OF TITLE 40, CHAPTER 14 OF THE CODE OF LAWS OF SC, 1976 AS AMENDED, PURSUANT TO REGULATION 72-300 ET SEQ. (IF APPLICABLE), AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF SCRI00000.



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/10/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

PROJECT: PROJECT GEKKO
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

FILE: GRADING PLAN
DATE: 06/26/13

DESIGNER: ISMACS GROUP, P.C.
DRAWN BY: FBL
SCALE: 1"=30'

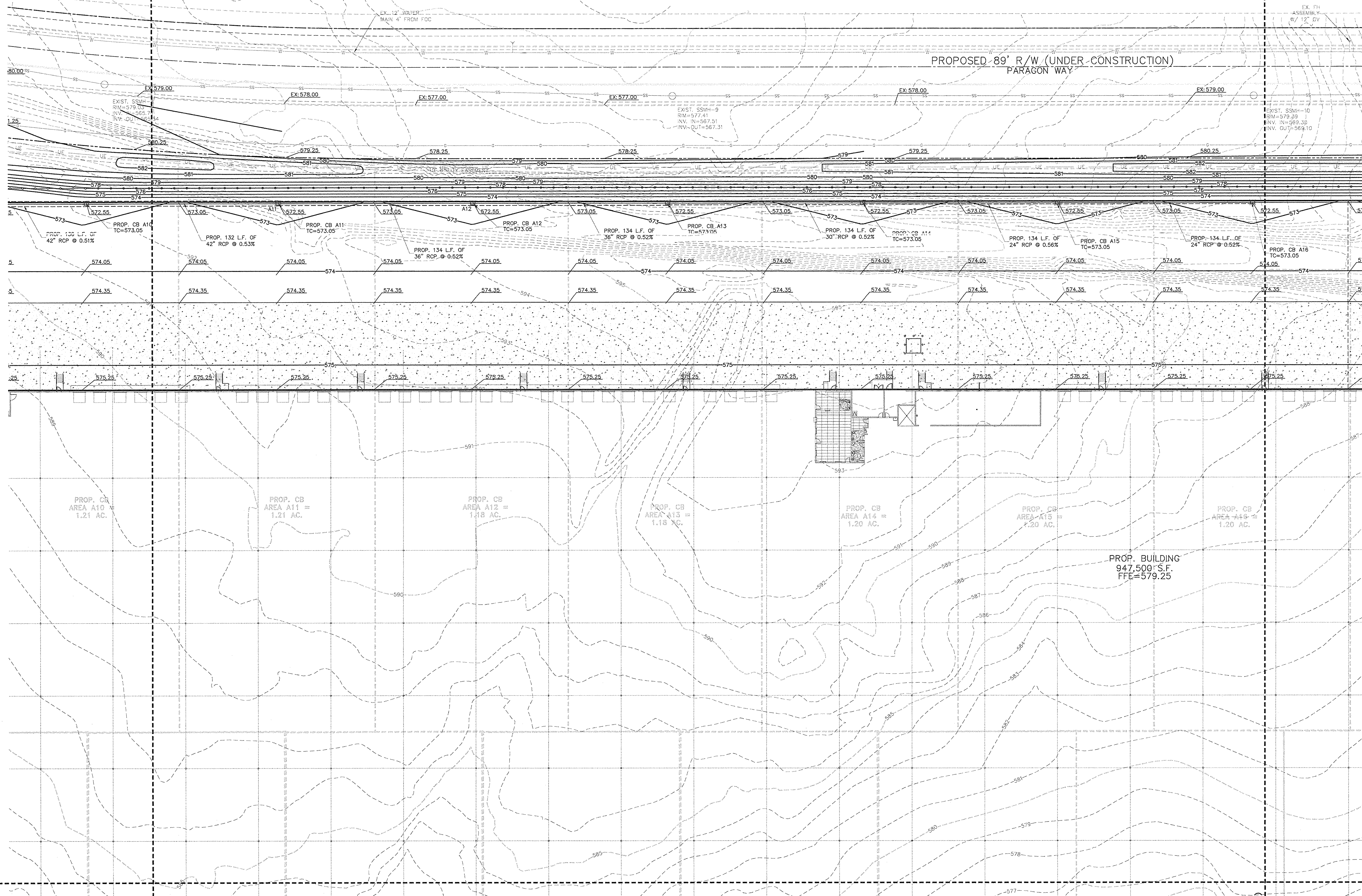
6720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C3.0A

REMAINDER OF
GREENS OF ROCK HILL, LLC
PROPERTY
DEED BK-7503 PG-99
PLAT BK-E177 PG-1
TAX PARCEL #6620701132
USE: VACANT
ZONED: PD-MEC

REMAINDER OF
GREENS OF ROCK HILL, LLC
PROPERTY
DEED BK-7503 PG-99
PLAT BK-E177 PG-1
TAX PARCEL #6620701132
USE: VACANT
ZONED: PD-MEC

PROPOSED 89' R/W (UNDER CONSTRUCTION)
PARAGON WAY



PROP. CB A10
TC=573.05
PROP. 130 L.F. OF
42" RCP @ 0.51%

PROP. CB A11
TC=573.05
PROP. 134 L.F. OF
42" RCP @ 0.52%

PROP. CB A12
TC=573.05
PROP. 134 L.F. OF
36" RCP @ 0.52%

PROP. CB A13
TC=573.05
PROP. 134 L.F. OF
36" RCP @ 0.52%

PROP. CB A14
TC=573.05
PROP. 134 L.F. OF
30" RCP @ 0.52%

PROP. CB A15
TC=573.05
PROP. 134 L.F. OF
24" RCP @ 0.56%

PROP. CB A16
TC=573.05
PROP. 134 L.F. OF
24" RCP @ 0.52%

PROP. CB
AREA A10 =
1.21 AC.

PROP. CB
AREA A11 =
1.21 AC.

PROP. CB
AREA A12 =
1.18 AC.

PROP. CB
AREA A13 =
1.18 AC.

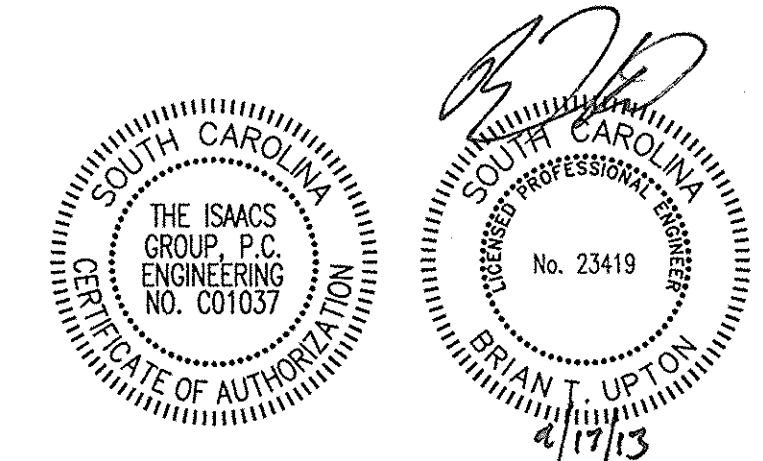
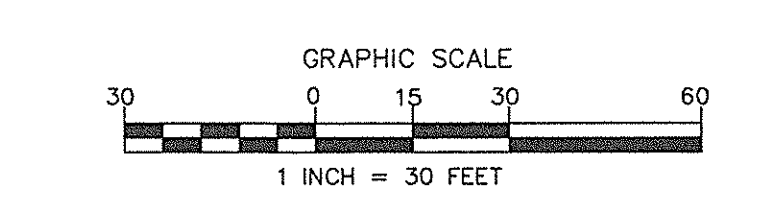
PROP. CB
AREA A14 =
1.20 AC.

PROP. CB
AREA A15 =
1.20 AC.

PROP. CB
AREA A16 =
1.20 AC.

PROP. BUILDING
947,500 S.F.
FFE=579.25

FROM	TO	"C"	"I"	AREA TO INLET	25 YR Q	CUM. Q	LENGTH	PIPE DIA.	SLOPE	RIM ELEV.	UPPER INV.	LOWER INV.	PIPE COVER
A10	A15	0.50	7.91	1.2	0.02	8.02	134.00	24	0.52	572.55	568.00	565.50	RCP 4.50
A15	A14	0.50	7.91	1.2	0.02	16.02	134.00	24	0.56	572.55	565.50	564.50	RCP 4.50
A14	A13	0.50	7.91	1.2	0.02	24.02	134.00	30	0.52	572.55	564.50	563.50	RCP 4.50
A13	A12	0.50	7.91	1.18	0.02	32.02	134.00	36	0.52	572.55	563.50	563.15	RCP 4.50
A12	A11	0.50	7.91	1.18	0.02	40.02	134.00	36	0.52	572.55	563.15	562.45	RCP 4.50
A11	A10	0.50	7.91	1.21	0.09	53.88	134.00	42	0.51	572.55	562.45	561.75	RCP 4.50
A10	A9	0.50	7.91	1.21	0.09	62.97	134.00	42	0.51	572.55	561.75	561.00	RCP 4.50
A9	A8	0.50	7.91	1.26	0.47	72.44	134.00	42	0.52	572.55	561.00	560.25	RCP 4.50
A8	A7	0.50	7.91	1.33	0.99	82.43	134.00	48	0.52	572.55	560.25	559.65	RCP 4.50
A7	A6	0.50	7.91	1.46	10.62	93.06	264.00	48	0.51	572.00	559.65	558.15	RCP 4.50
A6	A5	0.50	7.91	2.03	18.91	112.07	636.00	48	0.56	573.50	558.15	556.45	RCP 4.50
A5	A4	0.50	7.91	1.44	19.82	132.89	234.00	24	0.51	568.50	556.45	555.50	RCP 4.50
B10	B9	0.50	7.91	1.48	10.97	109.97	183.00	24	0.52	570.00	560.45	559.65	RCP 7.50
B9	B8	0.50	7.91	1.38	10.27	21.34	134.00	30	0.51	570.00	559.65	559.25	RCP 4.50
B8	B7	0.50	7.91	1.32	10.23	31.57	134.00	30	0.50	570.00	559.25	558.50	RCP 4.50
B7	B6	0.50	7.91	1.32	10.23	41.81	134.00	30	0.51	570.00	558.50	557.75	RCP 4.50
B6	B5	0.50	7.91	1.32	10.23	52.04	134.00	36	0.50	570.00	557.75	557.00	RCP 4.50
B5	B4	0.50	7.91	1.32	10.23	62.27	134.00	42	0.51	570.00	557.00	556.20	RCP 4.50
B4	B3	0.50	7.91	1.32	10.23	72.50	134.00	42	0.51	570.00	556.20	555.60	RCP 4.50
B3	B2	0.50	7.91	1.32	10.23	82.74	134.00	42	0.51	570.00	555.60	554.75	RCP 4.50
B2	A4	0.50	7.91	1.32	10.23	92.97	243.00	48	0.51	570.00	554.75	553.50	RCP 4.50
A4	A3-POND	0.50	7.91	3.14	24.34	240.30	98.00	66	0.52	568.10	553.50	553.00	RCP 10.1
C15	C14	0.50	7.91	1.17	8.8	8.8	134.00	24	0.60	572.55	563.00	562.20	RCP 7.50
C14	C13	0.50	7.91	1.18	8.9	17.7	134.00	24	0.60	572.55	562.20	561.40	RCP 7.50
C13	C12B	0.50	7.91	1.47	11.2	28.7	99.00	30	0.50	572.55	561.40	560.65	RCP 7.50
C12B	C12A	0.50	7.91	0.48	3.6	32.3	137.00	30	0.62	572.55	560.65	560.00	RCP 7.50
C12A	C11	0.50	7.91	1.07	6.0	38.3	104.00	36	0.61	572.55	559.00	558.40	RCP 7.50
C11	C10	0.50	7.91	0.92	8.9	47.3	116.00	36	0.61	572.55	558.40	557.70	RCP 7.50
C10B	C10A	0.50	7.91	0.56	3.4	49.7	104.00	36	0.61	572.55	557.70	557.20	RCP 7.50
C10A	C9	0.50	7.91	0.38	2.8	52.5	198.00	36	0.60	572.55	557.20	556.75	RCP 7.50
C9	C8	0.50	7.91	0.38	2.9	55.4	240.00	42	0.56	572.55	556.75	556.40	RCP 7.50
C8	C7	0.50	7.91	0.56	4.3	59.7	251.00	42	0.54	572.55	556.40	556.15	RCP 7.50
C7	C6	0.50	7.91	2.21	17.1	76.8	191.00	42	0.50	571.65	555.55	552.50	RCP 14.0
C6	C5	0.50	7.91	1.21	10.4	87.4	163.00	48	0.51	571.65	555.55	553.75	RCP 18.0
C5	C4-POND	0.50	7.91	1.29	9.8	95.9	83.00	48	0.60	571.65	553.75	547.50	RCP 20.0



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/10/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

PROJECT: PROJECT GEKKO
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

DATE: 06/26/13

DESIGNER: FBL

DRAWN BY: FBL

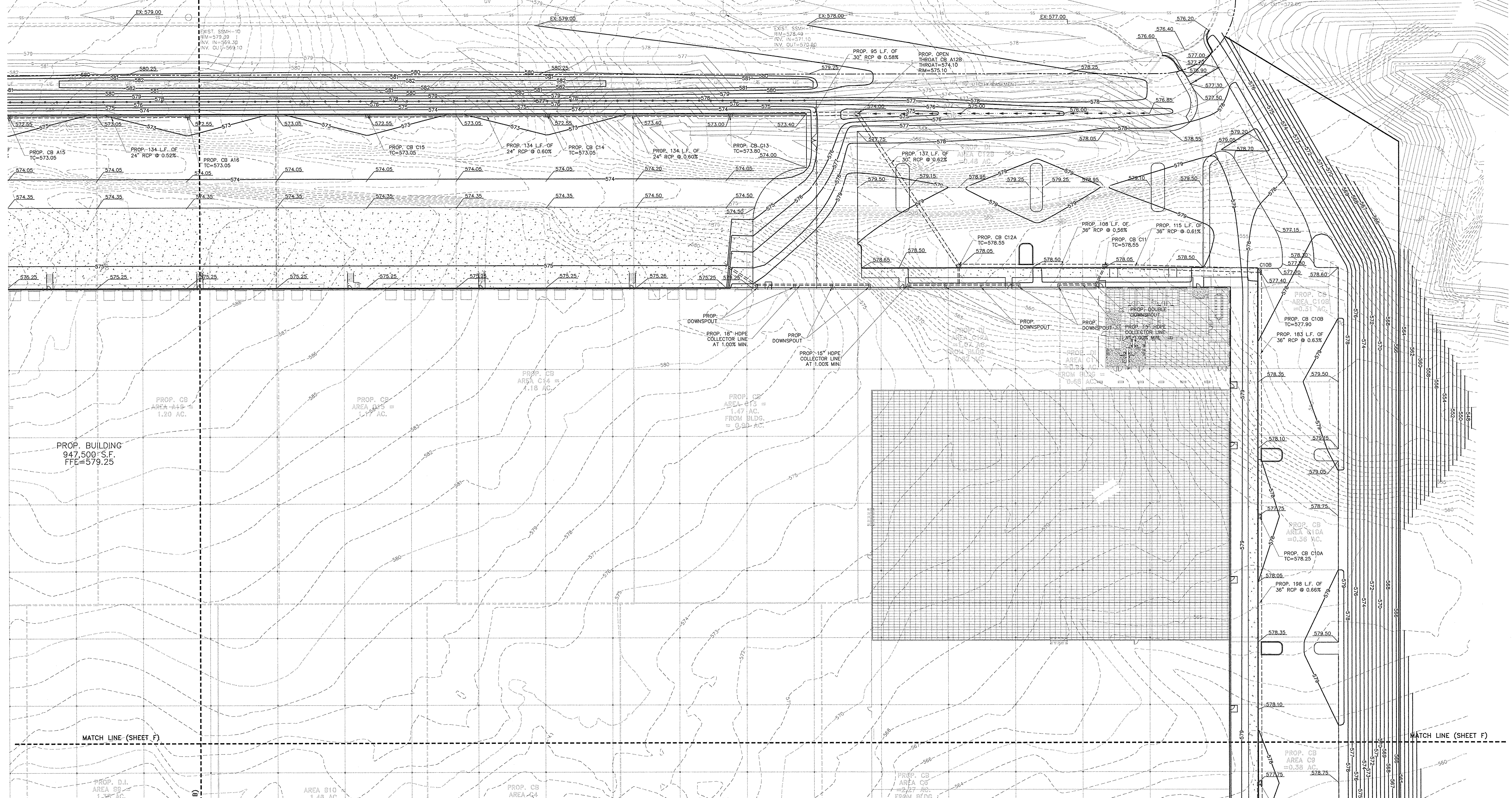
SCALE: 1" = 30'

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

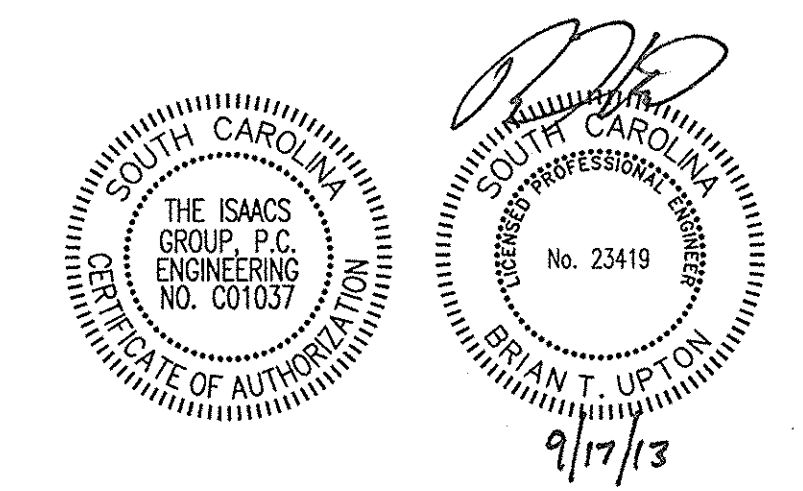
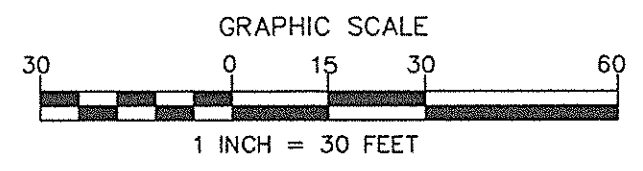
ISAACS
ENGINEERING

C3.0B

UNDER CONSTRUCTION)
WAY



FROM	TO	"C"	"T"	AREA TO INLET	25 YR. Q	CUMUL. Q	LENGTH	PIPE DIA.	SLOPE	RHH ELEV.	UPPER INV.	LOWER INV.	PIPE COVER	
				sq. ft.	cfs	cfs	ft.	in.	%	ft.	ft.	ft.	ft.	
A16	A15	0.95	7.91	1.2	8.02	8.02	134.00	24	0.52	572.55	566.00	566.30	RCP	4.50
A15	A14	0.95	7.91	1.2	9.02	17.04	134.00	24	0.56	572.55	564.50	564.85	RCP	4.50
A14	A13	0.95	7.91	1.2	8.02	27.06	134.00	30	0.52	572.55	564.55	564.85	RCP	5.50
A13	A12	0.95	7.91	1.18	8.87	35.93	134.00	36	0.52	572.55	563.65	563.95	RCP	5.50
A12	A11	0.95	7.91	1.18	8.87	44.79	134.00	36	0.52	572.55	563.15	563.45	RCP	6.00
A11	A10	0.95	7.91	1.21	9.08	53.86	132.00	42	0.53	572.55	562.45	562.75	RCP	6.00
A10	A9	0.95	7.91	1.21	9.09	62.95	136.00	42	0.51	572.55	561.75	562.05	RCP	6.00
A9	A8	0.95	7.91	1.28	9.47	72.42	134.00	42	0.52	572.55	561.05	561.35	RCP	6.00
A8	A7	0.95	7.91	1.33	9.96	82.41	135.00	48	0.52	572.55	560.35	560.65	RCP	6.50
A7	A6	0.92	7.91	1.45	10.62	93.03	284.00	48	0.51	572.55	559.65	559.95	RCP	6.50
A6	A5	0.95	7.91	2.55	18.51	112.57	635.00	48	0.55	572.55	558.95	559.25	RCP	13.50
A5	A4	0.95	7.91	1.44	10.82	122.59	225.00	54	0.51	565.50	554.85	555.15	RCP	6.50
B10	B9	0.95	7.91	1.48	10.97	133.57	153.00	24	0.52	570.00	560.45	560.75	RCP	7.50
B9	B8	0.95	7.91	1.35	10.37	21.24	133.00	30	0.53	570.00	559.95	560.25	RCP	6.00
B8	B7	0.95	7.91	1.32	10.23	31.57	136.00	30	0.55	570.00	559.25	559.55	RCP	6.00
B7	B6	0.95	7.91	1.32	10.23	41.81	136.00	36	0.51	570.00	558.55	558.85	RCP	6.50
B6	B5	0.95	7.91	1.32	10.23	52.04	136.00	36	0.58	570.00	557.85	558.15	RCP	6.85
B5	B4	0.95	7.91	1.32	10.23	62.27	136.00	42	0.51	570.00	557.15	557.45	RCP	12.15
B4	B3	0.95	7.91	1.32	10.23	72.50	136.00	42	0.51	570.00	556.45	556.75	RCP	10.85
B3	B2	0.95	7.91	1.32	10.23	82.74	136.00	42	0.63	570.00	555.75	556.05	RCP	11.95
B2	B1	0.95	7.91	1.32	10.23	92.97	243.00	48	0.51	570.00	555.05	555.35	RCP	11.15
A4	A3	0.95	7.91	3.14	24.34	240.20	98.00	66	0.52	568.10	553.50	553.80	RCP	10.1
C19	C18	0.95	7.91	1.17	8.8	8.8	134.00	24	0.60	572.55	563.00	563.30	RCP	7.55
C18	C17	0.95	7.91	1.18	8.9	17.7	134.00	30	0.56	572.55	562.30	562.60	RCP	8.55
C17	C16	0.95	7.91	1.17	11.0	28.7	95.00	30	0.58	572.55	561.40	561.70	RCP	8.65
C16	C15	0.95	7.91	0.48	3.8	32.3	137.00	30	0.62	572.55	560.85	561.15	RCP	8.2
C15	C14	0.95	7.91	1.07	8.0	40.4	198.00	36	0.56	578.00	559.40	559.70	RCP	15.65
C14	C13	0.95	7.91	0.92	6.9	47.3	115.00	36	0.61	578.00	558.40	558.70	RCP	15.65
C13	C12	0.95	7.91	0.31	2.4	49.7	133.00	36	0.63	577.65	557.65	557.95	RCP	15.1
C12	C11	0.95	7.91	0.38	2.8	52.5	188.00	36	0.66	577.75	557.55	557.85	RCP	17.1
C11	C10	0.95	7.91	0.28	2.0	55.4	240.00	42	0.56	577.75	556.85	557.15	RCP	16.1
C10	C9	0.95	7.91	0.35	4.3	59.7	251.00	42	0.55	577.65	556.00	556.30	RCP	13.45
C9	C8	0.95	7.91	2.21	17.1	76.8	191.00	42	0.55	571.65	553.55	553.85	RCP	14.6
C8	C7	0.95	7.91	1.21	9.4	86.2	128.00	48	0.51	571.65	552.65	552.95	RCP	16.65
C7	C6	0.95	7.91	1.26	9.8	95.9	83.00	48	0.60	571.35	547.50	547.80	RCP	20.05



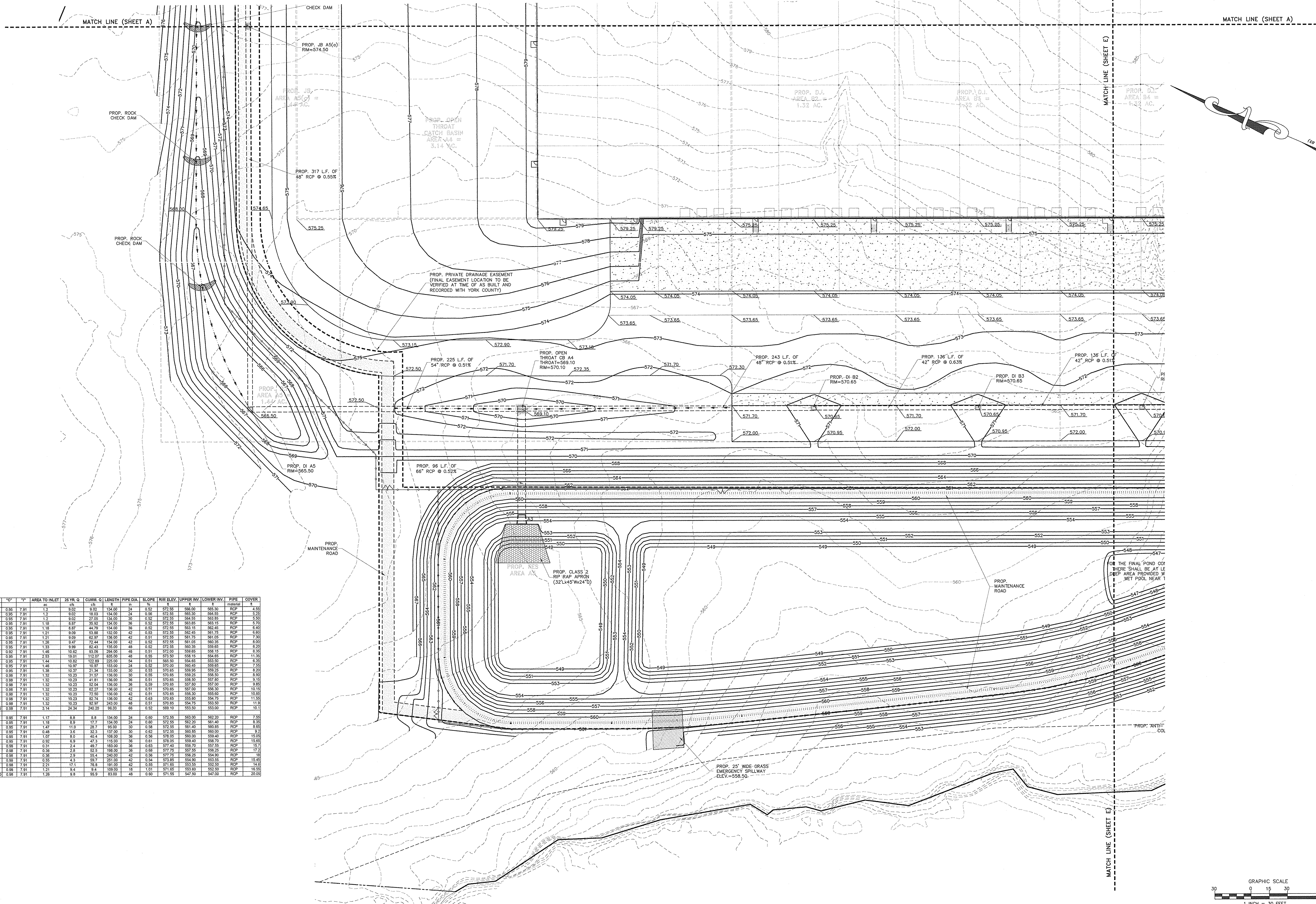
NO.	BY	DATE	REVISION
4	FBL	09/02/13	PER CITY COMMENTS
5	FBL	09/10/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

Project: **PROJECT GEKKO**
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

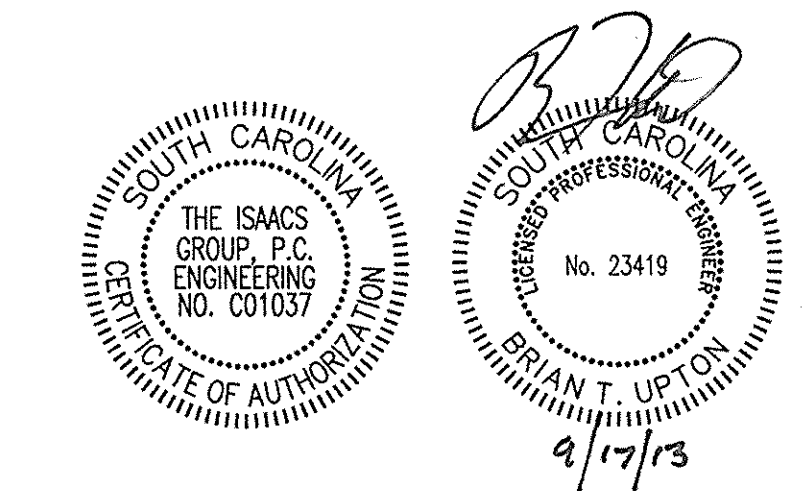
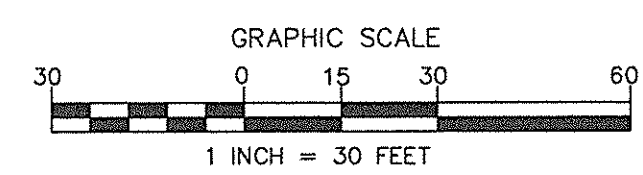
Drawn By: **ISAACS**
Scale: 1" = 30'

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C3.0C



FROM	TO	"C"	"P"	AREA TO INLET	SS YR Q	CUMUL Q	LENGTH	PIPE DIA.	SLOPE	RIM ELEV.	UPPER INV.	LOWER INV.	PIPE MATERIAL	COVER
A18	A15	0.85	7.81	1.2	8.02	134.00	24	0.50	572.55	569.00	565.30	RCP	4.50	
A14	A15	0.95	7.81	1.2	8.02	134.00	24	0.58	572.55	565.30	564.55	RCP	5.25	
A14	A13	0.85	7.81	1.2	8.02	134.00	24	0.52	572.55	565.30	563.85	RCP	5.00	
A13	A12	0.85	7.81	1.2	8.02	134.00	24	0.52	572.55	565.30	563.15	RCP	5.70	
A12	A11	0.85	7.81	1.18	8.87	134.00	38	0.52	572.55	565.10	562.45	RCP	6.40	
A11	A10	0.85	7.81	1.21	9.09	132.00	42	0.53	572.55	565.45	561.75	RCP	6.00	
A10	A9	0.85	7.81	1.21	9.09	132.00	42	0.51	572.55	561.75	561.05	RCP	7.30	
A9	A8	0.85	7.81	1.28	9.47	134.00	42	0.52	572.55	561.05	560.35	RCP	6.00	
A8	A7	0.85	7.81	1.33	9.89	135.00	48	0.52	572.55	560.35	559.65	RCP	8.20	
A7	A6	0.82	7.81	1.48	10.82	134.00	48	0.51	572.55	559.65	558.95	RCP	6.30	
A6	A5	0.85	7.81	2.53	10.81	132.00	48	0.58	572.55	558.95	558.15	RCP	11.35	
A5	A4	0.85	7.81	1.44	10.82	132.00	54	0.51	565.50	564.85	563.50	RCP	6.30	
B10	B9	0.85	7.81	1.48	10.87	132.00	24	0.52	570.00	560.45	559.65	RCP	7.50	
B9	B8	0.85	7.81	1.38	10.37	133.00	30	0.53	570.00	559.95	559.25	RCP	8.20	
B8	B7	0.85	7.81	1.32	10.33	133.00	30	0.55	570.00	559.25	558.50	RCP	9.15	
B7	B6	0.88	7.81	1.32	10.33	133.00	36	0.51	570.00	558.50	557.80	RCP	9.15	
B6	B5	0.88	7.81	1.32	10.33	133.00	36	0.57	570.00	557.80	557.00	RCP	9.85	
B5	B4	0.88	7.81	1.32	10.33	133.00	42	0.51	570.00	557.00	556.30	RCP	10.15	
B4	B3	0.88	7.81	1.32	10.33	133.00	42	0.63	570.00	556.30	555.65	RCP	10.85	
B3	B2	0.88	7.81	1.32	10.33	133.00	48	0.63	570.00	555.65	554.75	RCP	11.30	
B2	A4	0.88	7.81	1.32	10.33	133.00	48	0.51	570.00	554.75	553.50	RCP	11.15	
A4	A3-POND	0.88	7.81	3.12	24.34	250.00	60	0.52	568.10	553.50	553.00	RCP	10.1	
C15	C14	0.85	7.81	1.17	8.8	134.00	24	0.60	572.55	563.00	562.50	RCP	7.50	
C14	C13	0.85	7.81	1.18	8.9	134.00	24	0.60	572.55	562.50	561.40	RCP	8.00	
C13	C12B	0.85	7.81	1.47	11.0	137.00	30	0.58	572.55	561.40	560.85	RCP	8.00	
C12B	C12A	0.85	7.81	0.48	3.6	137.00	30	0.62	572.55	560.85	560.00	RCP	8.2	
C12A	C11	0.85	7.81	1.07	8.0	138.00	36	0.58	572.55	560.00	559.40	RCP	15.05	
C11	C10	0.85	7.81	0.92	6.9	135.00	36	0.61	572.55	559.40	558.70	RCP	12.05	
C10B	C10A	0.88	7.81	0.31	2.4	133.00	36	0.63	577.40	558.70	557.55	RCP	15.1	
C10A	C9	0.88	7.81	0.36	2.8	133.00	36	0.68	577.40	557.55	556.25	RCP	17.2	
C9	C7	0.88	7.81	0.38	2.9	134.00	42	0.58	577.40	556.25	554.90	RCP	17.2	
C7	C6	0.88	7.81	0.55	4.3	137.00	42	0.54	573.85	554.90	553.55	RCP	15.40	
C6	C5	0.88	7.81	2.21	17.1	138.00	42	0.55	571.65	553.55	552.00	RCP	14.6	
C4	C3	0.88	7.81	1.21	9.4	139.00	18	1.01	571.65	553.00	552.50	RCP	16.35	
C3	C3-POND	0.88	7.81	1.20	9.8	133.00	48	0.80	571.55	547.50	547.00	RCP	20.05	



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	08/10/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

Project: PROJECT GEKKO
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

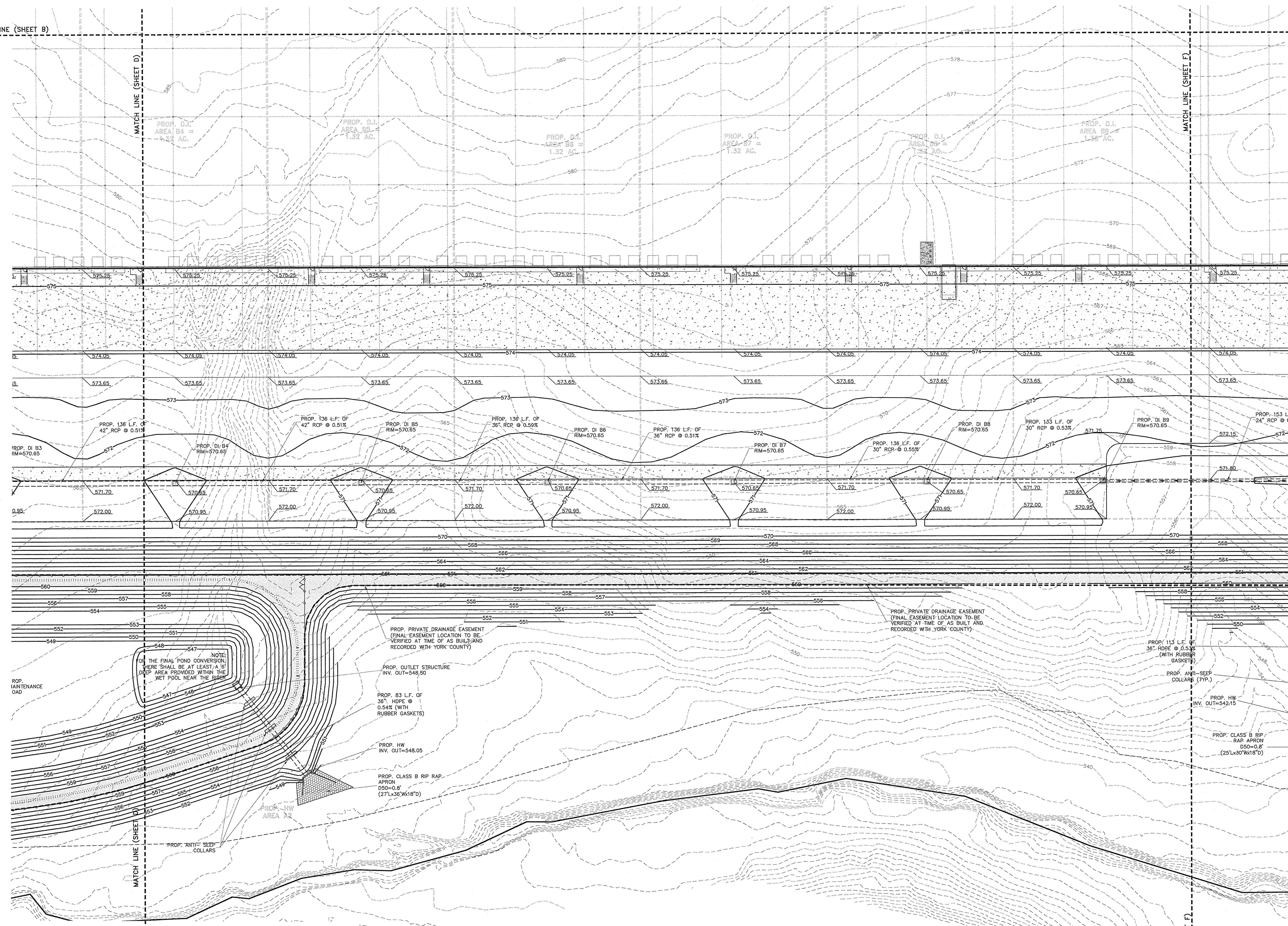
Grading Plan

ISAACS GROUP, INC.
8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C3.0D

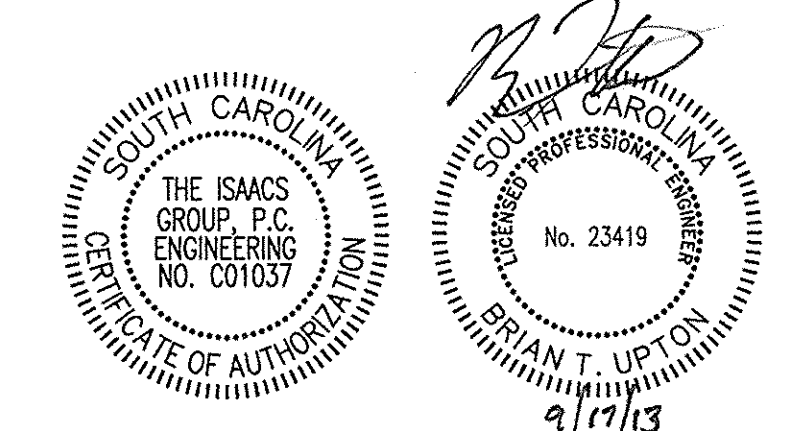
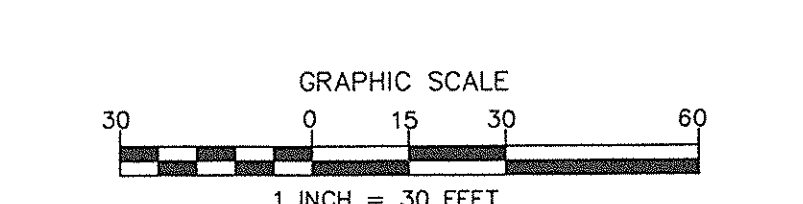
MATCH LINE (SHEET B)

MATCH LINE (SHEET D)



FROM	TO	PC	PT	AREA TO RILET	25 YR Q	CU YR Q	LENGTH	PIPE DIA.	SLOPE	RIM ELEV.	UPPER INV.	LOWER INV.	PIPE	COVER
ft	ft	ft	ft	sq ft	cfs	cfs	ft	in	%	ft	ft	ft	ft	ft
A16	A15	0.95	7.91	1.2	8.02	9.02	134.00	24	0.02	572.55	585.00	585.20	RCP	4.00
A14	A15	0.95	7.91	1.2	8.02	9.02	134.00	24	0.02	572.55	585.20	585.40	RCP	5.00
A13	A15	0.95	7.91	1.2	8.02	9.02	134.00	24	0.02	572.55	585.20	585.60	RCP	6.00
A12	A15	0.95	7.91	1.18	8.87	44.79	134.00	30	0.02	572.55	563.15	562.45	RCP	6.00
A11	A15	0.95	7.91	1.18	8.87	44.79	134.00	30	0.02	572.55	563.15	561.75	RCP	6.00
A10	A15	0.95	7.91	1.21	9.09	63.97	136.00	48	0.01	572.55	561.75	561.05	RCP	7.00
A9	A15	0.95	7.91	1.26	9.47	72.44	134.00	40	0.02	572.55	561.05	560.35	RCP	8.00
A8	A15	0.95	7.91	1.33	9.89	82.43	136.00	48	0.01	572.55	560.35	559.65	RCP	8.00
A7	A15	0.95	7.91	1.46	10.82	93.06	294.00	48	0.01	572.00	559.65	558.15	RCP	8.00
A6	A15	0.95	7.91	2.53	18.01	112.07	636.00	48	0.01	573.00	558.15	554.65	RCP	11.00
A5	A4	0.95	7.91	1.44	10.82	122.89	223.00	54	0.01	568.50	554.65	553.50	RCP	6.00
A4	A3-POND	0.98	7.91	3.14	24.34	240.00	96.00	66	0.02	569.10	553.00	553.00	RCP	10.1
C15	C14	0.95	7.91	1.17	8.8	8.8	134.00	24	0.00	572.55	585.00	585.20	RCP	7.50
C14	C13	0.95	7.91	1.19	8.9	11.7	134.00	24	0.00	572.55	585.20	585.40	RCP	6.50
C13	C12B	0.95	7.91	1.47	11.0	28.7	95.00	30	0.08	572.55	561.40	560.85	RCP	6.00
C12B	C12A	0.95	7.91	0.48	3.4	23.4	137.00	30	0.02	572.55	560.85	560.00	RCP	6.00
C12A	C11	0.95	7.91	1.07	8.0	40.4	108.00	30	0.06	576.00	560.00	559.40	RCP	15.00
C11	C10	0.95	7.91	0.90	6.9	47.3	115.00	36	0.01	578.00	559.40	558.70	RCP	15.00
C10A	C10	0.98	7.91	0.71	4.7	49.7	183.00	42	0.03	577.40	558.70	558.25	RCP	17.00
C10	C9	0.98	7.91	0.50	2.8	52.5	188.00	36	0.08	577.75	558.25	558.25	RCP	17.00
C9	C7	0.98	7.91	0.58	2.4	49.7	183.00	42	0.03	577.40	558.25	558.00	RCP	17.00
C7	C6	0.98	7.91	0.50	4.3	59.7	281.00	42	0.04	573.30	554.60	553.55	RCP	15.40
C6	C5	0.98	7.91	2.21	17.1	76.8	101.00	48	0.05	571.60	553.55	552.70	RCP	16.00
C4	C3	0.98	7.91	1.21	9.4	8.4	100.00	36	0.01	571.60	553.55	553.00	RCP	16.50
C3	C3-POND	0.98	7.91	1.26	9.8	89.9	83.00	48	0.00	571.55	547.50	547.00	RCP	20.00

N/F LAND OF
 CREG R. WHITEHEAD
 DEED BK-8049 PG-119
 PLAT BK-77 PG-105
 TAX PARCEL #6550000107
 USE: VACANT
 ZONING: (YORK COUNTY MUNICIPALITY)



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/10/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

Project: **PROJECT GEKKO**
 996 PARAGON WAY
 ROCK HILL, SOUTH CAROLINA

File: **GRADING PLAN**

File #: 13003-PB.dwg Date: 06/26/13 Project Egr: BTU
 Design By: FBL
 Drawn By: FBL
 Scale: 1" = 30'

8720 RED OAK BOULEVARD, SUITE 420
 CHARLOTTE, N.C. 28217
 PHONE (704) 527-3440 FAX (704) 527-8335

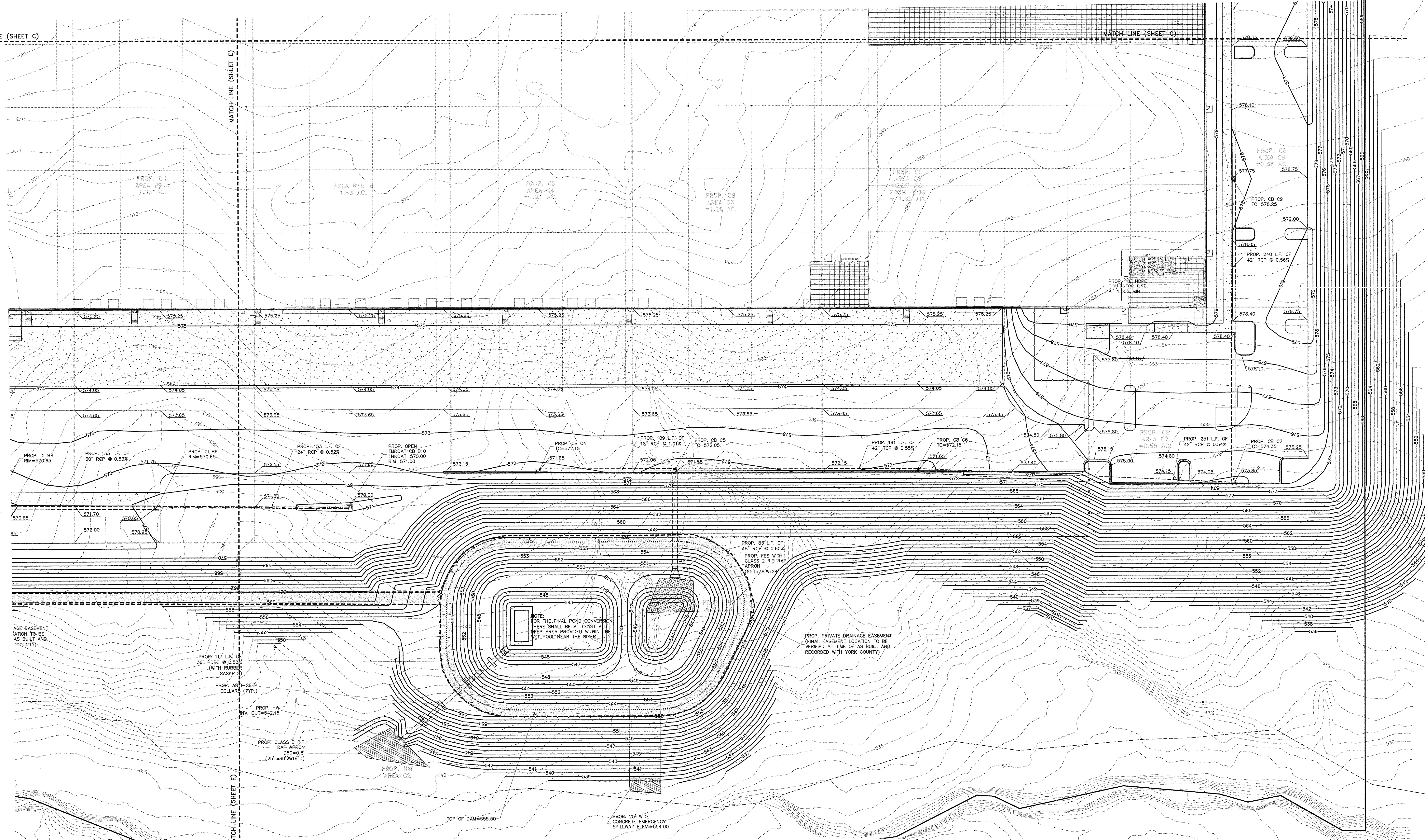
C3.OE

MATCH LINE (SHEET C)

MATCH LINE (SHEET C)

MATCH LINE (SHEET E)

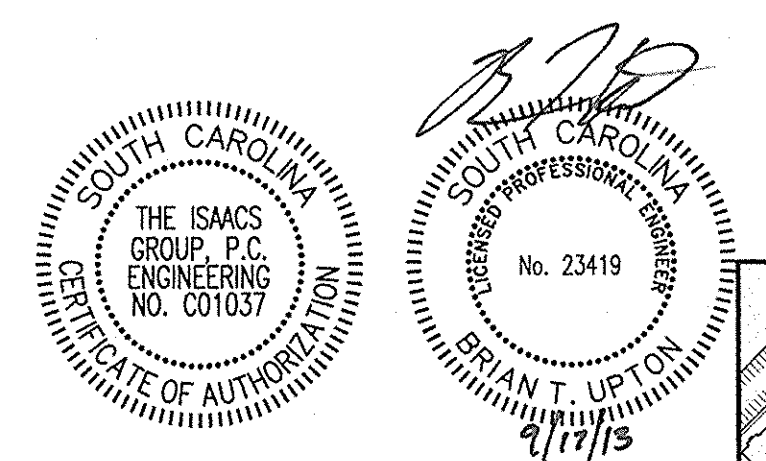
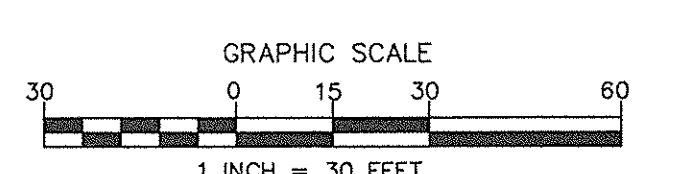
MATCH LINE (SHEET E)



NOTE:
FOR THE FINAL POND CONVERSION
HERE SHALL BE AT LEAST A 4'
SEEP AREA PROVIDED WITHIN THE
MET. POOL NEAR THE RISER

PROP. PRIVATE DRAINAGE EASEMENT
(FINAL EASEMENT LOCATION TO BE
VERIFIED AT TIME OF AS BUILT AND
CORRECTED WITH YORK COUNTY)

FROM	TO	TC	"T"	AREA TO INLET	25 YR. Q	CUMUL. Q	LENGTH	PIPE DIA.	SLOPE	RIM ELEV.	UPPER INV.	LOWER INV.	PIPE	COVER
A15	A15	0.95	7.91	1.2	0.02	0.02	134.00	24	0.32	572.55	566.00	565.30	RCP	1.50
A15	A14	0.95	7.91	1.2	0.02	0.03	134.00	24	0.36	572.50	565.30	564.35	RCP	1.50
A14	A13	0.95	7.91	1.2	0.02	0.05	134.00	30	0.32	572.55	565.30	564.35	RCP	1.50
A13	A12	0.95	7.91	1.18	0.07	0.12	134.00	36	0.32	572.55	565.30	564.15	RCP	1.50
A12	A11	0.95	7.91	1.18	0.07	0.19	134.00	36	0.32	572.55	565.30	563.45	RCP	1.50
A11	A10	0.95	7.91	1.21	0.09	0.28	132.00	42	0.33	572.55	565.45	561.75	RCP	0.60
A10	A9	0.95	7.91	1.21	0.09	0.37	132.00	42	0.37	572.55	565.75	561.05	RCP	0.30
A9	A8	0.95	7.91	1.26	0.07	0.44	134.00	42	0.32	572.55	565.05	560.35	RCP	0.00
A8	A7	0.95	7.91	1.33	0.09	0.43	135.00	48	0.32	572.50	565.35	559.65	RCP	0.30
A7	A6	0.95	7.91	1.46	0.02	0.06	204.00	48	0.31	572.50	565.65	558.15	RCP	0.30
A6	A5	0.95	7.91	2.53	19.01	112.07	635.00	48	0.55	573.50	558.15	554.65	RCP	11.35
A5	A4	0.95	7.91	1.46	0.02	0.09	225.00	54	0.51	565.50	558.65	553.00	RCP	1.35
B10	B9	0.95	7.91	1.46	0.07	0.07	153.00	36	0.32	570.00	560.45	558.85	RCP	7.35
B9	B8	0.95	7.91	1.38	0.08	0.14	133.00	36	0.33	570.00	560.75	558.25	RCP	1.35
B8	B7	0.98	7.91	1.32	0.23	0.15	136.00	30	0.55	570.00	559.25	558.50	RCP	0.90
B7	B6	0.98	7.91	1.32	0.23	0.18	136.00	36	0.51	570.00	559.80	557.80	RCP	0.15
B6	B5	0.98	7.91	1.32	0.23	0.24	136.00	36	0.59	570.00	559.00	557.00	RCP	0.60
B5	B4	0.98	7.91	1.32	0.23	0.27	136.00	42	0.51	570.00	559.00	556.30	RCP	10.15
B4	B3	0.98	7.91	1.32	0.23	0.29	136.00	42	0.51	570.00	559.35	555.60	RCP	10.65
B3	B2	0.98	7.91	1.32	0.23	0.27	136.00	42	0.63	570.00	558.60	554.75	RCP	11.35
B2	B1	0.98	7.91	1.32	0.23	0.29	136.00	42	0.51	570.00	558.75	555.85	RCP	11.15
A4	A3	0.95	7.91	3.14	24.34	260.20	96.00	66	0.32	569.10	553.50	553.00	RCP	10.15
C15	C14	0.95	7.91	1.17	0.8	0.8	134.00	24	0.60	572.55	563.00	562.20	RCP	7.55
C14	C13	0.95	7.91	1.18	0.9	1.77	134.00	24	0.60	572.55	562.20	561.40	RCP	8.25
C13	C12B	0.95	7.91	1.27	11.0	20.7	90.00	30	0.38	572.55	561.40	560.85	RCP	0.60
C12B	C12A	0.95	7.91	0.48	3.6	23.3	137.00	30	0.82	572.55	560.85	560.00	RCP	0.3
C12A	C11	0.95	7.91	1.01	0.6	42.4	106.00	36	0.56	578.65	561.00	559.40	RCP	15.00
C11	C10	0.95	7.91	0.92	0.9	47.3	115.00	36	0.81	578.05	559.40	558.70	RCP	15.65
C10B	C08A	0.98	7.91	0.31	2.4	49.7	183.00	36	0.63	577.40	558.70	557.55	RCP	15.75
C10A	C9	0.98	7.91	0.36	2.6	53.5	188.00	36	0.66	577.75	558.25	557.20	RCP	17.25
C9	C7	0.98	7.91	0.29	2.9	58.4	240.00	42	0.56	577.75	558.25	554.90	RCP	18.40
C7	C6	0.98	7.91	0.26	4.3	59.1	251.00	42	0.54	573.65	558.95	555.55	RCP	18.40
C6	C5	0.98	7.91	0.21	17.1	78.8	191.00	42	0.55	571.85	558.55	552.50	RCP	14.6
C5	C4	0.98	7.91	0.21	9.4	8.4	109.00	36	0.61	571.85	558.55	552.50	RCP	15.50
C4	C3	0.98	7.91	0.21	9.6	8.6	83.00	48	0.60	571.85	558.50	547.00	RCP	20.05



Project: **PROJECT GEKKO**
956 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

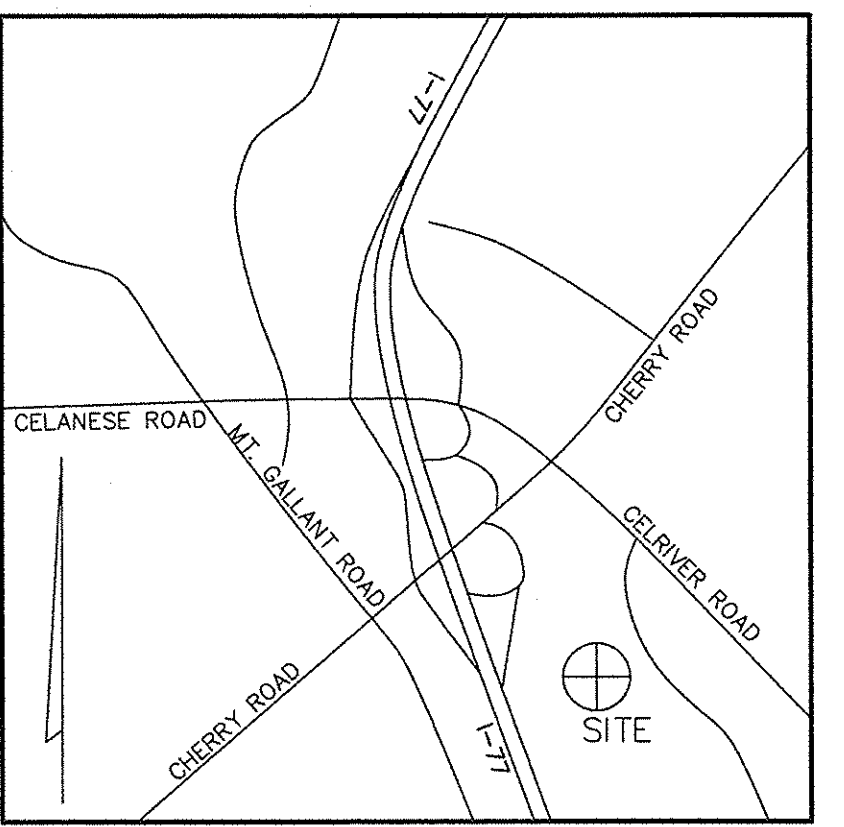
Title: **GRADING PLAN**

File #: 13020-PB.dwg Date: 06/26/13 Project Egn: BTU
Design By: FBL
Drawn By: FBL
Scale: 1" = 30'

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

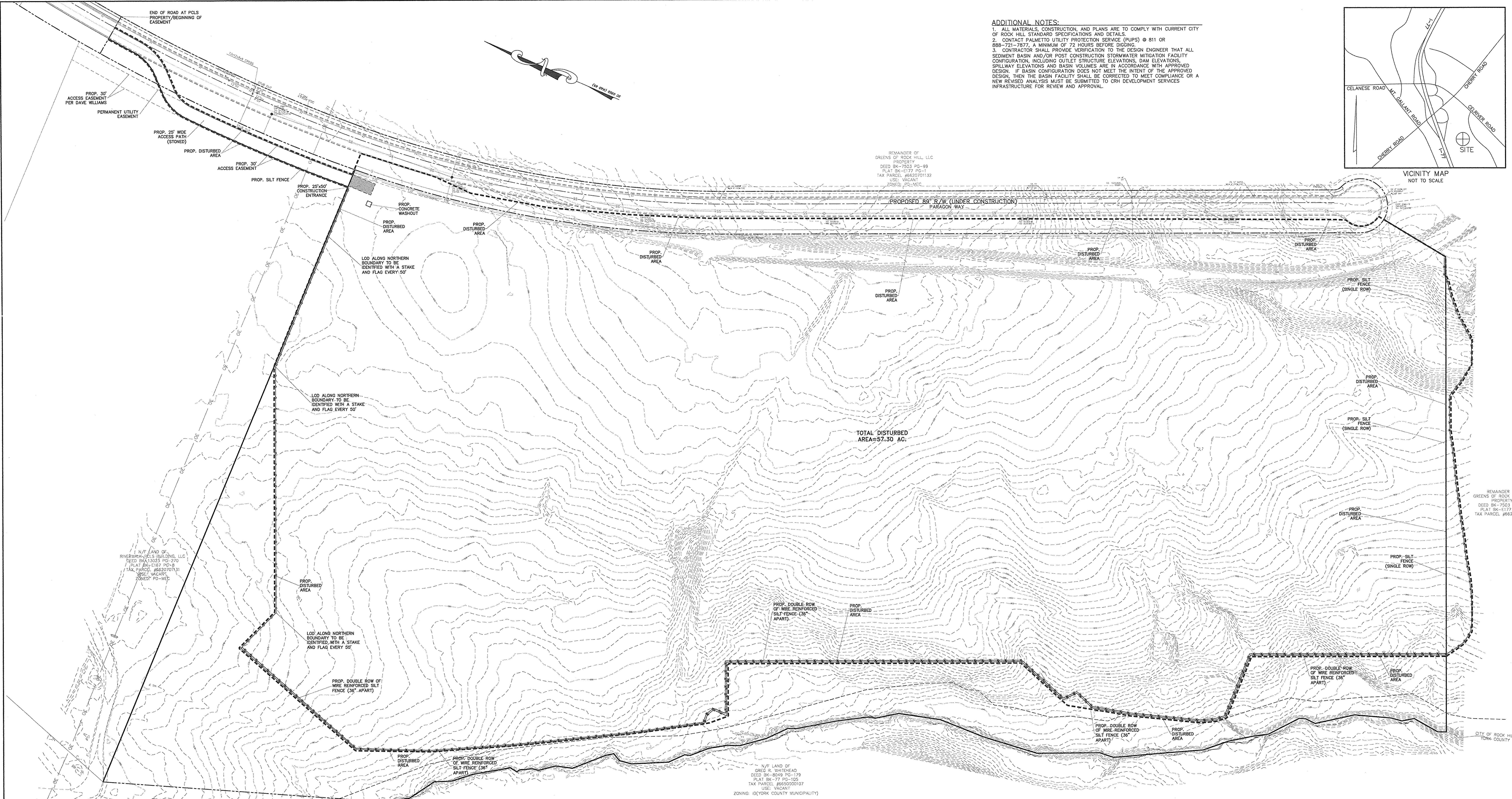
ISAACS
ENGINEERS
INC.

C3.0F



VICINITY MAP
NOT TO SCALE

- ADDITIONAL NOTES:**
1. ALL MATERIALS, CONSTRUCTION, AND PLANS ARE TO COMPLY WITH CURRENT CITY OF ROCK HILL STANDARD SPECIFICATIONS AND DETAILS.
 2. CONTACT PALMETTO UTILITY PROTECTION SERVICE (PUPS) @ 811 OR 888-721-7877, A MINIMUM OF 72 HOURS BEFORE DIGGING.
 3. CONTRACTOR SHALL PROVIDE VERIFICATION TO THE DESIGN ENGINEER THAT ALL SEDIMENT BASIN AND/OR POST CONSTRUCTION STORMWATER MITIGATION FACILITY CONFIGURATION, INCLUDING OUTLET STRUCTURE ELEVATIONS, DAM ELEVATIONS, SPILLWAY ELEVATIONS AND BASIN VOLUMES ARE IN ACCORDANCE WITH APPROVED DESIGN. IF BASIN CONFIGURATION DOES NOT MEET THE INTENT OF THE APPROVED DESIGN, THEN THE BASIN FACILITY SHALL BE CORRECTED TO MEET COMPLIANCE OR A NEW REVISED ANALYSIS MUST BE SUBMITTED TO CRH DEVELOPMENT SERVICES INFRASTRUCTURE FOR REVIEW AND APPROVAL.



TOTAL DISTURBED AREA=57.30 AC.

ROCK HILL STANDARD NOTES:

1. ALL MATERIALS, CONSTRUCTION, AND PLANS ARE TO COMPLY WITH CURRENT CITY OF ROCK HILL STANDARD SPECIFICATIONS AND DETAILS.
2. CONTACT PALMETTO UTILITY PROTECTION SERVICE (PUPS) @ 811 OR 888-721-7877, A MINIMUM OF 72 HOURS BEFORE DIGGING.
3. CONTRACTOR SHALL PROVIDE VERIFICATION TO THE DESIGN ENGINEER THAT ALL SEDIMENT BASIN AND/OR POST CONSTRUCTION STORMWATER MITIGATION FACILITY CONFIGURATION, INCLUDING OUTLET STRUCTURE ELEVATIONS, DAM ELEVATIONS, SPILLWAY ELEVATIONS, AND BASIN VOLUMES ARE IN ACCORDANCE WITH APPROVED DESIGN. IF BASIN CONFIGURATIONS DOES NOT MEET THE INTENT OF THE APPROVED DESIGN, THEN THE BASIN FACILITY SHALL BE CORRECTED TO MEET COMPLIANCE OR A NEW REVISED ANALYSIS MUST BE SUBMITTED TO CRH DEVELOPMENT SERVICES INFRASTRUCTURE FOR REVIEW AND APPROVAL.
4. I HAVE PLACED MY SIGNATURE AND SEAL ON THE DESIGN DOCUMENTS SUBMITTED SIGNIFYING THAT I ACCEPT RESPONSIBILITY FOR THE DESIGN OF THE SYSTEM. FURTHER, I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE DESIGN IS CONSISTENT WITH THE REQUIREMENTS OF TITLE 48, CHAPTER 14 OF THE CODE OF LAWS OF SC, 1976 AS AMENDED, PURSUANT TO REGULATION 72-300 ET SEQ. AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF SCRI00000.

CONSTRUCTION SEQUENCE (TREE REMOVAL PHASE)

1. ANTICIPATED START DATE IS JUNE 2013.
2. OBTAIN LAND DISTURBANCE PERMIT THROUGH ROCK HILL AND SCDEHC. FAILURE TO SCHEDULE AN ON-SITE MEETING WITH ROCK HILL 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION AND IS SUBJECT TO FINE. THE PRE-CONSTRUCTION MEETING MUST INVOLVE ALL PARTIES CONCERNED WITH THE PROJECT FOR AREAS DISTURBING 10 ACRES AND NON-LINEAR OR MORE.
3. NOTIFY CITY ROCK HILL ENGINEERING OFFICE 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITIES.
4. CLEARING AND GRUBBING ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS (E.G., SILT FENCE AND CONSTRUCTION ENTRANCE).
5. INSTALL SILT FENCE AND CONSTRUCTION ENTRANCES FOR PERIMETER EROSION CONTROL. GRADE ONLY AS NECESSARY FOR INSTALLATION OF THESE DEVICES.
6. CONTACT CITY OF ROCK HILL FOR APPROVAL OF SILT FENCE INSTALLATION. TREE CUTTING CANNOT PROCEED UNTIL THE CITY OF ROCK HILL APPROVES THE INSTALLATION OF THE SILT FENCE.
7. CUTTING OF TREES IS ALLOWED AFTER THE PERIMETER SILT FENCE IS APPROVED. NEITHER STUMP REMOVAL OR GRADING BEYOND WHAT IS NEEDED FOR SILT FENCE INSTALLATION AND A SMALL AREA NEAR PARAGON FOR A GROUND-BREAKING CEREMONY CAN PROCEED UNTIL THE SEDIMENT BASINS ARE APPROVED, INSTALLED, AND ACCEPTED BY THE CITY.
8. TEMPORARY STABILIZATION MUST OCCUR IMMEDIATELY FOR ALL AREAS THAT WILL GO UNDISTURBED FOR MORE THAN 14 DAYS.
9. THIS PLAN IS ONLY TO ALLOW FOR TREE REMOVAL. A SEPARATE PLAN WILL BE SUBMITTED FOR THE NEXT PHASE OF EROSION CONTROL MEASURES.

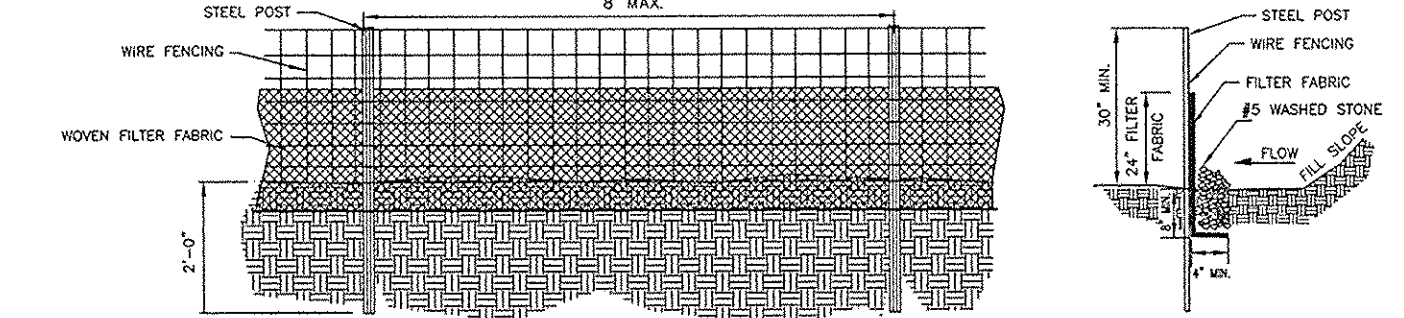
- LEGEND**
- - - - - EXISTING CONTOUR
 - LIMITS OF DISTURBANCE
 - PROPOSED SILT FENCE

CITY OF ROCK HILL/SCDEHC STANDARD NOTES:

1. IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS. IN ADDITION TO HYDROSEEDING, IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FORTY (40) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
3. WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
4. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
5. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE A CALENDAR EVERY WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY OR INCORRECTLY, THE PERMITEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
6. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
7. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
8. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAYS FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
9. RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOTS.
10. CONSTRUCTION, INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C. REG. 72-300 ET SEQ. AND SCRI00000.
11. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
12. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CANT BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
13. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
14. A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
15. REVISED DECEMBER 2012 12
16. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.

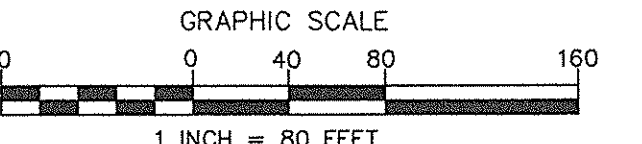
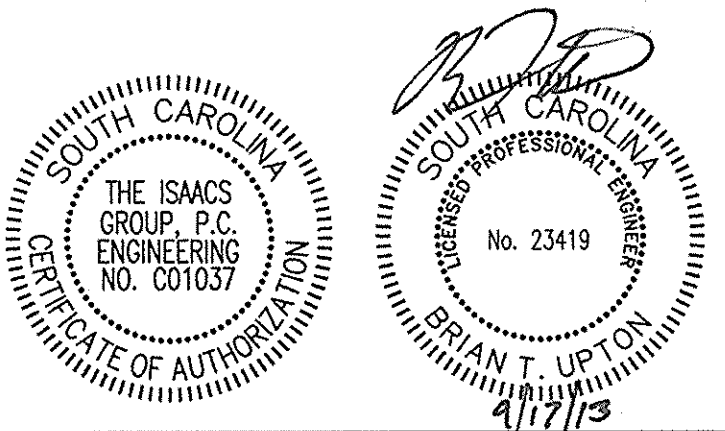
SCDEHC STANDARD NOTES (CONTINUED):

13. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING. WHEEL WASH WATER AND OTHER WASH WATERS, WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPs (SEDIMENT BASIN, FILTER BAG, ETC.).
16. THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
17. WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
18. COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
19. FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
20. SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
21. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
22. IF EXISTING BMPs NEED TO BE MODIFIED OR IF ADDITIONAL BMPs ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPs MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
23. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE. THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.



- GENERAL NOTES:**
1. WIRE FENCING SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
 2. WOVEN FILTER FABRIC BE USED WHERE SILT FENCE IS TO REMAIN FOR A PERIOD OF MORE THAN 90 DAYS.
 3. STEEL POSTS SHALL BE 6"-Ø IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
 4. WIRE FENCING SHALL BE AT LEAST #10 GAGE WITH A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
 5. TURN SILT FENCE UP SLOPE AT END.
 6. WIRE WHEN SHALL BE MIN. 13 GAGE WITH MAXIMUM 12" OPENINGS.
 7. WIRE AND WASHED STONE IS REQUIRED TO BE SHOWN ON PLANS AT THE TOE OF SLOPES GREATER THAN 10 FEET VERTICAL H:1 HORIZONTAL.
 8. DRAINAGE AREA CAN NOT BE GREATER THAN 1/4 ACRE PER 100 FT. OF FENCE.
 9. DO NOT INSTALL SEDIMENT FENCE ACROSS STREAMS, DITCHES, WATERWAYS OR OTHER AREAS OF CONCENTRATED FLOW.
- MAINTENANCE NOTES:**
1. FILTER FABRIC SHOULD BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY TO THE PROJECT IMMEDIATELY AFTER EACH STORMWATER EVENT AND AT LEAST ONCE DURING PROLONGED PERIODS OF HIGH FLOW. ANY DAMAGE TO THE FABRIC SHOULD BE REPAIRED IMMEDIATELY.
 2. SHOULD THE FABRIC DISINTEGRATE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER SILT IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
 3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS REMOVED SHALL BE DRESSED TO CONFORM TO THE DRAINAGE GRADE, PROMOTED AND RESEED.

HIGH HAZARD SILT FENCE



NO.	BY	DATE	REVISION
1	FBL	06/13/13	PER CITY COMMENTS
2	FBL	06/18/13	PER ACCESS CHANGE
3	CBH	06/26/13	FOR FULL SUBMITTAL
4	FBL	06/02/13	PER CITY COMMENTS
5	FBL	09/10/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

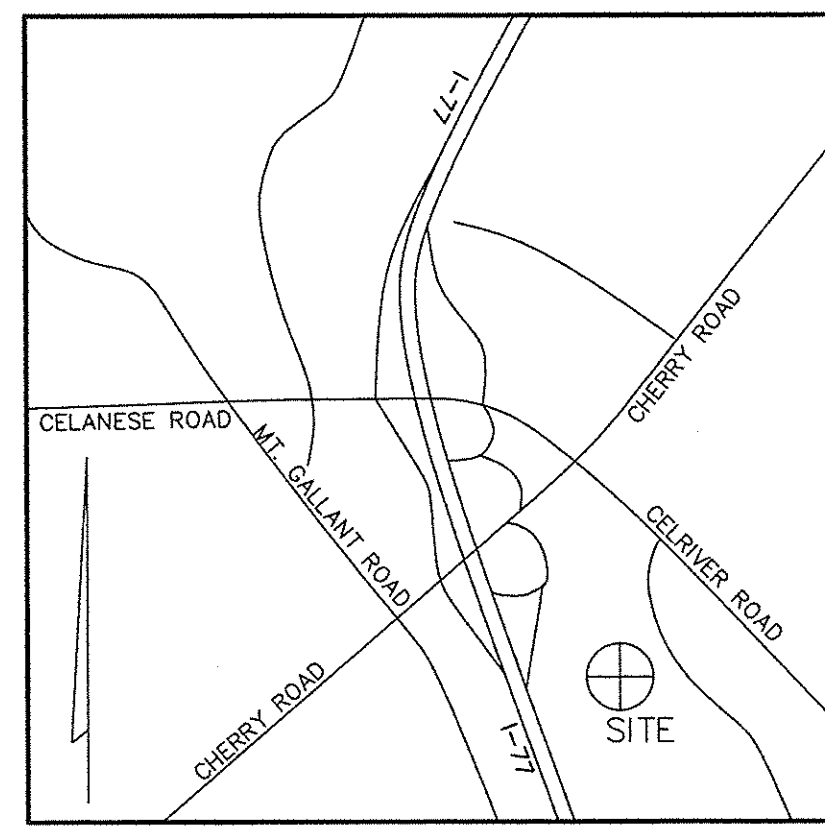
PROJECT GEKKO
956 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

**EROSION CONTROL - PH.1
LOD STAKING AND SILT FENCE**

File # 13020-PB.dwg Date: 05/01/13 Project: GEKKO
Design By: FBL
Drawn By: FBL
Scale: 1"=80'

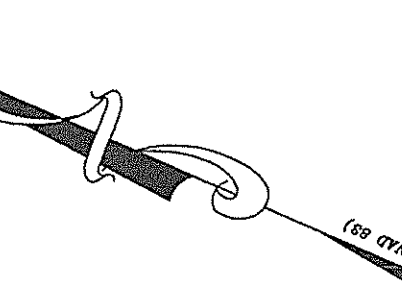
8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C4.0



NOTE:
SEE SHEET C4.0 FOR ACCESS TO PARAGON WAY

REMAINDER OF
GREENS OF ROCK HILL, LLC
PROPERTY
DEED BK-7263 PG-99
PLAT BK-1177 PG-1
TAX PARCEL #682070132
USE: VACANT
ZONED: PD-MFC



PROP. SILT FENCE
PROP. 25'x50' CONSTRUCTION ENTRANCE
PROP. CONCRETE WASHOUT
PROP. DISTURBED AREA
PROP. SEDIMENT BASIN 1 DRAINAGE AREA
LOD ALONG NORTHERN BOUNDARY TO BE IDENTIFIED WITH A STAKE AND FLAG EVERY 50'

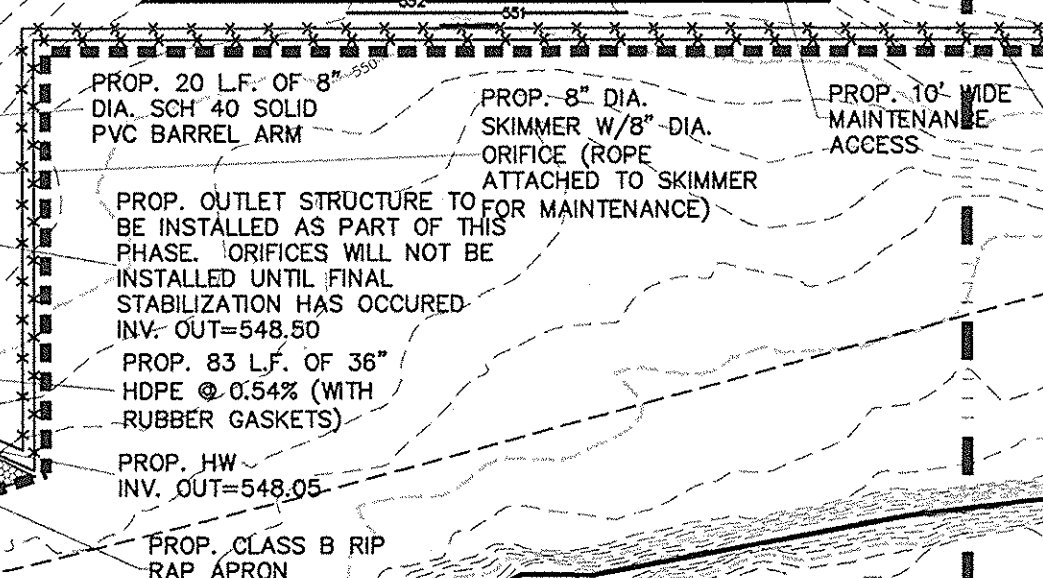
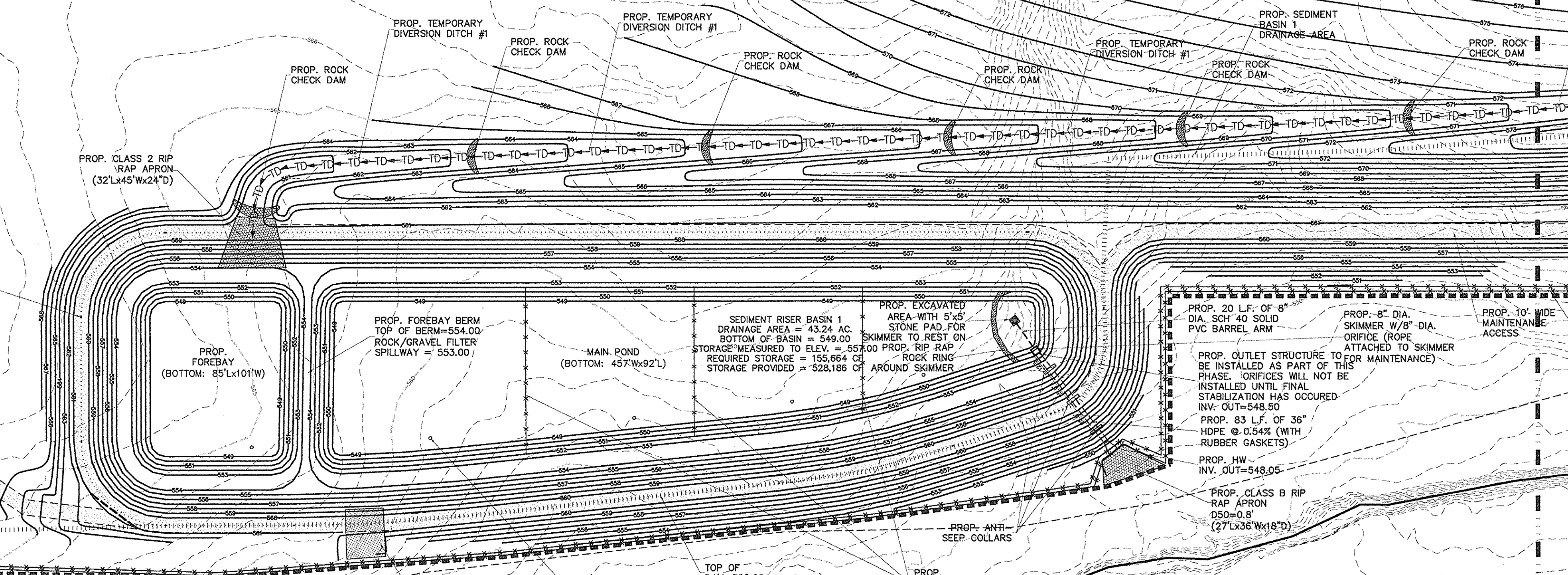
PROP. 10' WIDE MAINTENANCE ACCESS
LOD ALONG NORTHERN BOUNDARY TO BE IDENTIFIED WITH A STAKE AND FLAG EVERY 50' FUTURE EXPANSION

TOTAL DISTURBED AREA = 57.30 AC.
SEDIMENT BASIN 1 DRAINAGE AREA (BASED ON FINAL DRAINAGE AREA) = 43.24 AC.
INITIAL DRAINAGE AREA = 39.95 AC.
TEMPORARY DIVERSION DITCH #1 AREA = 23.43 AC.

PROP. SEDIMENT BASIN 1 DRAINAGE AREA
LOD ALONG NORTHERN BOUNDARY TO BE IDENTIFIED WITH A STAKE AND FLAG EVERY 50'

PROP. TOP OF BASIN CENTERLINE (668'x182'W)
PROP. 10' WIDE MAINTENANCE ACCESS

NOTE:
CONSTRUCTION ENTRANCE PREVIOUSLY PROVIDED OFF OF CORPORATE BLVD. MUST BE REMOVED. ALL DISTURBANCE ASSOCIATED WITH THIS ACCESS MUST BE PERMANENTLY STABILIZED



- SCDHEC STANDARD NOTES:**
- IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS. IN ADDITION TO HYDROSEEDING, IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
 - STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
 - WHERE STABILIZATION BY THE 14TH DAY IS PRECIPITATED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
 - WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
 - ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED EVERY SEVEN DAYS AND WITHIN 24 HOURS AFTER EACH RAINFALL OCCURRENCE THAT EXCEEDS ONE-HALF INCH. IF SITE INSPECTIONS OR OTHER INFORMATION INDICATES THAT DEVICES ARE DAMAGED, INAPPROPRIATELY OR INCORRECTLY INSTALLED, OR NOT OPERATING EFFECTIVELY, THEN MAINTENANCE MUST BE PERFORMED AS SOON AS PRACTICABLE, OR AS REASONABLY POSSIBLE AND NO LESS THAN 48 HOURS FROM THE TIME OF IDENTIFICATION (PREFERABLY BEFORE THE NEXT STORM EVENT).
 - PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION IS COMPLETE AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
 - ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL MEASURES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
 - THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVED AREAS AS MAY BE REQUIRED.
 - RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C. REG. 72-300 ET SEQ. AND SCD100000.
 - TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTS.
 - ALL WATERS OF THE STATE (WOS) OR WOLDS, INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CANT BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS AND A 130-FOOT MINIMUM BUFFER FOR WOLDS. A 25-FOOT NO DISTURBANCE ZONE SHALL BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS AND A MINIMUM 50-FOOT DISTURBANCE FOR WOLDS. BUFFERS AND NO DISTURBANCE ZONES SHALL BE MEASURED FROM TOP OF GREEN BANK.
 - LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
 - A COPY OF THE SWPPP, INSPECTION RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
 - INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
 - MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE AND STOCKPILE TOPSOIL FOR REUSE.
 - THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
-WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FROM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS, FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE AND SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
-WATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FROM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS.
-FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE AND SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
-ALL CHEMICAL SPILLS, OIL SPILLS, OR FISH KILLS MUST BE REPORTED TO SCDHEC LAND AND WASTE MANAGEMENT EMERGENCY RESPONSES.
-CALL THE 24-HOUR EMERGENCY RESPONSE LINE AT 1-888-481-0125.
 - TEMPORARY TOILET FACILITIES SHALL BE PROVIDED FOR ALL CONSTRUCTION WORKERS AND SITE VISITORS IN ACCORDANCE WITH 2008 INTERNATIONAL PLUMBING CODE GENERAL REGULATIONS, SECTION 311. PORTABLE FACILITIES SHALL BE PLACED ON LEVEL GROUND AND AWAY FROM STORM DRAINAGE SYSTEMS (DITCHES, CATCH BASINS, ETC.). DISPOSAL AND HANDLING OF SANITARY WASTE MUST COMPLY WITH SCDHEC REQUIREMENTS.
 - FINAL GRADES FOR GRASSED AND LANDSCAPED AREAS SHALL REQUIRE A MINIMUM OF 4-6" OF CLEAN TOP SOIL, FREE OF DEBRIS AND CONTAMINANTS, AND PREFERABLY OF NATIVE ORIGIN.

CONSTRUCTION SEQUENCE (TREE REMOVAL - PHASE 1)

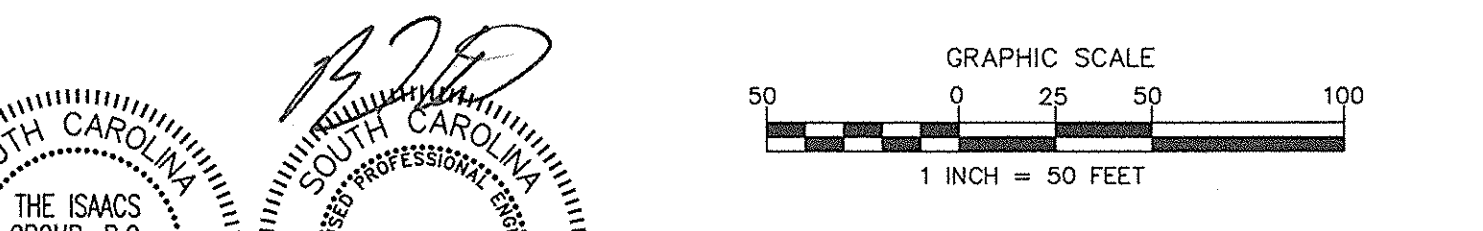
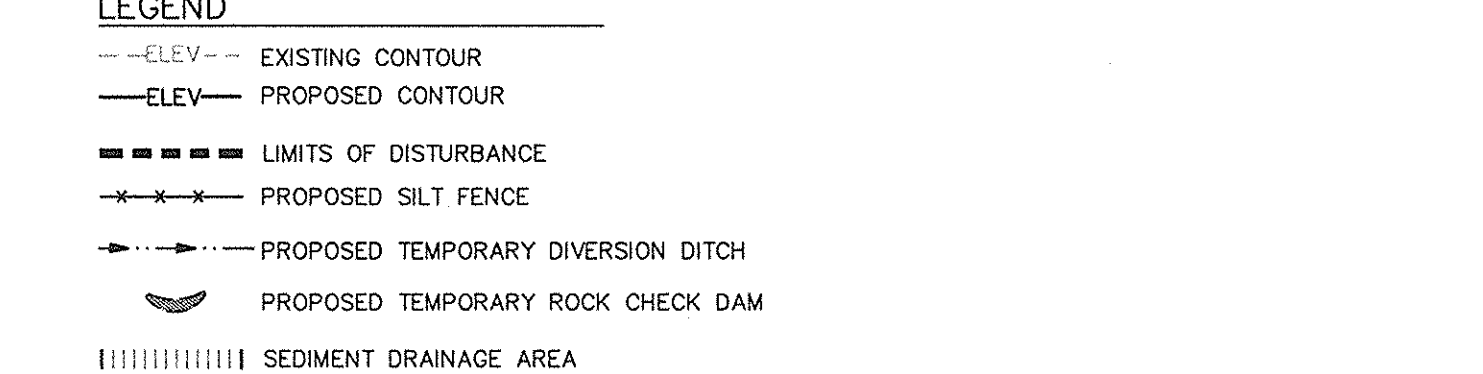
- ANTICIPATED START DATE IS JUNE 2013.
- OBTAIN LAND DISTURBANCE PERMIT THROUGH ROCK HILL AND SCDHEC. FAILURE TO SCHEDULE AN ON-SITE MEETING WITH ROCK HILL 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION AND IS SUBJECT TO FINE. THE PRE-CONSTRUCTION MEETING MUST INVOLVE ALL PARTIES CONCERNED WITH THE PROJECT FOR AREAS DISTURBING 10 ACRES AND NON-LINEAR OR MORE.
- NOTIFY CITY OF ROCK HILL ENGINEERING OFFICE 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITIES. ALL CONSTRUCTION WORKERS AND SITE VISITORS IN ACCORDANCE WITH 2008 INTERNATIONAL PLUMBING CODE GENERAL REGULATIONS, SECTION 311. PORTABLE FACILITIES SHALL BE PLACED ON LEVEL GROUND AND AWAY FROM STORM DRAINAGE SYSTEMS (DITCHES, CATCH BASINS, ETC.). DISPOSAL AND HANDLING OF SANITARY WASTE MUST COMPLY WITH SCDHEC REQUIREMENTS.
- CLEARING AND GRUBBING ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS (E.G., SILT FENCE AND CONSTRUCTION ENTRANCE).
- INSTALL SILT FENCE AND CONSTRUCTION ENTRANCES FOR PERIMETER EROSION CONTROL. GRADE ONLY AS NECESSARY FOR INSTALLATION OF THESE DEVICES.
- CONTACT CITY OF ROCK HILL FOR APPROVAL OF SILT FENCE INSTALLATION. TREE CUTTING CANNOT PROCEED UNTIL THE CITY OF ROCK HILL APPROVES THE INSTALLATION OF THE SILT FENCE.
- CUTTING OF TREES IS ALLOWED AFTER THE PERIMETER SILT FENCE IS APPROVED. NEITHER STUMP REMOVAL OR GRADING BEYOND WHAT IS NEEDED FOR SILT FENCE INSTALLATION AND A SMALL AREA NEAR PARAGON FOR A GROUNDING CEREMONY CAN PROCEED UNTIL THE SEDIMENT BASINS ARE APPROVED, INSTALLED, AND ACCEPTED BY THE CITY.
- TEMPORARY STABILIZATION MUST OCCUR IMMEDIATELY FOR ALL AREAS THAT WILL GO UNDISTURBED FOR MORE THAN 14 DAYS.
- THIS PLAN IS ONLY TO ALLOW FOR TREE REMOVAL. A SEPARATE PLAN WILL BE SUBMITTED FOR THE NEXT PHASE OF EROSION CONTROL MEASURES.

CONSTRUCTION SEQUENCE (PHASE 2)

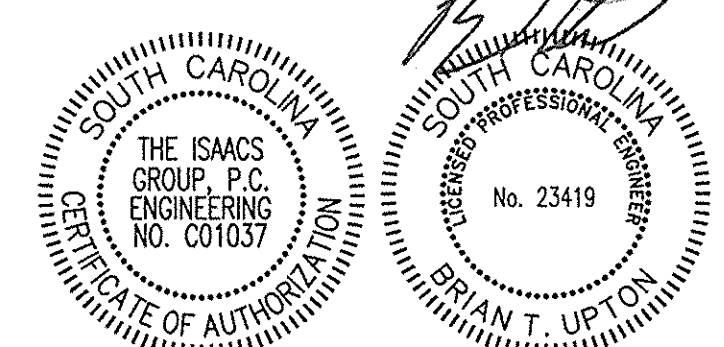
- INSTALL TEMPORARY SEDIMENT BASIN PER PLAN AND DETAILS (AREAS DRAINING TO BASINS CANNOT BE DISTURBED UNTIL THE BASIN AND TRAPS ARE INSTALLED).
- INSTALL TEMPORARY DIVERSION DITCHES, SLOPE DRAINS AND ROCK CHECK DAMS. GRADE ONLY AS NECESSARY FOR INSTALLATION OF THESE DEVICES.
- STRIP AND STOCKPILE TOPSOIL WHICH IS TO BE USED ON GREEN AREAS FOR PERMANENT STABILIZATION. ALL GREEN AREAS TO RECEIVE 4" TO 6" OF TOPSOIL PRIOR TO PERMANENT STABILIZATION.
- CLEAR AND GRADE SITE. MAINTAIN EROSION CONTROL DEVICES AS NECESSARY TO PREVENT OFF SITE SEDIMENTATION. ALL EROSION CONTROL DEVICES SHOULD BE INSPECTED AFTER EVERY RAINFALL EVENT TO ASSURE THEY ARE OPERATING PROPERLY.
- THIS PLAN DOES NOT INCLUDE FINE GRADING AND THE INSTALLATION OF STORM DRAINAGE. CONSTRUCTION BEYOND PHASE 1 WILL BE PERMITTED SEPARATELY.

EROSION CONTROL MATTING NOTES:

ALL SLOPES 3:1 OR STEEPER SHALL BE MATTED WITH NORTH AMERICAN GREEN 57S.



- ADDITIONAL NOTES:**
- ALL MATERIALS, CONSTRUCTION, AND PLANS ARE TO COMPLY WITH CURRENT CITY OF ROCK HILL STANDARD SPECIFICATIONS AND DETAILS.
 - CONTACT PALMETTO UTILITY PROTECTION SERVICE (PUPS) @ 811 OR 888-721-7877, A MINIMUM OF 72 HOURS BEFORE DIGGING.
 - CONTRACTOR SHALL PROVIDE VERIFICATION TO THE DESIGN ENGINEER THAT ALL SEDIMENT BASIN AND/OR POST CONSTRUCTION STORMWATER MITIGATION FACILITY CONFIGURATION, INCLUDING OUTLET STRUCTURE ELEVATIONS, DAM ELEVATIONS, SPILLWAY ELEVATIONS AND BASIN VOLUMES ARE IN ACCORDANCE WITH APPROVED DESIGN. IF BASIN CONFIGURATION DOES NOT MEET THE INTENT OF THE APPROVED DESIGN, THEN THE BASIN FACILITY SHALL BE CORRECTED TO MEET COMPLIANCE OR A NEW REVISED ANALYSIS MUST BE SUBMITTED TO CRH DEVELOPMENT SERVICES INFRASTRUCTURE FOR REVIEW AND APPROVAL.



PROJECT GEKKO
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

EROSION CONTROL-PH.2
CLEARING AND GRUBBING

File # 13008-PB.dwg Date: 05/01/13 Project Egr: BTU
Design By: FBL
Drawn By: FBL
Scale: 1"=50'

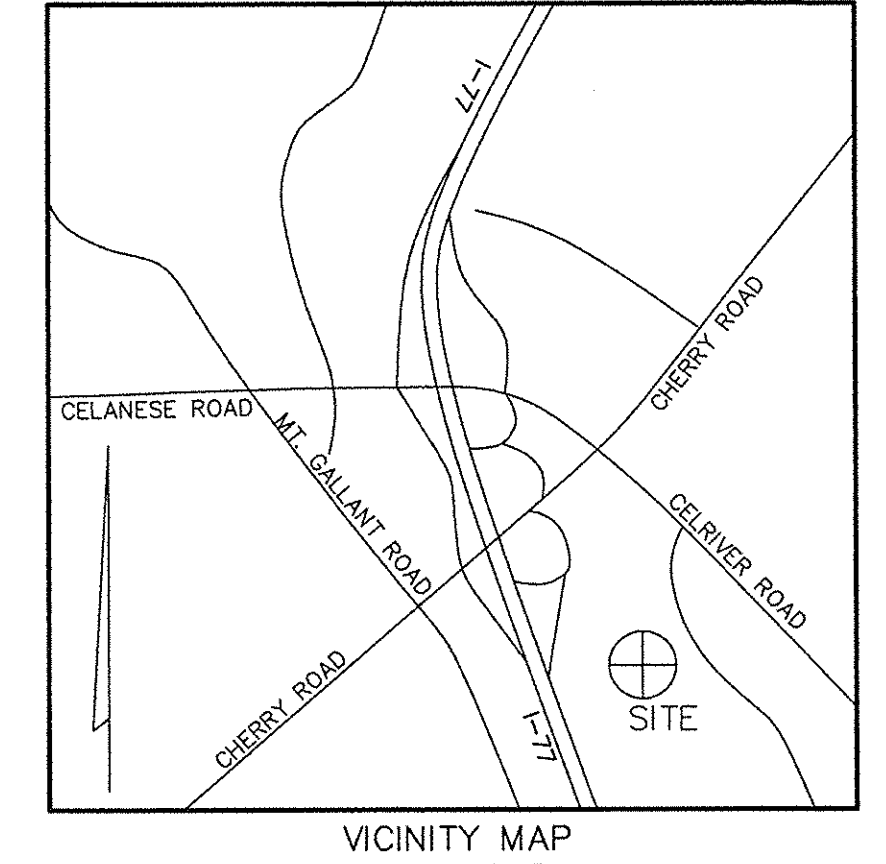
ISAACS
ENGINEERING, ARCHITECTURE AND LAND SURVEYING

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

MATCH LINE

REMAINDER OF GREENS OF ROCK HILL, LLC PROPERTY DEED BK-7553 PG-99 PLAT BK-E177 PG-1 TAX PARCEL #5820701132 USE: VACANT ZONED: PD-MEC

PROPOSED 89' R/W (UNDER CONSTRUCTION) PARAGON WAY



CONSTRUCTION SEQUENCE (TREE REMOVAL - PHASE 1)

- 1. ANTICIPATED START DATE IS JUNE 2013.
2. OBTAIN LAND DISTURBANCE PERMIT THROUGH ROCK HILL AND SCHEC.
3. FAILURE TO SCHEDULE AN ON-SITE MEETING WITH ROCK HILL 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION AND IS SUBJECT TO FINE.
4. NOTIFY CITY ROCK HILL ENGINEERING OFFICE 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITIES.
5. CLEARING AND GRUBBING ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS (E.G., SILT FENCE AND CONSTRUCTION ENTRANCE).
5A. INSTALL SILT FENCE AND CONSTRUCTION ENTRANCES FOR PERIMETER EROSION CONTROL. GRADE ONLY AS NECESSARY FOR INSTALLATION OF THESE DEVICES.
5B. CONTACT CITY OF ROCK HILL FOR APPROVAL OF SILT FENCE INSTALLATION. TREE CUTTING CANNOT PROCEED UNTIL THE CITY OF ROCK HILL APPROVES THE INSTALLATION OF THE SILT FENCE.
6. CUTTING OF TREES IS ALLOWED AFTER THE PERIMETER SILT FENCE IS APPROVED. NEITHER STUMP REMOVAL OR GRADING BEYOND WHAT IS NEEDED FOR SILT FENCE INSTALLATION AND A SMALL AREA NEAR PARAGON FOR A GROUNDBREAKING CEREMONY CAN PROCEED UNTIL THE SEDIMENT BASINS ARE APPROVED, INSTALLED, AND ACCEPTED BY THE CITY.
7. TEMPORARY STABILIZATION MUST OCCUR IMMEDIATELY FOR ALL AREAS THAT WILL GO UNDISTURBED FOR MORE THAN 14 DAYS.
8. THIS PLAN IS ONLY TO ALLOW FOR TREE REMOVAL. A SEPARATE PLAN WILL BE SUBMITTED FOR THE NEXT PHASE OF EROSION CONTROL MEASURES.

CONSTRUCTION SEQUENCE (PHASE 2)

- 1. INSTALL TEMPORARY SEDIMENT BASIN PER PLAN AND DETAILS (AREAS DRAINING TO BASINS CANNOT BE DISTURBED UNTIL THE BASIN AND TRAPS ARE INSTALLED.)
2. INSTALL TEMPORARY DIVERSION DITCHES, SLOPE DRAINS AND ROCK CHECK DAMS. GRADE ONLY AS NECESSARY FOR INSTALLATION OF THESE DEVICES.
3. STRIP AND STOCKPILE TOPSOIL WHICH IS TO BE USED ON GREEN AREAS FOR PERMANENT STABILIZATION. ALL GREEN AREAS TO RECEIVE 4" TO 6" OF TOPSOIL PRIOR TO PERMANENT STABILIZATION.
4. CLEAR AND GRADE SITE. MAINTAIN EROSION CONTROL DEVICES AS NECESSARY TO PREVENT OFF SITE SEDIMENTATION. ALL EROSION CONTROL DEVICES SHOULD BE INSPECTED AFTER EVERY RAINFALL EVENT TO ASSURE THEY ARE OPERATING PROPERLY.

CONSTRUCTION SEQUENCE (PHASE 3)

- 1. INSTALL STORM DRAINAGE AND UTILITIES. PLACE INLET PROTECTION AT STORM DRAINAGE.
2. CONTINUE TO MAINTAIN DIVERSION DITCHES AS NECESSARY AS SITE IS RAISED.
3. STABILIZED SITE AS AREAS ARE BROUGHT TO FINISHED GRADE.
4. FINAL GRADING, PAVING, AND STABILIZATION OF ALL DISTURBED AREAS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY AND PERMANENT SEEDING ON AN AS NEEDED BASIS TO COMPLY WITH ROCK HILL REQUIREMENTS AND ESTABLISH A FINAL GROUND COVER SUFFICIENT TO RESTRAIN EROSION AS DIRECTED BY ENGINEER AND/OR CITY INSPECTOR.
6. ONCE SITE IS COMPLETE STABILIZED CONVERT EROSION CONTROL BASINS TO PERMANENT PONDS. INSTALL ORIFICES AS SHOWN ON SHEET CS.2.
7. COORDINATE WITH EROSION CONTROL INSPECTOR PRIOR TO REMOVAL OF EROSION CONTROL MEASURES.
8. REMOVE EROSION CONTROL DEVICES.

NOTE: ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SCHEC AND CITY ROCK HILL DESIGN MANUALS.

EROSION CONTROL MATTING NOTE:

ALL SLOPES 3:1 OR STEEPER SHALL BE MATTED WITH NORTH AMERICAN GREEN S75.

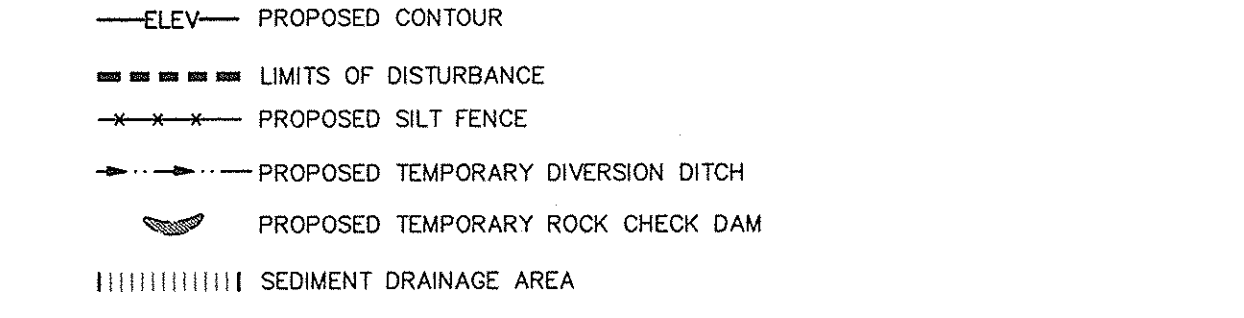
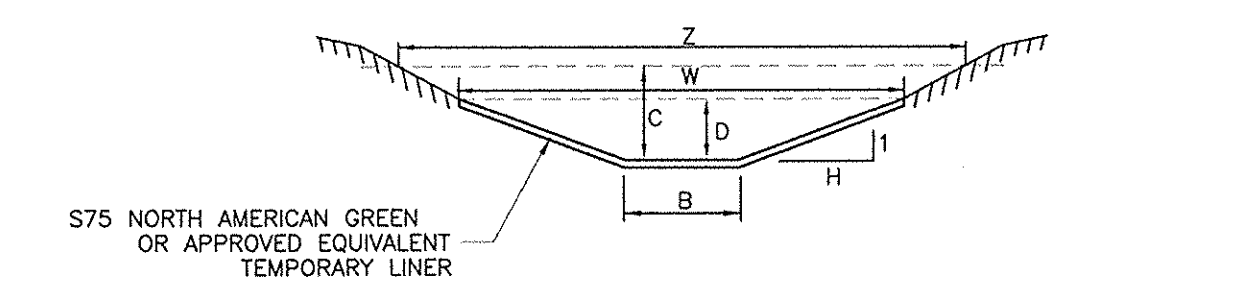


Table with columns SWALE, B, H, W, D, C, Z and rows 1, 2, & 3, 10', 3', 19', 18', 24', 22'. Includes definitions for B, H, W, D, C, Z.



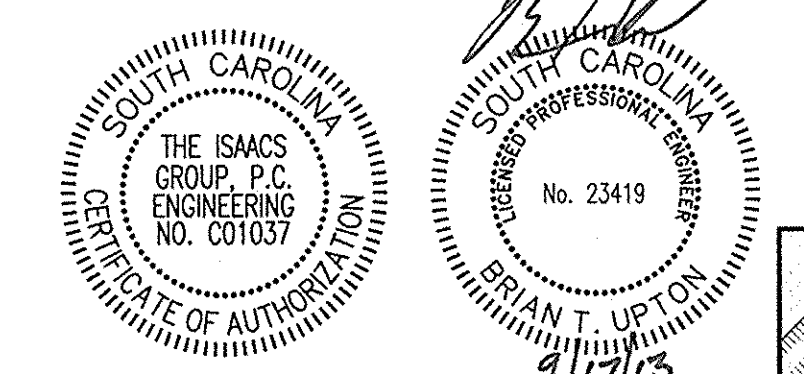
GRASSED SWALE NOTES:

- 1. EXCAVATE CHANNEL TO THE CROSS-SECTION SHOWN.
2. APPLY LIME, FERTILIZER AND SEED TO THE CHANNEL AND ADJOINING AREAS IN ACCORDANCE WITH THE SEEDING SCHEDULE.
3. START LAYING THE NET FROM THE TOP OF THE UPSTREAM END OF THE CHANNEL AND UNROLL IT DOWN THE GRADE. DO NOT STRETCH MATTING.
4. BUILD THE UPSLOPE END AND STAPLE THE NET EVERY 12" ACROSS THE TOP END. EVERY 3' AROUND THE EDGES AND ACROSS THE MAT SO THAT THE STRAW IS HELD CLOSELY AGAINST THE SOIL.
5. MATTING STRIPS SHOULD BE JOINED TOGETHER ALONG THE SIDES WITH A 3" OVERLAP AND STAPLED TOGETHER.
6. TO JOIN ENDS OF STRIPS, INSERT THE NEW ROLL OF NET IN A TRENCH AS WITH UPSLOPE END AND OVERLAP IT 18" WITH THE PREVIOUSLY LAID UPPER ROLL. TURN UNDER 6" OF THE 18" OVERLAP AND STAPLE EVERY 12" ACROSS THE END.

DIVERSION DITCH



GRAPHIC SCALE 1 INCH = 50 FEET

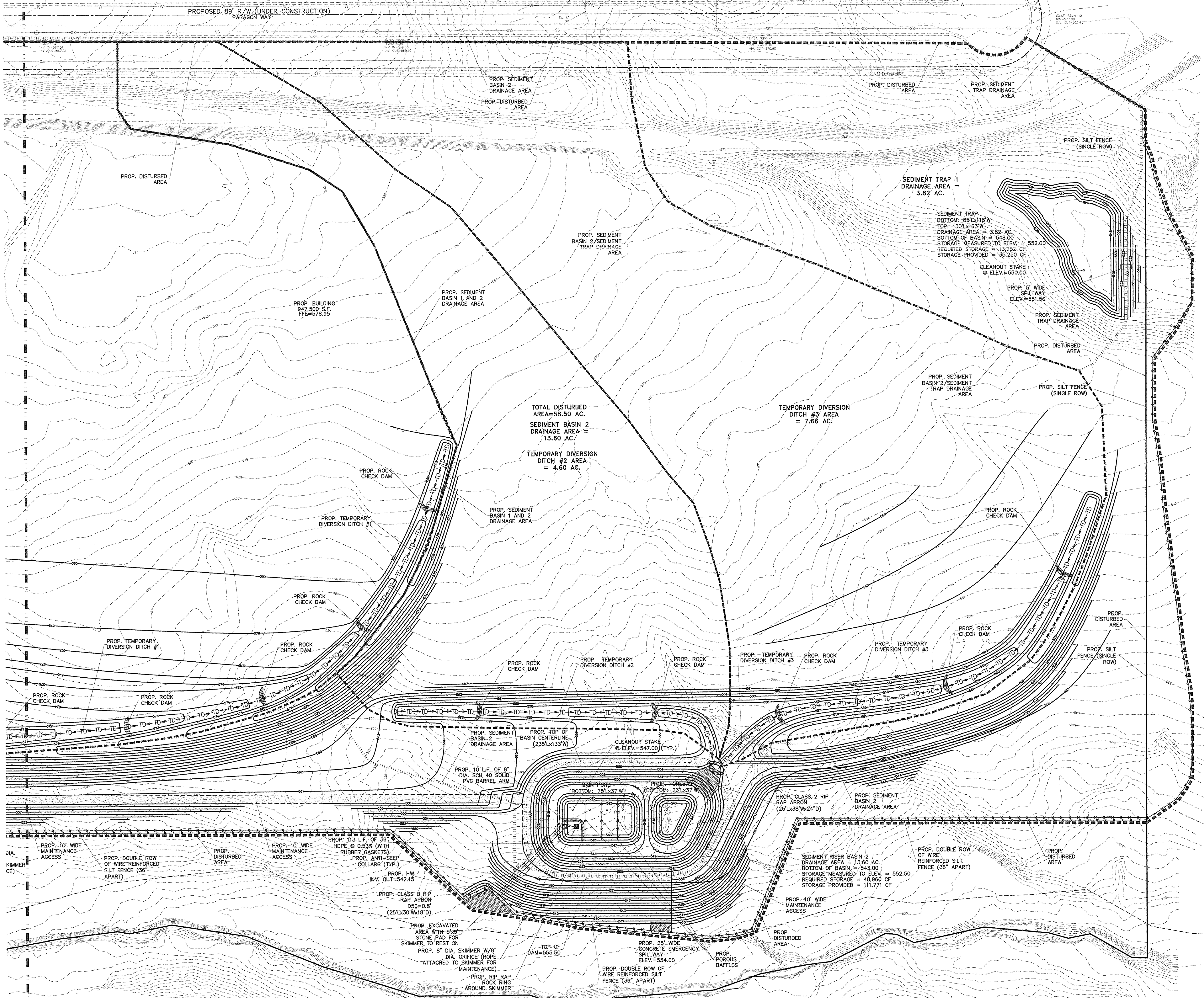


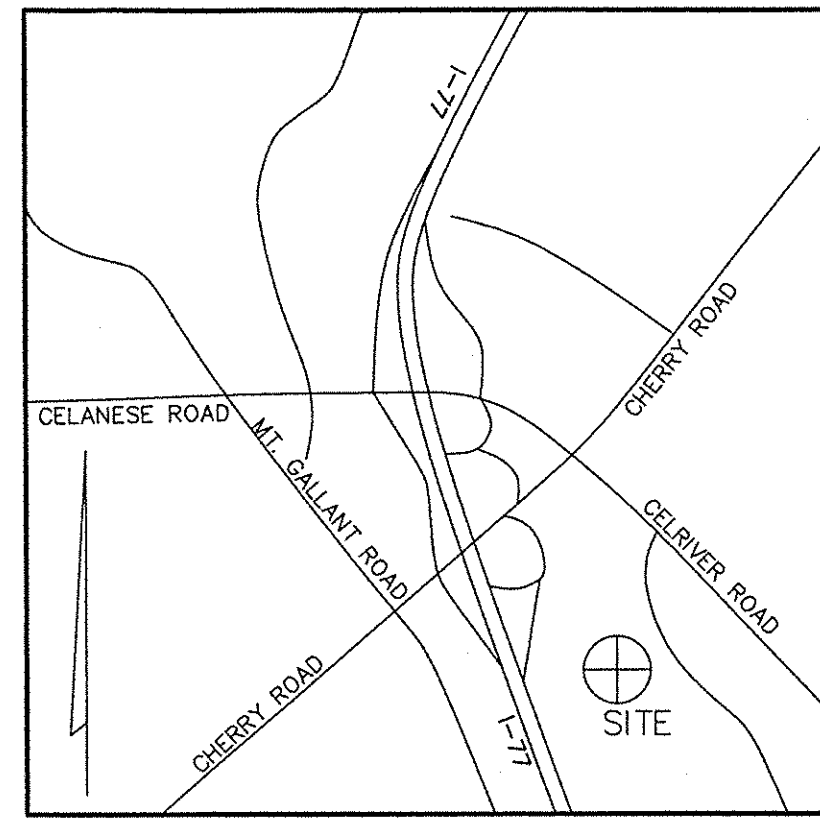
PROJECT GEKKO 996 PARAGON WAY ROCK HILL, SOUTH CAROLINA EROSION CONTROL-PH.2 CLEARING AND GRUBBING. Includes ISAACS logo and project details.

Table with columns NO., BY, DATE, REVISION. Lists revisions 1 through 6.

MATCH LINE

REMAINDER OF GREENS OF ROCK HILL PROPERTY DEED BK-7503 PG-104 PLAT BK-E177 PG-1 TAX PARCEL #5820701132 USE: VACANT ZONED: PD-MEC





VICINITY MAP
NOT TO SCALE

ADDITIONAL NOTES:

1. ALL MATERIALS, CONSTRUCTION, AND PLANS ARE TO COMPLY WITH CURRENT CITY OF ROCK HILL STANDARD SPECIFICATIONS AND DETAILS.
2. CONTACT PALMETTO UTILITY PROTECTION SERVICE (PUPS) @ 811 OR 888-721-7871, A MINIMUM OF 72 HOURS BEFORE DIGGING.
3. CONTRACTOR SHALL PROVIDE VERIFICATION TO THE DESIGN ENGINEER THAT ALL SEDIMENT BASIN AND/OR POST CONSTRUCTION STORMWATER MITIGATION FACILITY CONFIGURATION, INCLUDING OUTLET STRUCTURE ELEVATIONS, DAM ELEVATIONS, SPILLWAY ELEVATIONS AND BASIN VOLUMES ARE IN ACCORDANCE WITH APPROVED DESIGN. IF BASIN CONFIGURATION DOES NOT MEET THE INTENT OF THE APPROVED DESIGN, THEN THE BASIN FACILITY SHALL BE CORRECTED TO MEET COMPLIANCE OR A NEW REVISED ANALYSIS MUST BE SUBMITTED TO CRH DEVELOPMENT SERVICES INFRASTRUCTURE FOR REVIEW AND APPROVAL.

CONSTRUCTION SEQUENCE (TREE REMOVAL - PHASE 1)

1. ANTICIPATED START DATE IS JUNE 2013.
2. OBTAIN LAND DISTURBANCE PERMIT THROUGH ROCK HILL AND SCDCHEC. FAILURE TO SCHEDULE AN ON-SITE MEETING WITH ROCK HILL 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION AND IS SUBJECT TO FINE. THE PRE-CONSTRUCTION MEETING MUST INVOLVE ALL PARTIES CONCERNED WITH THE PROJECT FOR AREAS DISTURBING 10 ACRES AND NON-LINEAR OR MORE.
3. NOTIFY CITY ROCK HILL ENGINEERING OFFICE 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITIES.
4. CLEARING AND GRUBBING ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS (E.G., SILT FENCE AND CONSTRUCTION ENTRANCE).
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- 5B. CONTACT CITY OF ROCK HILL FOR APPROVAL OF SILT FENCE INSTALLATION. TREE CUTTING CANNOT PROCEED UNTIL THE CITY OF ROCK HILL APPROVES THE INSTALLATION OF THE SILT FENCE.
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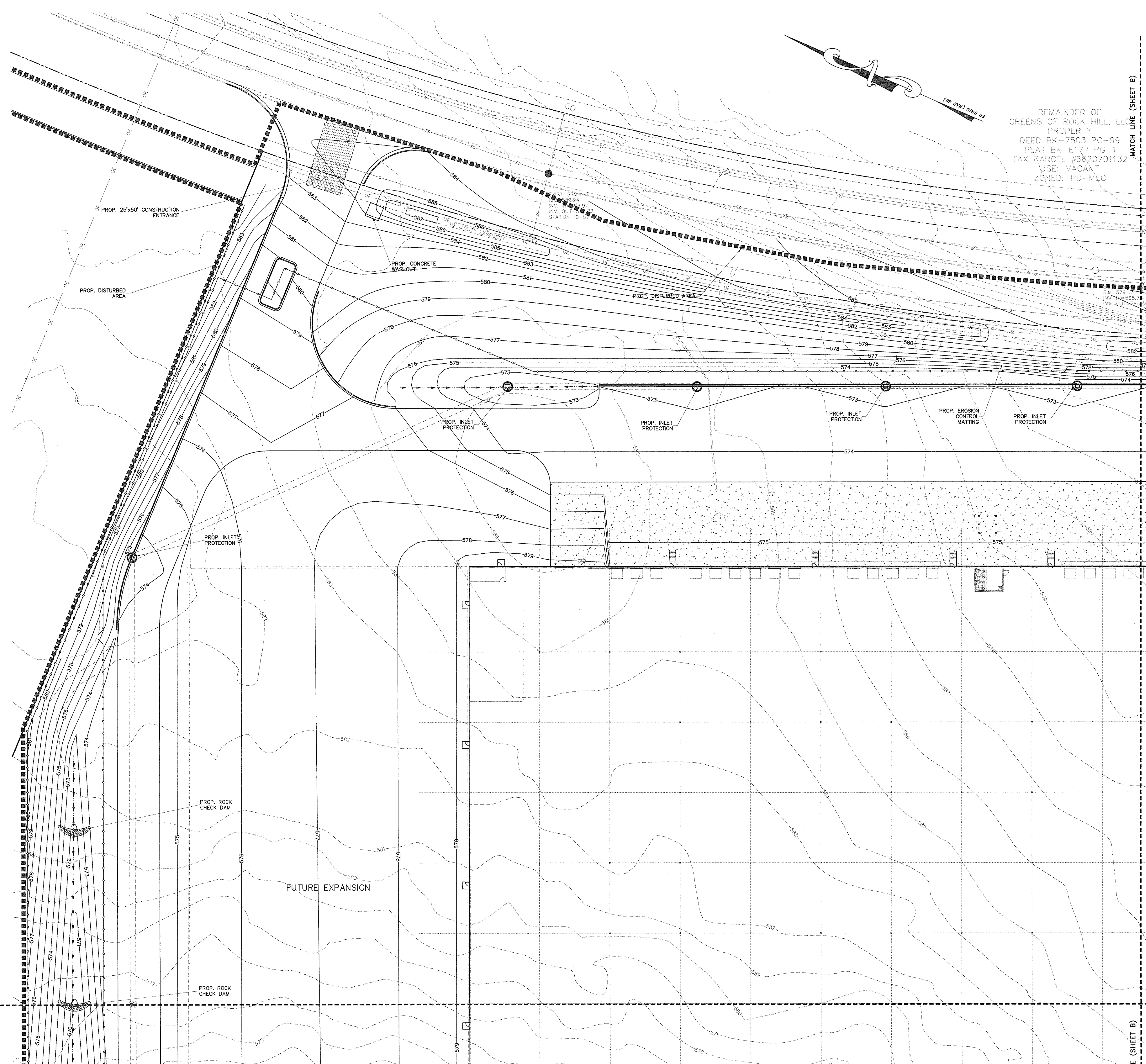
CONSTRUCTION SEQUENCE (PHASE 2)

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CONSTRUCTION SEQUENCE (PHASE 3)

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6. ONCE SITE IS COMPLETE STABILIZED CONVERT EROSION CONTROL BASINS TO PERMANENT PONDS. INSTALL ORIFICES AS SHOWN ON SHEET C5.2.
7. COORDINATE WITH EROSION CONTROL INSPECTOR PRIOR TO REMOVAL OF EROSION CONTROL MEASURES.
8. REMOVE EROSION CONTROL DEVICES.

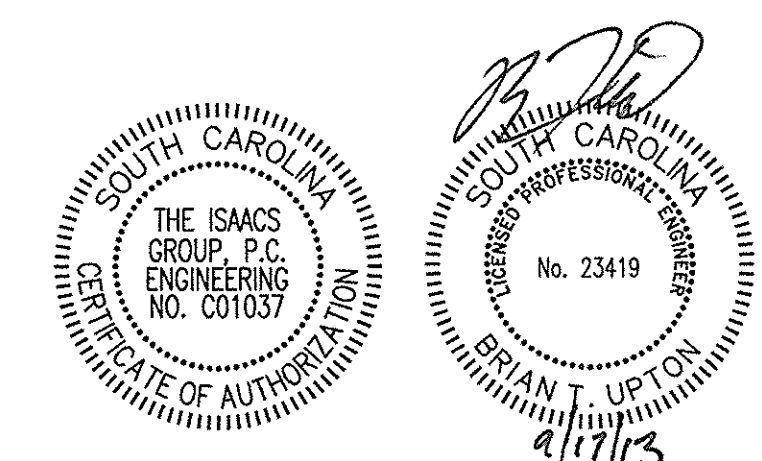
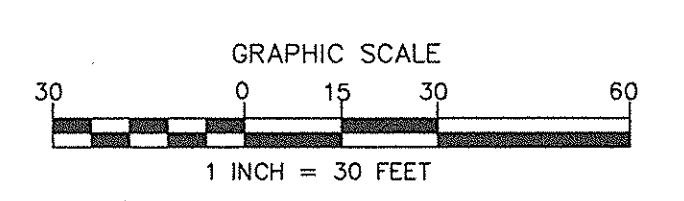
NOTE:
ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SCDCHEC AND CITY ROCK HILL DESIGN MANUALS.



REMAINDER OF
GREENS OF ROCK HILL, L.L.
PROPERTY
DEED BK-7503 PG-99
PLAT BK-E177 PG-1
TAX PARCEL #6620701132
USE: VACANT
ZONED: PD-MEC

MATCH LINE (SHEET D)

MATCH LINE (SHEET D)



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	08/13/13	PER CONTRACTOR COMMENTS
6	FBL	08/17/13	CONSTRUCTION DOCUMENTS

Project: **PROJECT GEKKO**
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

EROSION CONTROL PH.3

File #: 13000-PB.dwg Date: 08/26/13 Project Egr: BTLJ
Design By: FBL
Drawn By: FBL
Scale: 1"=30'

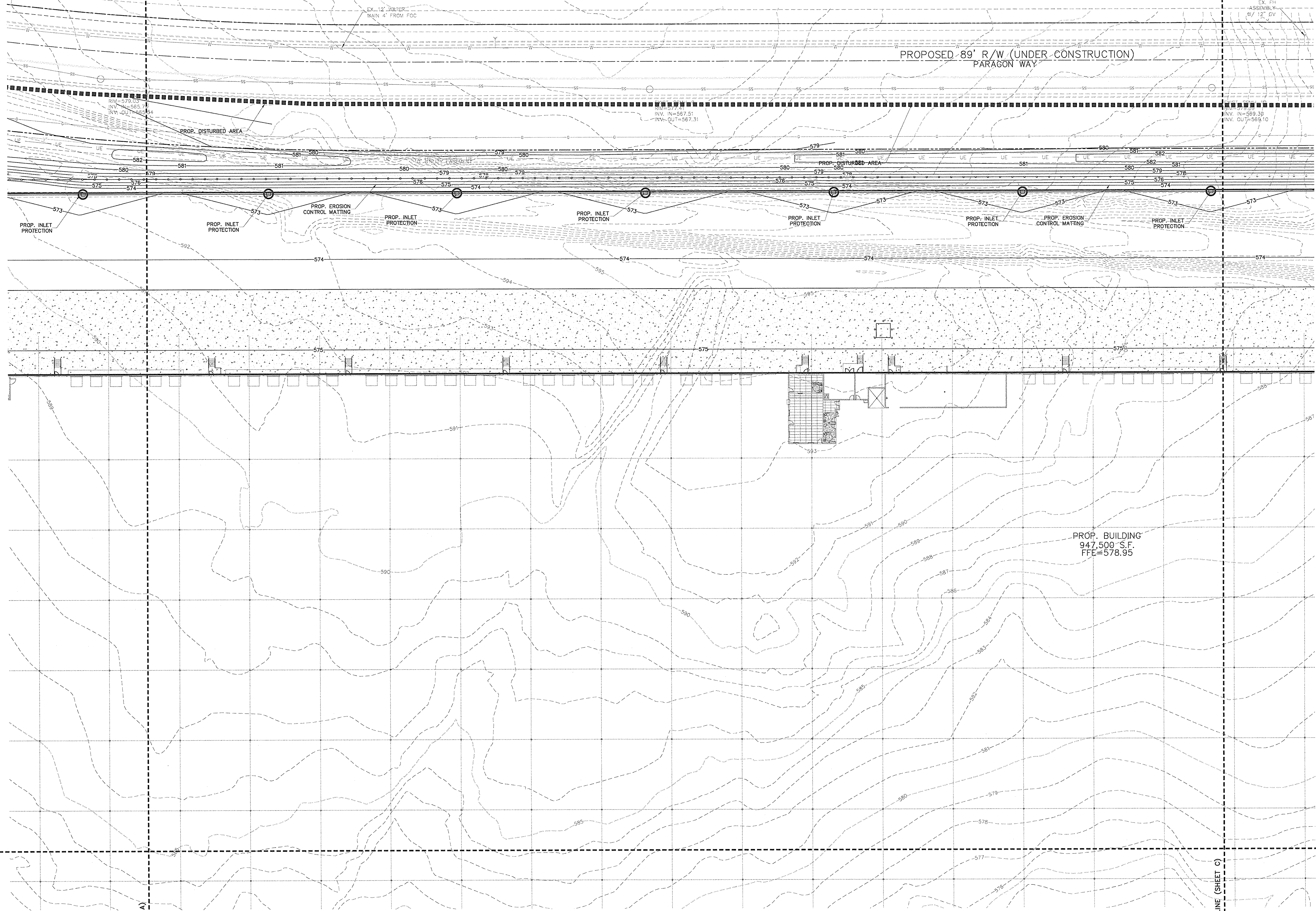
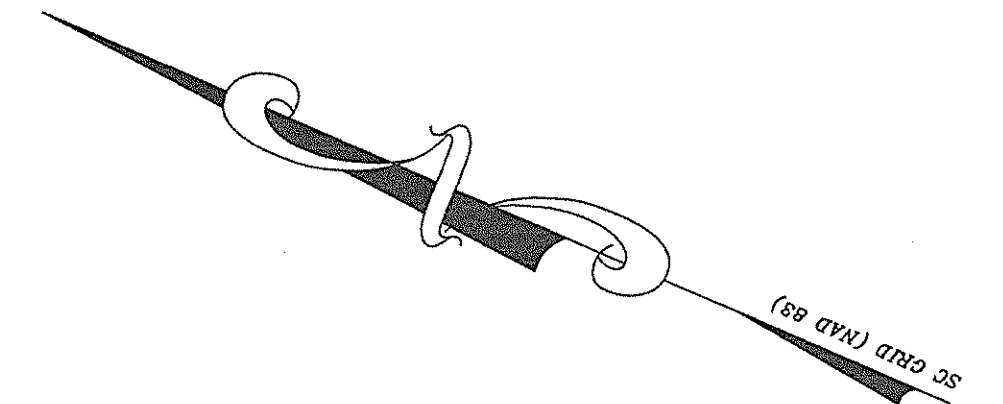
ISAACS GROUP
INFRASTRUCTURE DESIGN AND CONSTRUCTION SERVICES

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C4.2A

REMAINDER OF
GREENS OF ROCK HILL, LLC
PROPERTY
DEED BK-7503 PG-99
PLAT BK-E177 PG-1
TAX PARCEL #6620701132
USE: VACANT
ZONED: PD-MEC

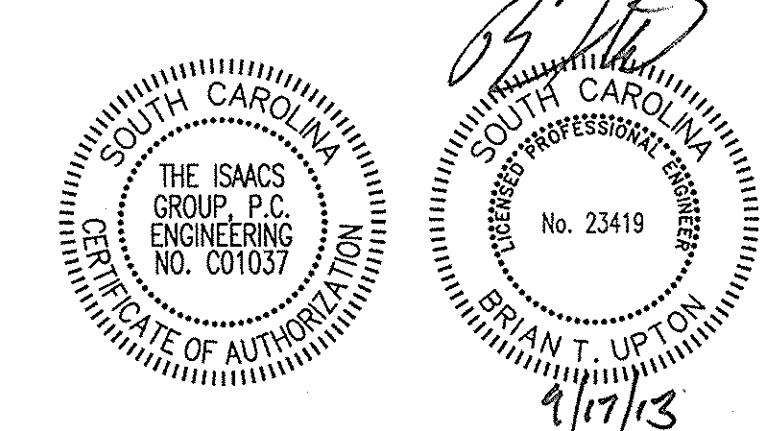
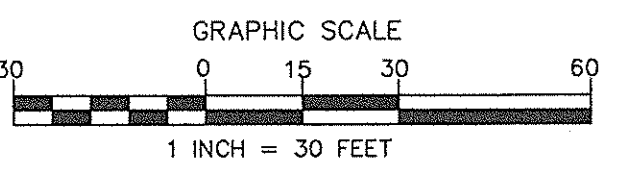
REMAINDER OF
GREENS OF ROCK HILL, LLC
PROPERTY
DEED BK-7503 PG-99
PLAT BK-E177 PG-1
TAX PARCEL #6620701132
USE: VACANT
ZONED: PD-MEC



PROP. BUILDING
947,500 S.F.
FFE=578.95

MATCH LINE (SHEET E)

MATCH LINE (SHEET E)



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/13/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DOCUMENTS

Project: **PROJECT GEKKO**
998 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

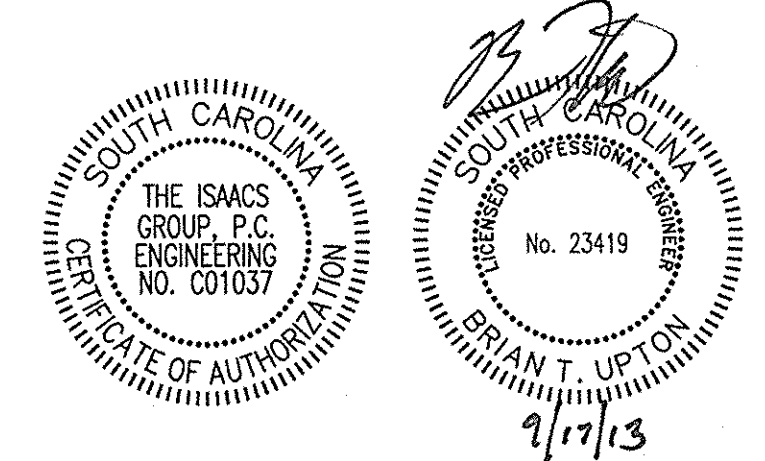
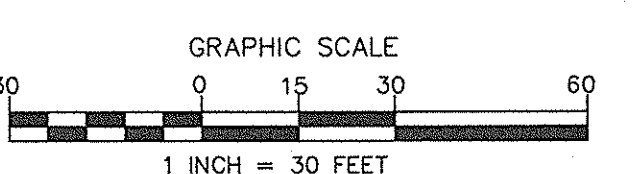
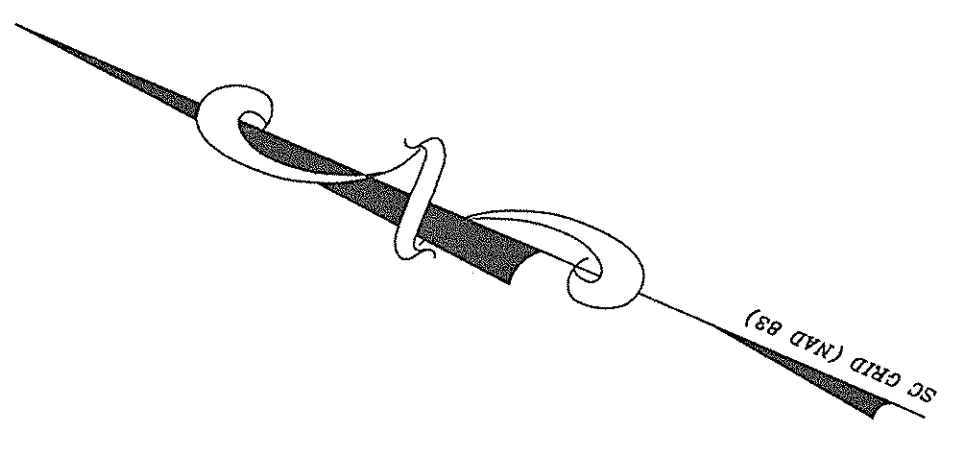
File #: 13020-FB.dwg Date: 08/26/13 Project Egr: BTLU

ISAACS
CIVIL ENGINEERING DESIGN AND LAND SURVEYING

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

Design By: FBL
Drawn By: FBL
Scale: 1"=30'

C4.2B

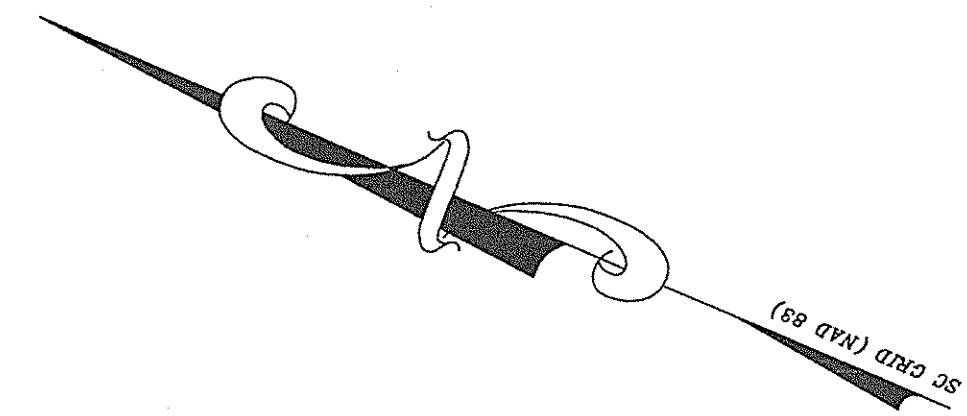
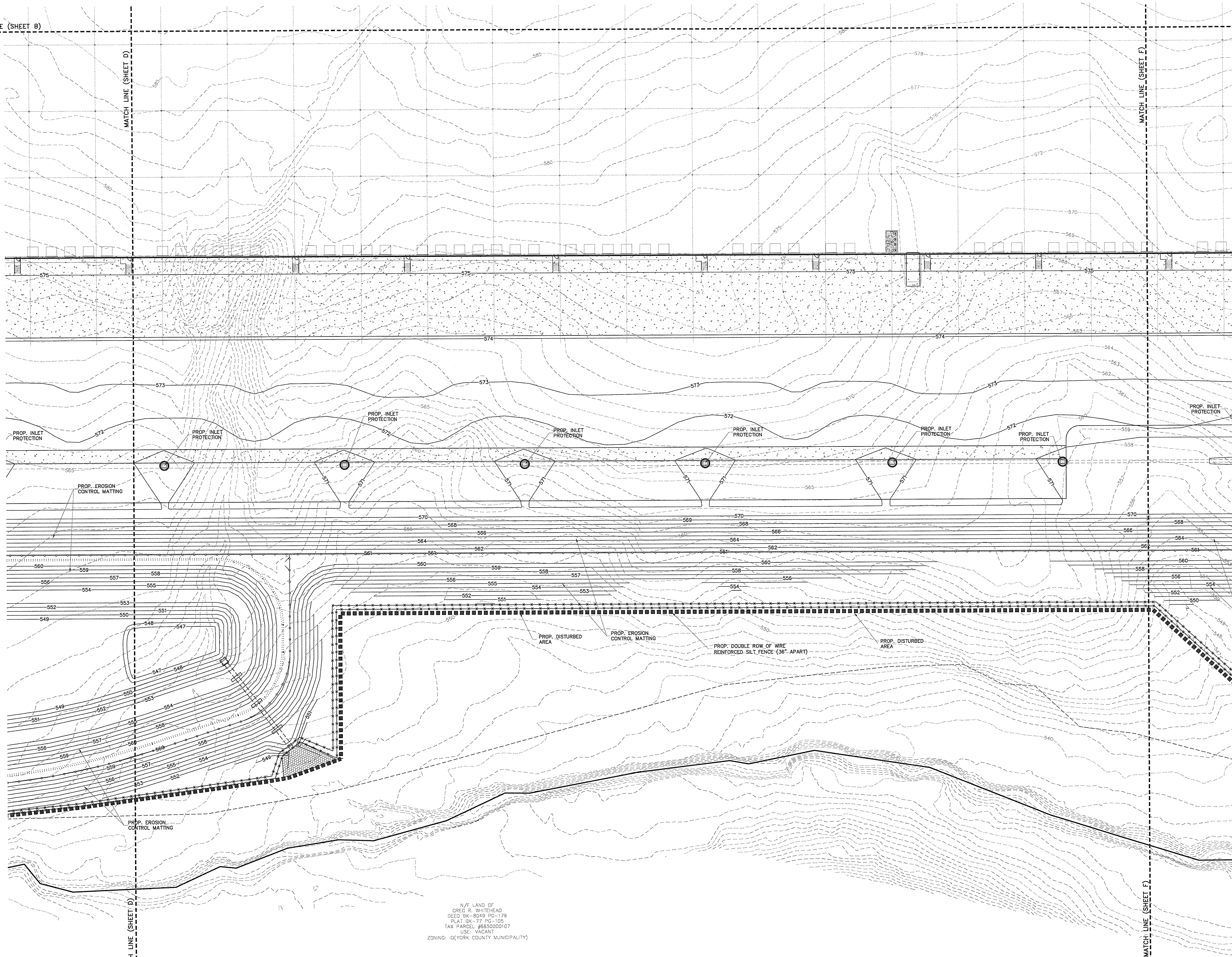


NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/13/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DOCUMENTS

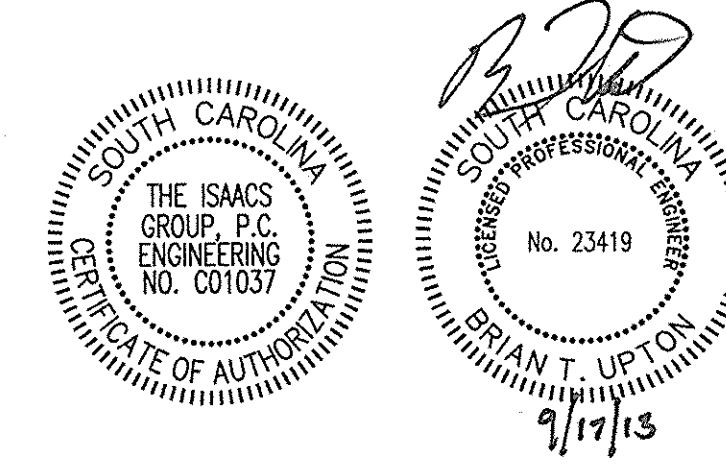
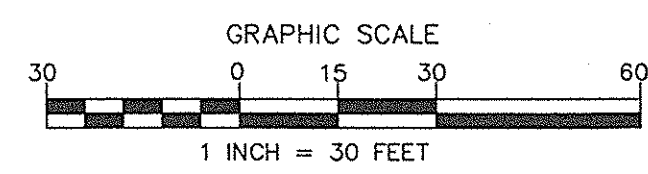
Project: **PROJECT GEKKO**
 996 PARAGON WAY
 ROCK HILL, SOUTH CAROLINA
EROSION CONTROL PH.3
 File #: 13020-P9.dwg Date: 08/26/13 Project Egr: BTJ
 Design By: FBL
 Drawn By: FBL
 Scale: 1"=30'
ISAACS GROUP
 CIVIL ENGINEERING DESIGN AND LAND SURVEYING
 8720 RED OAK BOULEVARD, SUITE 420
 CHARLOTTE, N.C. 28217
 PHONE (704) 527-3440 FAX (704) 527-8335
C4.2D

MATCH LINE (SHEET B)

MATCH LINE (SHEET B)



N/2 LAND OF
 GREG R. WHITEHEAD
 DEED BK-8049 PG-179
 PLAT BK-77 PG-105
 TAX PARCEL #6630000107
 USE: VACANT
 ZONING: ID(YORK COUNTY MUNICIPALITY)



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/13/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DOCUMENTS

Project: **PROJECT GEKKO**
 996 PARAGON WAY
 ROCK HILL, SOUTH CAROLINA

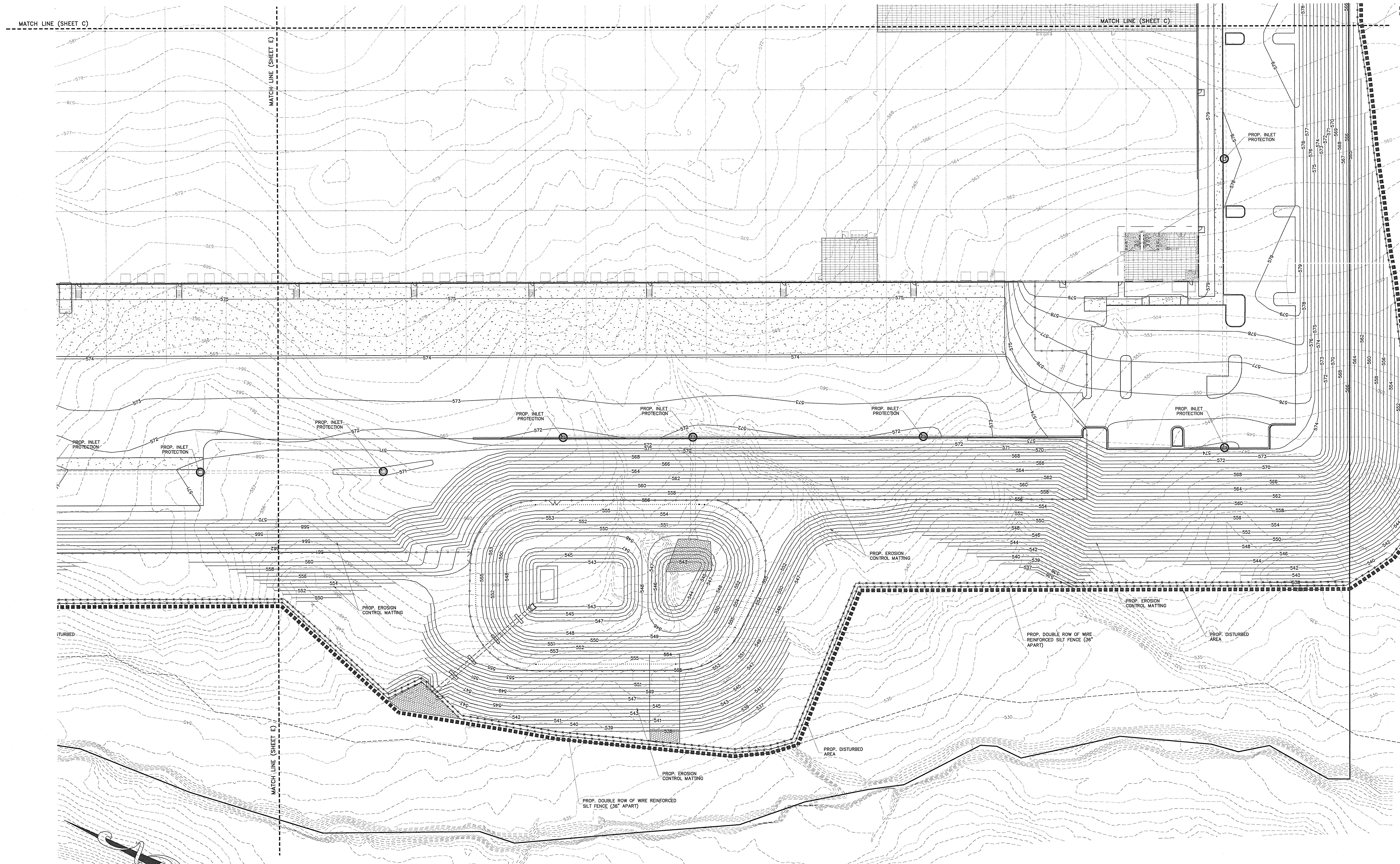
Title: **EROSION CONTROL PH.3**

File: g_13020-PR.dwg Date: 09/26/13 Project Egr: BTL
 Design By: FBL
 Drawn By: FBL
 Scale: 1" = 30'

ISAACS
 CIVIL ENGINEERING DESIGN AND LAND SURVEYING

8720 RED OAK BOULEVARD, SUITE 420
 CHARLOTTE, N.C. 28217
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C4.2E



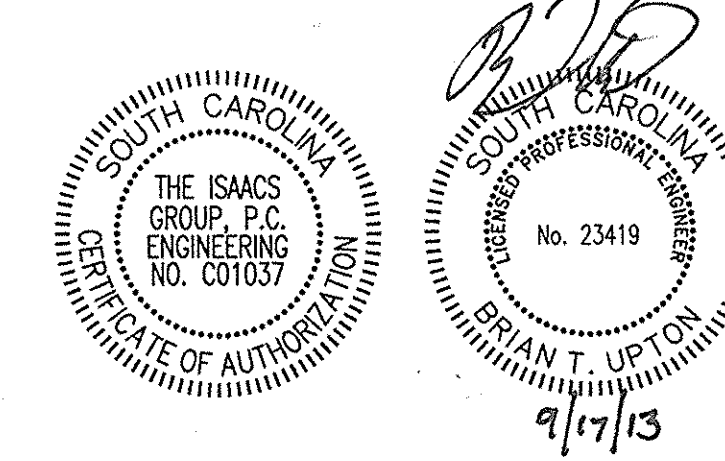
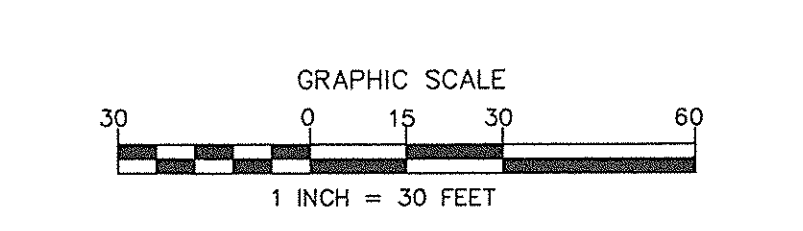
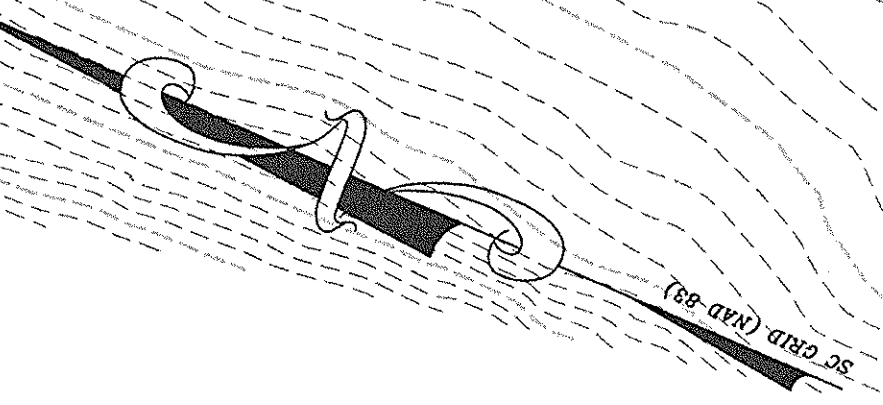
MATCH LINE (SHEET C)

MATCH LINE (SHEET C)

MATCH LINE (SHEET E)

MATCH LINE (SHEET E)

TURBED



NO.	BY	DATE	REVISION
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/13/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DOCUMENTS

Project: **PROJECT GEKKO**
 996 PARACON WAY
 ROCK HILL, SOUTH CAROLINA
EROSION CONTROL PH.3
 File #: 13020-PB.dwg Date: 05/28/13
ISAACS
 CIVIL ENGINEERING SURVEYING AND LAND SURVEYING
 8720 RED OAK BOULEVARD, SUITE 420
 CHARLOTTE, N.C. 28217
 PHONE (704) 527-3440 FAX (704) 527-8335
 Project Egr: BTU
 Design By: FBL
 Drawn By: FBL
 Scale: 1"=30'
C4.2F

SITE WORK SPECIFICATIONS

PART 1 GENERAL

- 1.01 WORK INCLUDED
A. Grade site including all necessary excavation, backfilling, placement and compaction of earth to finish grades or sub-grades as indicated on Grading Plan.
1.03 QUALITY ASSURANCE
A. Laboratory Testing
1. Soils and materials testing shall be provided at every stage of this project.

- 1.04 JOB CONDITIONS
A. Existing Utilities: Contractor shall locate and flag existing underground utilities in areas of work.
B. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult utility owner and notify Owner's representative immediately for directions.
1.05 PROTECTION
A. Protect all site features along perimeter of property as well as all other site features indicated on drawings to be preserved.

- PART 2 PRODUCTS
2.01 MATERIALS
A. Imported fill material to be pre-approved by geotechnical engineer prior to transporting to job site.
B. See details and specifications for site work materials to be used during construction.
C. All material and workmanship requirements to be in accordance with the City of Rock Hill Development Standards and SODHC.

PART 3 EXECUTION

- 3.01 UNFORESEEN CONDITIONS
A. Unforeseen conditions discovered after conscientious investigation shall be immediately brought to the attention of the Owner. Work resulting from such unforeseen conditions shall be performed as directed by the Owner.
3.02 PREPARATION
A. Identify required lines, levels, contours and benchmarks.
B. Maintain and protect existing utilities remaining which pass through work areas.
C. Notify respective utility companies to remove and relocate utilities as required to execute the work specified herein.

- 3.03 TESTING
A. To facilitate testing services, the Contractor shall cooperate with the testing laboratory and advise the laboratory and inspectors sufficiently in advance of operations to allow for completion of tests and for the assignment of inspectors.
B. A testing laboratory qualified in soils testing and evaluation shall observe the site grading, placement of fill and the excavations and backfill for the site utilities and roadways.

- 3.04 SUBSOIL EXCAVATION
A. Excavate as required to establish sub-grade to within plus or minus 0.1 feet for roadways.
B. Excavation shall be carried to the elevations as dimensioned or indicated on the drawings. Excavations shall be kept free from water while construction is in progress.
C. Excavations carried below the depths indicated, without specific directions shall be backfilled to the proper grade with suitable material and compacted as specified by geotechnical engineer, all at the Contractor's expense.
D. Shore, sheet and/or braced excavations as required to maintain them secure; remove shoring as the backfilling progresses but only when banks are safe against caving.
E. Excavate where and as necessary to obtain grade elevations as shown on the plans or hereinafter specified.
F. Unstable Soils: Within the limits of the proposed permanent areas or structural fill areas, the following materials shall be removed and replaced with acceptable fill material:

- 1. Topsoil
2. Peat and other organic soils
3. Inorganic silts and highly plastic clays that rut excessively or otherwise become unstable under traffic or construction equipment.
4. Any unsuitable soils as directed by geotechnical engineer.

- G. Undercut and replacement of unsuitable soils shall be done on a unit price basis, at a rate to be established in the Contract for Construction.
H. Proper notification of Owner and Soils Engineer/Testing Laboratory for confirmation shall be required before beginning work.
I. Correct unauthorized excavation at no cost to Owner.
J. Compact excavation material on site; compact excess subsoil, not being reused, on site.
K. When wet excavation is encountered, the excavated area shall be dewatered and kept free of water. Provide a permanent subdrainage system when recommended by the Soils Engineer and authorized by Owner, on a unit price basis at a rate established in the Contract for Construction. All saturated material shall be removed.

- 3.05 PROOF ROLLING
A. After clearing and grubbing, stripping of topsoil and excavation has been accomplished, the natural ground surfaces shall be proof rolled as directed by the geotechnical engineer.
3.06 MOISTURE CONTROL
A. Moisture content of soils underlying roadways to be in accordance with the requirements established by the geotechnical engineer.
3.08 FILLING
A. Fill areas to required contours and elevations in accordance with plans, allowing for thickness of final surface base, pavement or topsoil as required. Use unfrozen materials.
B. Do not fill over porous, wet, or spongy sub-grade surfaces without approval from the geotechnical engineer.
C. Maintain optimum moisture contents specified by geotechnical engineer to obtain required compaction density.
D. Placement of fill and testing of fill areas to be in accordance with the recommendations provide by the geotechnical engineer.

- 3.08 EXTERIOR CONCRETE PAVING AND SURFACING
A. Prepare asphalt and concrete pavements to the lines, grades and specifications as indicated on these drawings.
B. Materials and quantities to meet the minimum specifications as indicated on these drawings.
3.08 CLEANUP
A. Complete the grading operations after utilities are installed, site improvements constructed, and all materials, rubbish and debris removed from site.
B. Provide temporary and permanent seeding in accordance with the seeding specifications in these plans.

SPILL PREVENTION AND RESPONSE

The BMPs DESCRIBED BELOW SHOULD BE IMPLEMENTED TO PREVENT AND CONTROL SPILLS IN A MANNER THAT MINIMIZES OR PREVENTS THE DISCHARGE OF SPILL MATERIAL TO THE DRAINAGE SYSTEM OR WATERCOURSES. THEY APPLY TO ALL CONSTRUCTION PROJECTS AND SHOULD BE UTILIZED ANYTIME CHEMICALS AND/OR HAZARDOUS SUBSTANCES ARE STORED ON SITE. SUBSTANCES MAY INCLUDE, BUT ARE NOT LIMITED TO:
-SOIL STABILIZERS/BINDERS
-EROSION PREVENTIVES
-HERBICIDES
-GROWTH INHIBITORS
-FERTILIZERS
-DEICING/ANTI-ICE CHEMICALS
-PAINTS
-TILES
-LUBRICANTS, AND OTHER PETROLEUM DISTILLATES

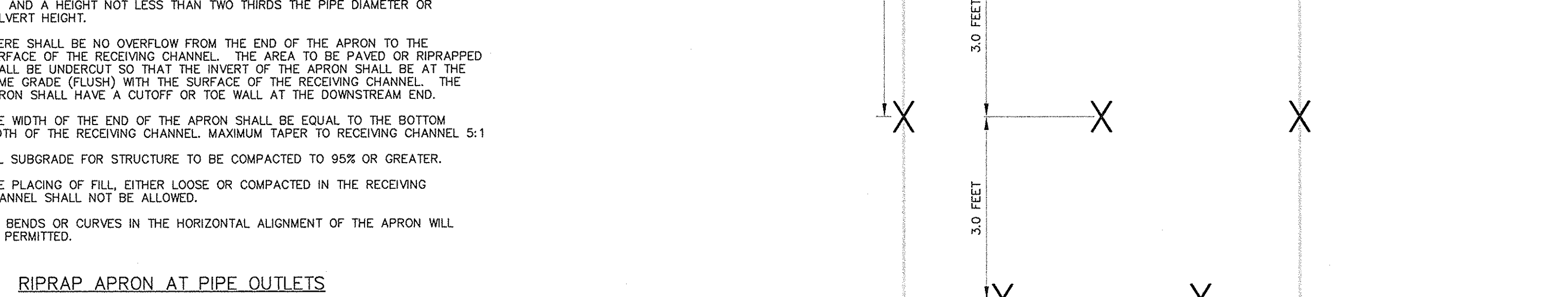
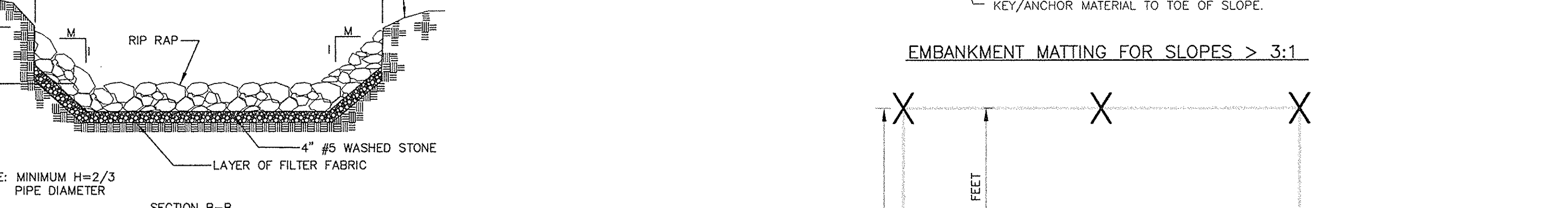
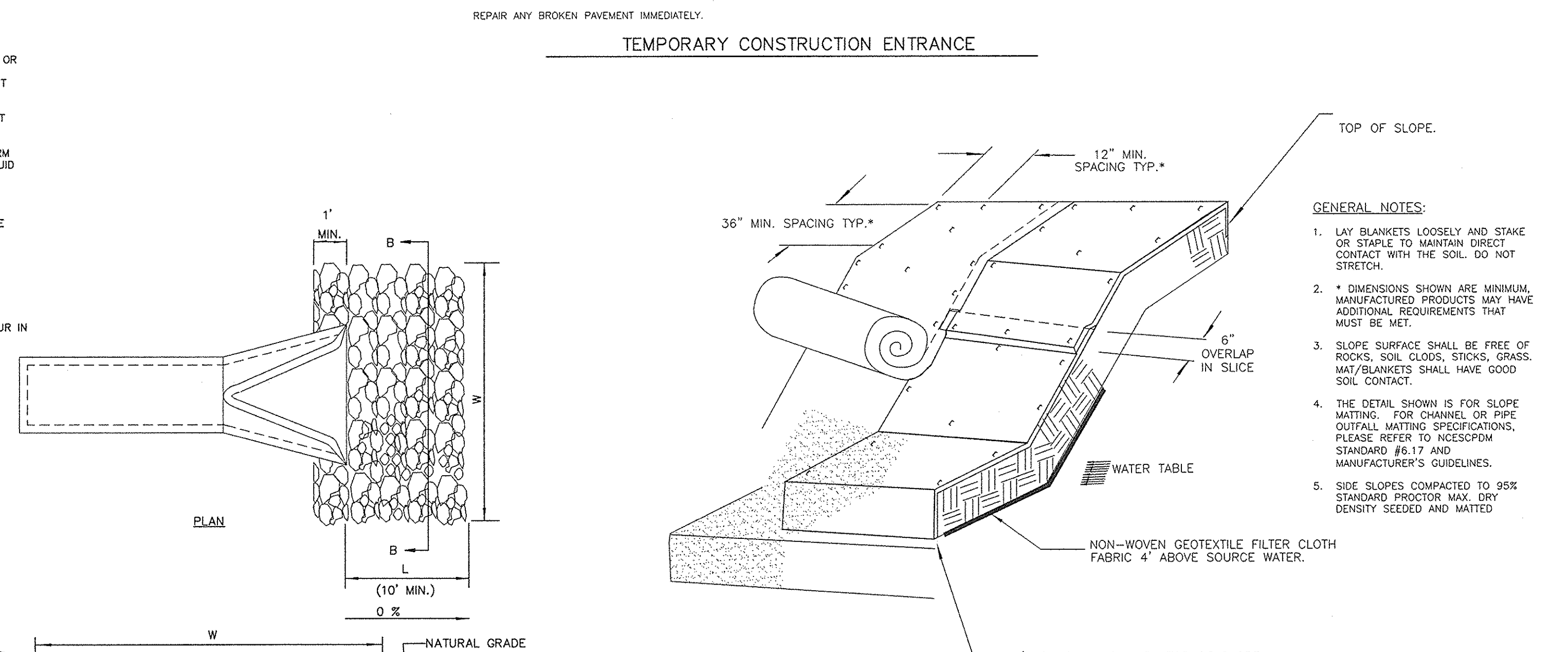
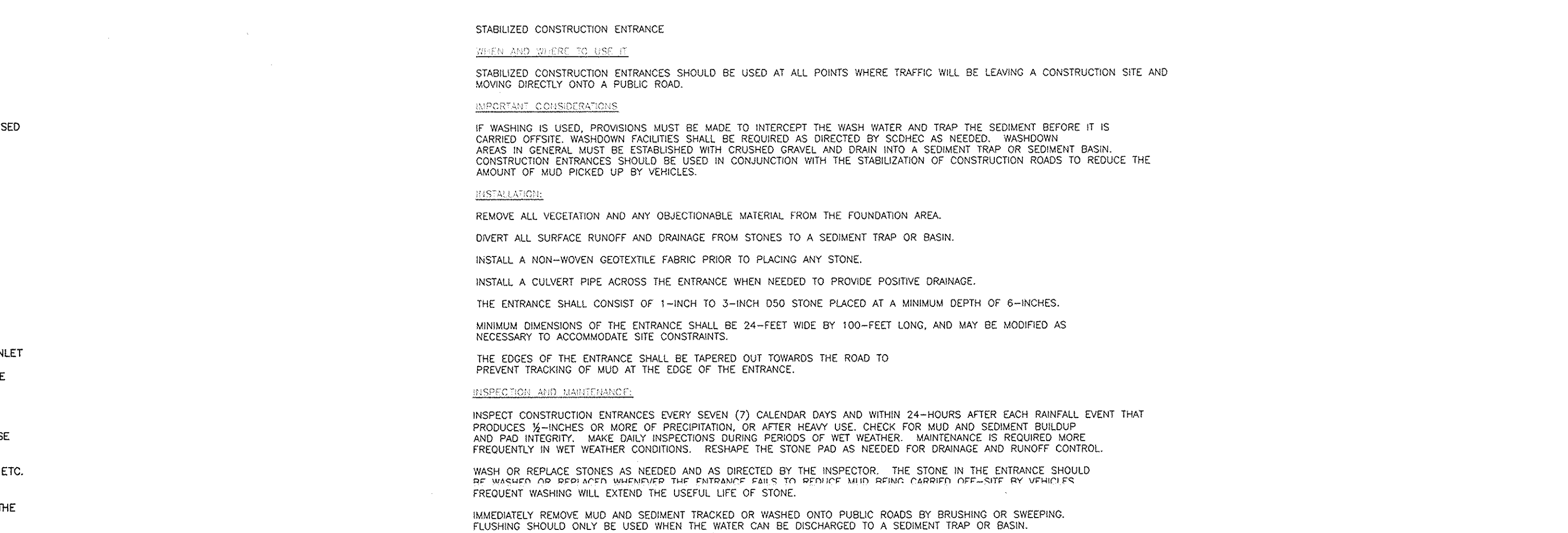
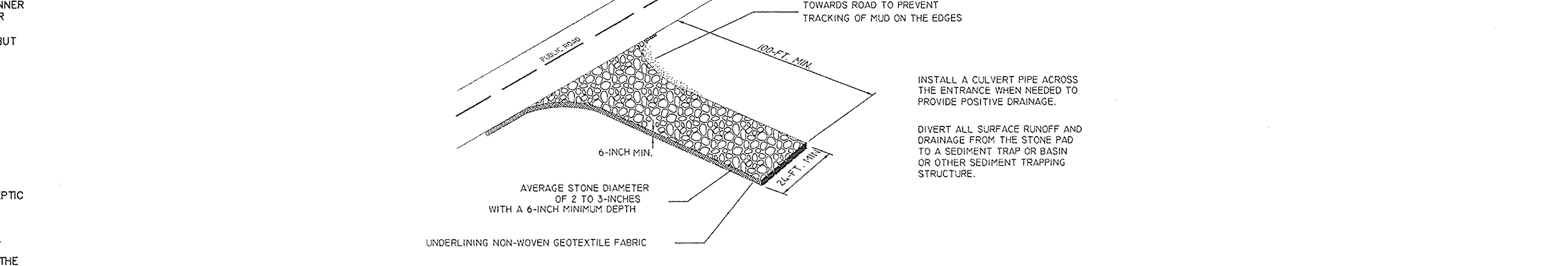
TO THE EXTENT THAT THE WORK CAN BE ACCOMPLISHED SAFELY, SPILLS OF OIL, PETROLEUM PRODUCTS, SUBSTANCES LISTED UNDER 49 CFR PARTS 173 AND 302, AND SANITARY AND SEPTIC WASTES SHOULD BE CONTAINED AND CLEANED UP IMMEDIATELY.
SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN
IN THE EVENT OF A SPILL OF A DANGEROUS OR HAZARDOUS WASTE, REGARDLESS OF SIZE THAT COULD REACH SURFACE WATERS, ONEY MUST BE NOTIFIED IMMEDIATELY 911-888-6440-0122 AND THE FOLLOWING INFORMATION MUST BE PROVIDED:
1. LOCATION
2. MATERIAL RELEASED
3. QUANTITY OF MATERIAL
4. CONTACT PHONE NUMBER(S)
5. RESOURCE DAMAGES (E.G. DEAD FISH)
6. LOCATION
7. RESPONSIBLE PARTY
8. QUANTITY OF SPILL AND
9. CLEANUP STATUS
THE SITE CONTRACTOR SHOULD IDENTIFY APPROPRIATE PRACTICES FOR THE SPECIFIC MATERIALS USED OR STORED ON SITE.

BMP'S

- 1. EDUCATE EMPLOYEES AND SUBCONTRACTORS ON WHAT A "SIGNIFICANT SPILL" IS FOR EACH MATERIAL THEY USE, AND WHAT IS THE APPROPRIATE RESPONSE FOR "SIGNIFICANT" AND "INSIGNIFICANT" SPILLS.
2. EDUCATE EMPLOYEES AND SUBCONTRACTORS ON POTENTIAL DANGERS TO HUMANS AND THE ENVIRONMENT FROM SPILLS AND LEAKS.
3. HOLD REGULAR MEETINGS TO DISCUSS AND REINFORCE APPROPRIATE DISPOSAL PROCEDURES (INCORPORATE INTO REGULAR SAFETY MEETINGS).
4. PROVIDE SPECIFIC CLEANUP INSTRUCTIONS FOR DIFFERENT PRODUCTS HANDLED ON-SITE.
5. ASSIGN A PERSON TO BE IN CHARGE OF CLEANUP ASSISTANCE.
6. PREPARE SPILL CONTAINMENT AND CLEANUP LISTS THAT ARE EASY TO FIND AND USE.
7. POST A SUMMARY OF THE CLEANUP PLAN AT APPROPRIATE LOCATIONS.
CLEANUP AND STORAGE PROCEDURES
1. IF A SPILL OCCURS, DEMONSTRATE IT AS SOON AS POSSIBLE.
2. IF THERE IS A CHANCE THAT THE SPILL COULD ENTER A STORM DRAIN OR SEWER, PLUG THE INLET AND TURN OFF OR DIVERT ANY INCOMING WATER.
3. COVER THE SPILL WITH ABSORBENT MATERIAL SUCH AS KITTY LITTER OR SAWDUST. DO NOT USE STRAW. DISPOSE OF THE USED ABSORBENT PER MANUFACTURER'S INSTRUCTIONS. IF THE SPILL IS FLAMMABLE, DISPOSE OF AS DIRECTED BY THE LOCAL FIRE MARSHAL.
4. KEEP THE AREA WELL VENTILATED.
5. SMALL SPILLS USUALLY INVOLVE SMALL QUANTITIES OF OIL, GASOLINE, PAINT, ETC., WHICH CAN BE CONTROLLED BY THE FIRST RESPONDER AT THE DISCOVERY OF THE SPILL. USE ABSORBENT MATERIALS IN SMALL SPILLS RATHER THAN HOSE DOWN OR BURYING THE SPILL.
6. SEMI-SIGNIFICANT SPILLS (SEM SIGNIFICANT SPILLS STILL CAN BE CONTROLLED BY THE FIRST RESPONDER ALONG WITH THE AID OF OTHER PERSONNEL SUCH AS LABORERS AND THE FOREMAN, ETC.
7. CONTAIN SPILLS IMMEDIATELY IF THE SPILLS OCCURS ON PAVED OR IMPERMEABLE SURFACES. CLEAN UP USING "DRY" METHODS (ABSORBENT MATERIALS, CAT LITTER AND/OR BAGS). CONTAIN THE SPILL BY ENCLOSING WITH ABSORBENT MATERIALS AND DO NOT LET THE SPILL SPREAD WIDELY.
8. IF THE SPILL OCCURS IN DIRT AREAS, IMMEDIATELY CONTAIN THE SPILL BY CONSTRUCTING AN EARTHEN DIKE.
9. IF THE SPILL OCCURS DURING RAIN, TO THE EXTENT THAT IT DOESN'T COMPROMISE CLEAN UP ACTIVITIES, COVER SPILL WITH TARPS OR OTHER MATERIAL TO PREVENT CONTAMINATING RUNOFF TO SURFACE/HAZARDOUS SPILLS - FOR SIGNIFICANT OR HAZARDOUS SPILLS THAT CANNOT BE CONTROLLED BY PERSONNEL IN THE IMMEDIATE VICINITY, THE SERVICES OF A SPILLS CONTRACTOR OR HAZARDOUS TEAM SHOULD BE OBTAINED IMMEDIATELY. CONSTRUCTION PERSONNEL SHOULD NOT ATTEMPT TO CLEAN UP THE SPILL UNTIL THE APPROPRIATE AND QUALIFIED STAFF HAS ARRIVED AT THE JOB SITE.
10. SPILLS SHOULD NOT BE BURIED OR WASHED WITH WATER.
11. USED CLEAN UP MATERIALS, CONTAMINATED MATERIALS, AND RECOVERED SPILL MATERIAL THAT ARE NO LONGER SUITABLE FOR THE INTENDED PURPOSE SHOULD BE STORED AND DISPOSED OF PROPERLY.
12. WATER USED FOR CLEANING AND DECONTAMINATION SHOULD NOT BE ALLOWED TO ENTER STORM DRAINS OR WATER COURSES AND SHOULD BE COLLECTED AND DISPOSED OF AS DESCRIBED IN LIQUID WASTE MANAGEMENT.
13. WASTE STORAGE AREAS SHOULD BE KEPT CLEAN, WELL ORGANIZED AND EQUIPPED WITH AMPLE CLEAN-UP SUPPLIES AS APPROPRIATE FOR THE MATERIALS BEING STORED. PERIMETER CONTROLS, CONTAINMENT STRUCTURES, COVERS AND LINERS SHOULD BE REPAIRED OR REPLACED AS NEEDED TO MAINTAIN PROPER FUNCTION.

INSPECTION AND MAINTENANCE

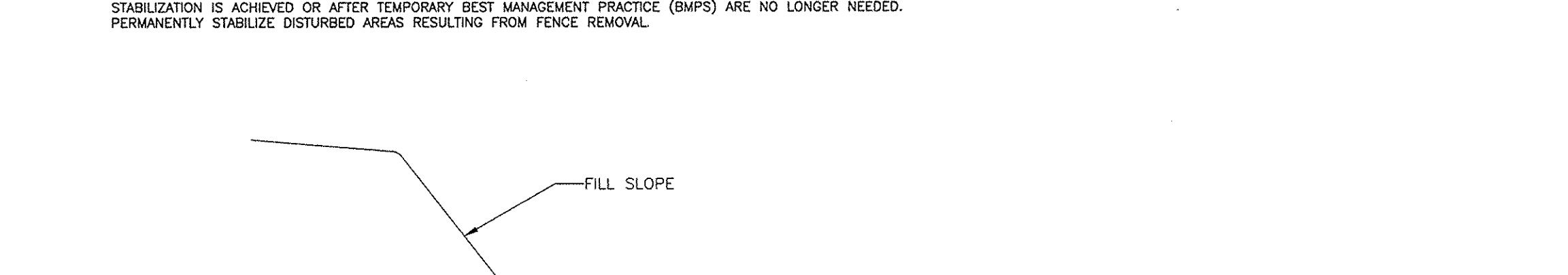
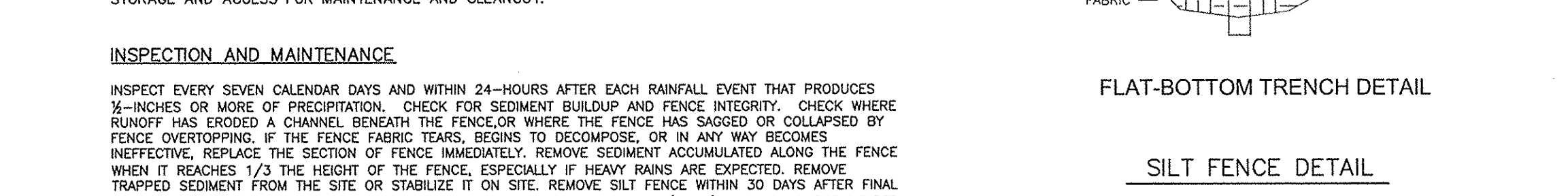
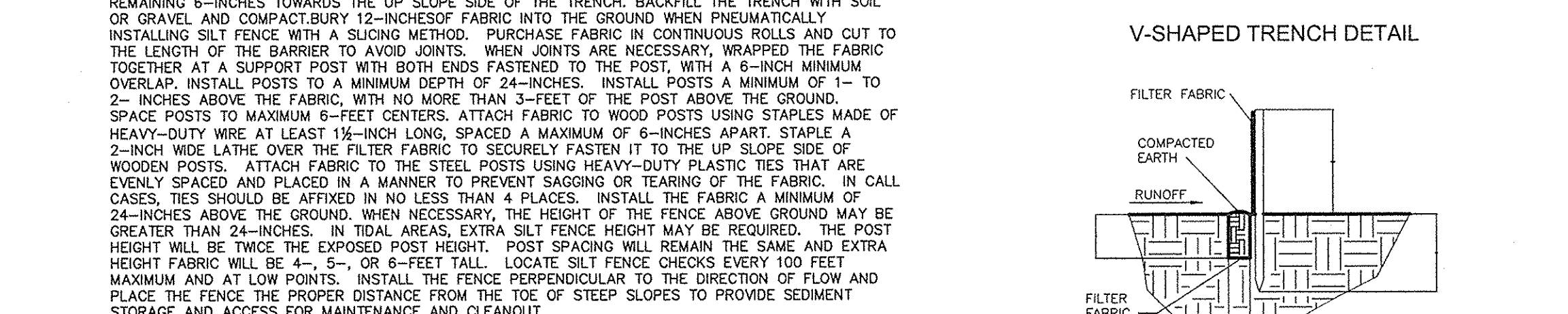
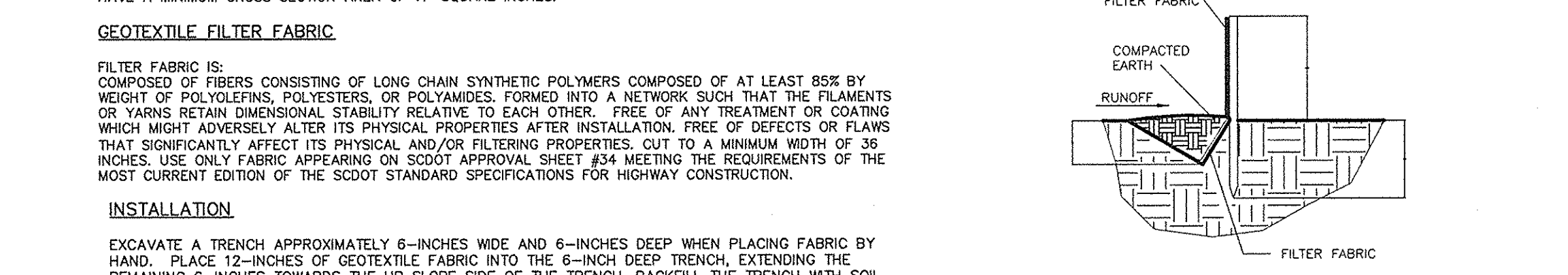
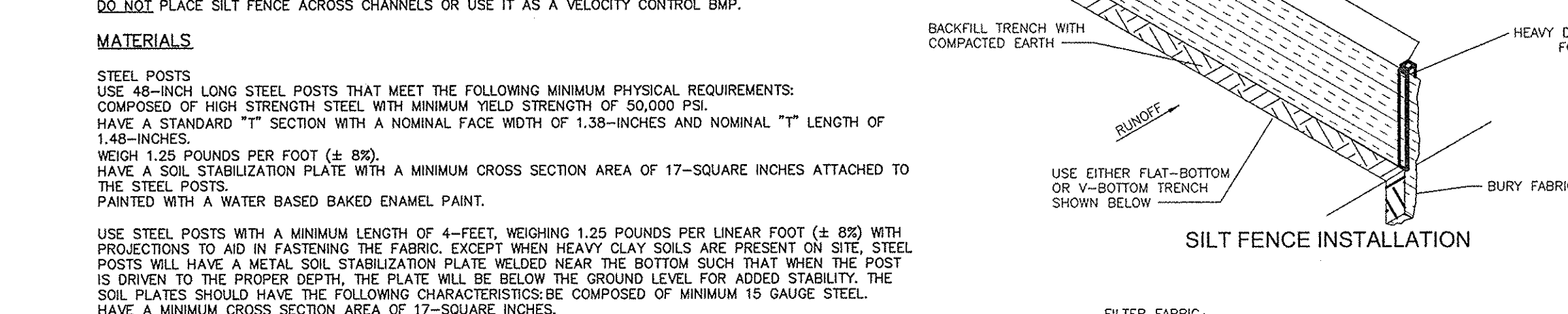
- 1. VERIFY WEEKLY THAT SPILL CONTROL CLEANUP MATERIALS ARE LOCATED NEAR MATERIAL STORAGE, STORED OR USED ON THE PROJECT SITE SHOULD BE POSTED AT ALL TIMES IN AN OPEN, CONSPICUOUS AND ACCESSIBLE LOCATION.
2. UPDATE SPC PLANS AND STOCK APPROPRIATE CLEANUP MATERIALS WHENEVER CHANGES OCCUR IN THE TYPES OF CHEMICALS USED OR STORED ON SITE.



PROJECT GEKKO
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA
DETAILS
Project No. 1200-PA-04g Date: 05/01/13
No. 23419
SOUTH CAROLINA PROFESSIONAL ENGINEERING BOARD
STATE OF SOUTH CAROLINA
No. 01037
REVISION
1. FEB 05/13/13 PER CITY COMMENTS
2. FEB 05/18/13 PER CITY COMMENTS
3. FEB 06/26/13 PER FULL SUBMITTAL
4. FEB 09/02/13 PER CITY COMMENTS
5. FEB 09/02/13 PER CONTRACTOR COMMENTS
6. FEB 09/17/13 CONSTRUCTION DRAWINGS
8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8355
C5.0

SILT FENCE NOTES

WHEN AND WHERE TO USE IT
SILT FENCE IS APPLICABLE IN AREAS:
WHERE THE MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE FENCE IS 100-FEET.
WHERE THE MAXIMUM SLOPE STEEPNESS (NORMAL PERPENDICULAR TO FENCE LINE) IS 2H:1V.
THAT DO NOT RECEIVE CONCENTRATED FLOWS GREATER THAN 0.5 CS.
DO NOT PLACE SILT FENCE ACROSS CHANNELS OR USE IT AS A VELOCITY CONTROL BMP.

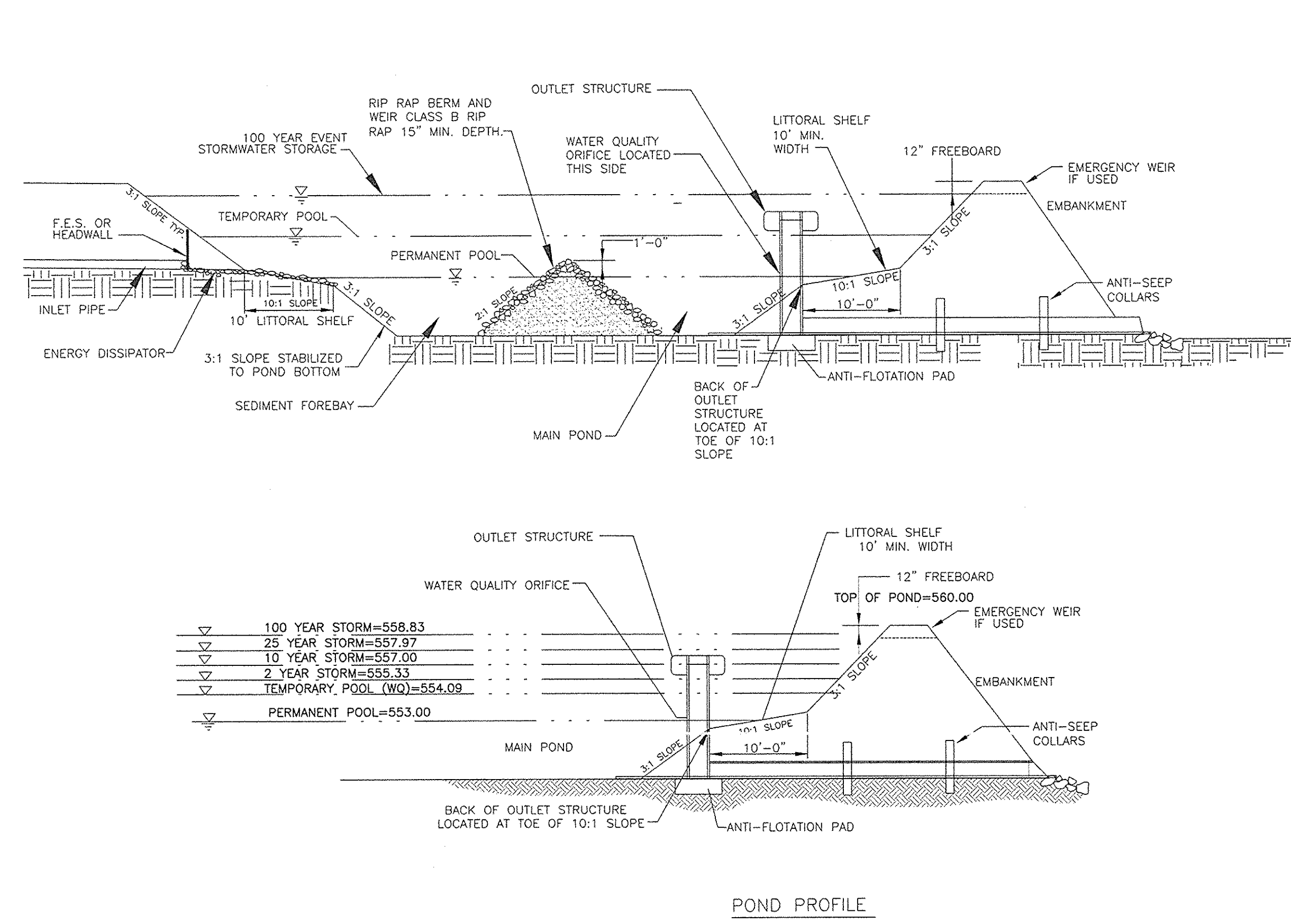


- SLOPE STABILIZATION NOTES
1. CONFORM TO GRADES AND CROSS SECTIONS SHOWN ON PLANS.
2. FINISH TO A SMOOTH AND EVEN CONDITION WITH ALL DEBRIS, ROOTS, STONES AND LUMPS GREATER THAN 3 IN. IN DIAMETER PAKED OUT AND REMOVED.
3. LOOSEN TOP 3 - 4 IN. OF SOIL SURFACE TO ACCOMMODATE SEED AND MAT BEDDING.
4. LINES TO BE DIRECTED, APPLY SEED, FERTILIZER, AND LIME BEFORE MAT PLACEMENT.
5. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6 IN (15.2 CM) DEEP BY 6 IN (15.2 CM) WIDE TRENCH, BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ROLL THE BLANKETS DOWN THE SLOPE.
7. USE STAPLE PATTERN "B", IN ACCORDANCE WITH NORTH AMERICAN GREEN DIMENSIONAL REQUIREMENTS.
8. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2 IN (5.1 CM) OF OVERLAP.
9. WHEN BLANKETS MUST BE STAPLED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4 IN. OF OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12 IN. APART.
10. THIS DETAIL TO BE USED AS INDICATED ON THE PLANS, AND ON ALL SLOPES 3:1 OR STEEPER.
SLOPE STABILIZATION

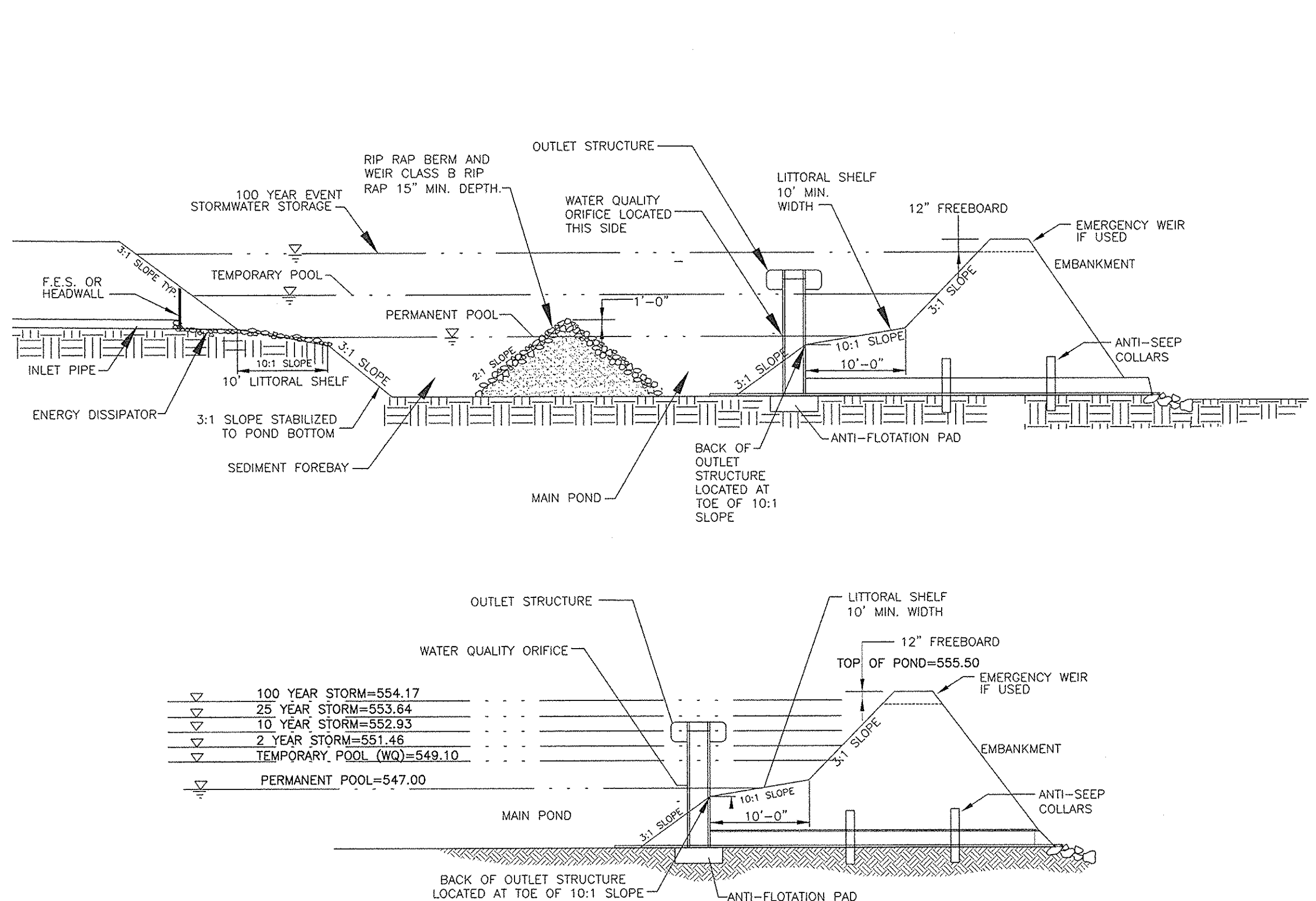
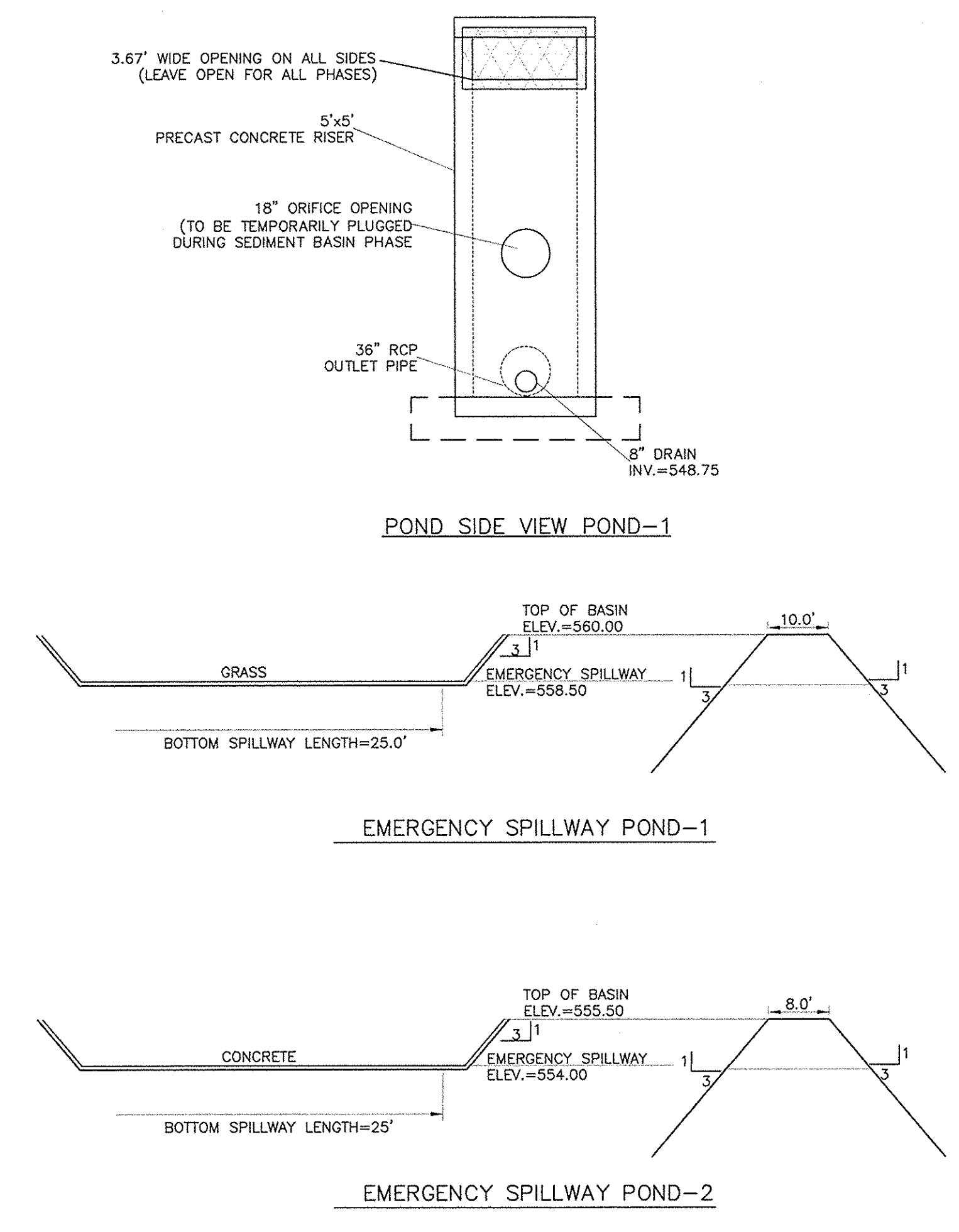
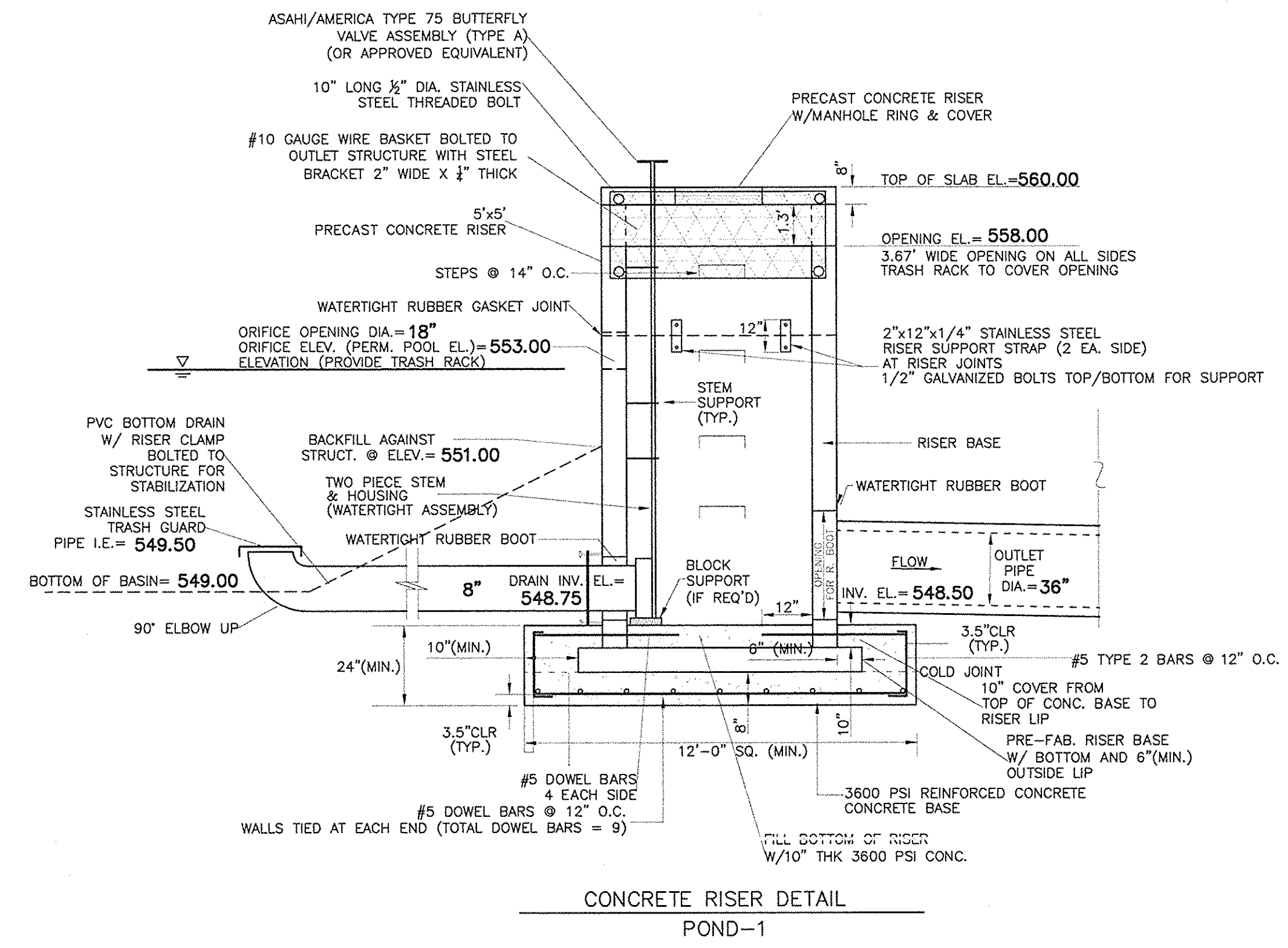
TEMPORARY SILT DITCH

NOTE:
1. DITCH SHOULD HAVE LONGITUDINAL SLOPE OF 1%.
2. SILT FENCE MAY BE REQUIRED BEHIND BERM.

- TRUCKING
1. CONFORM TO GRADES AND CROSS SECTIONS SHOWN ON PLANS.
2. FINISH TO A SMOOTH AND EVEN CONDITION WITH ALL DEBRIS, ROOTS, STONES AND LUMPS GREATER THAN 3 IN. IN DIAMETER PAKED OUT AND REMOVED.
3. LOOSEN TOP 3 - 4 IN. OF SOIL SURFACE TO ACCOMMODATE SEED AND MAT BEDDING.
4. LINES TO BE DIRECTED, APPLY SEED, FERTILIZER, AND LIME BEFORE MAT PLACEMENT.
5. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6 IN (15.2 CM) DEEP BY 6 IN (15.2 CM) WIDE TRENCH, BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
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10. THIS DETAIL TO BE USED AS INDICATED ON THE PLANS, AND ON ALL SLOPES 3:1 OR STEEPER.
SLOPE STABILIZATION



WETPOND #1



WETPOND #2

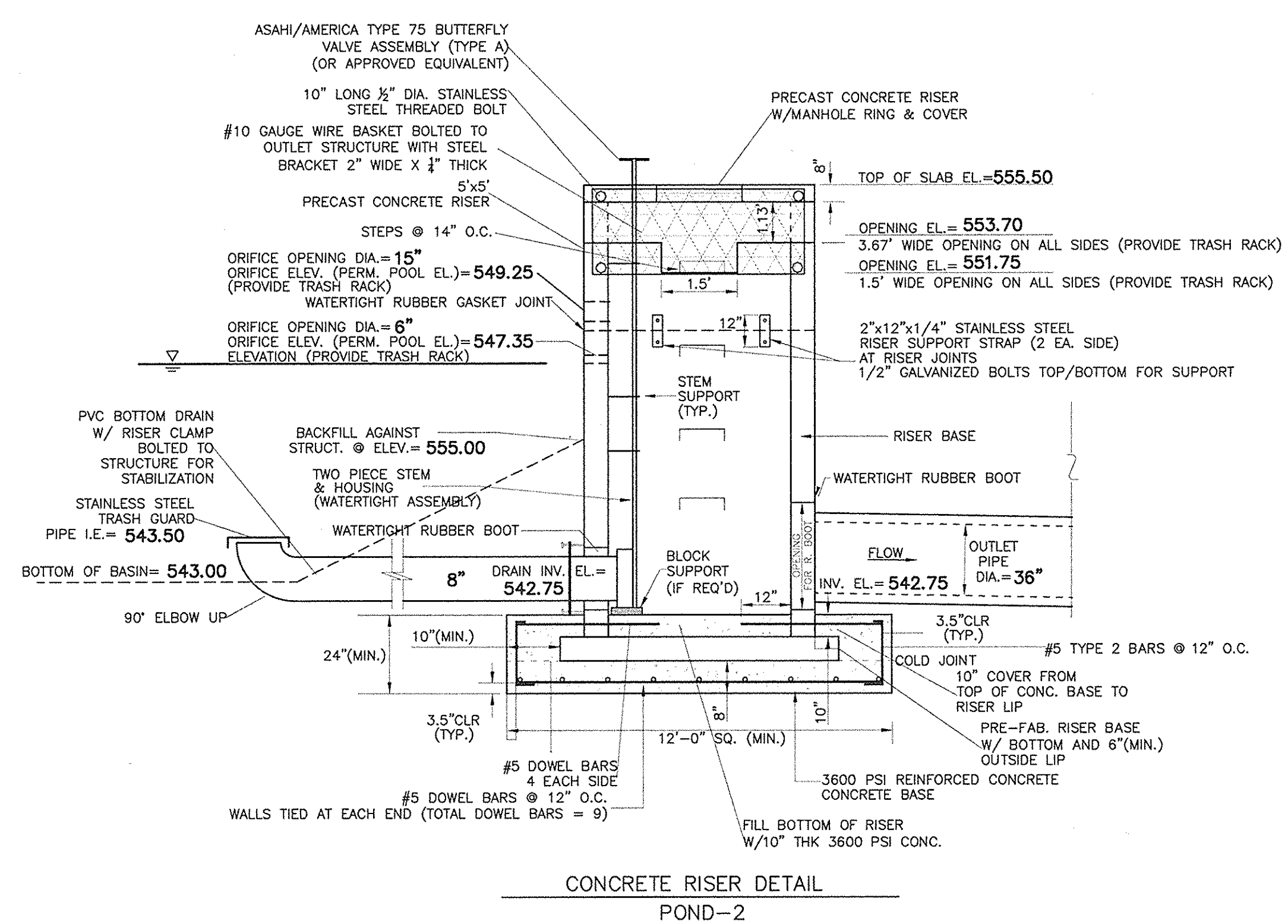


TABLE 1: PERENNIALS * Months shaded in grey represent applicable planting dates.

COMMON NAME ¹	BOTANICAL NAME	APPROVED SITE(S)	PLANTING RATE (lb/acre)	PLANTING LOCATION	Planting Dates*													
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
TURF-TYPE GRASSES (SELECT ONE)																		
Bahiagrass ¹	Paspalum notatum	Slopes	35	Upper State														
Common Bermudagrass ¹ (hulled = hull absent)	Cynodactylon	Shoulders, Slopes, or Medians	25	Upper State														
Common Bermudagrass ¹ (hulled = hull present)	Cynodactylon	Shoulders, Slopes, or Medians	30	Lower State														
Carpet Grass	Axonopus africus	Shoulders, Slopes, or Medians	15	Upper State														
Tall Fescue	Festuca arvensis	Shoulders, Slopes, or Medians	50	Upper State														
Centpedegrass	Eriochloa fasciculata	Shoulders, Slopes, or Medians	10	Upper State														
GRASSES																		
Weeping Lovegrass	Eriochloa fasciculata	Slopes	5	Upper State														
Indiangrass	Sorghastrum nutans	Slopes	10	Upper State														
Little Bluestem	Andropogon scoparius	Slopes	10	Upper State														
Coastal Panicgrass	Panicum maritimum	Slopes	20	Upper State														
Switchgrass	Panicum virgatum	Slopes	10	Lower State														
Perennial Rye Grass ¹	Lolium perenne	Shoulders, Slopes, or Medians	15	Upper State														
Virginia Wild Rye	Elymus virginicus	Shoulders, Slopes, or Medians	5	Upper State														
LEGUMES¹																		
White Clover	Trifolium repens	Shoulders, Slopes	5	Upper State														
Scarlet Legume (Scarlet seed)	Lespedeza cuneata	Slopes	50	Upper State														
Scarlet Legume (Unscarlet seed)	Lespedeza cuneata	Slopes	50	Lower State														

¹ Alternative to 4 Methods from independent 3rd party testing facilities will be accepted until January 31, 2017.
 ASTM test methods developed for Road and Tunnel Control Products (RCPs) that have been modified for comparison to control between 14 and 21 days.

April 4, 2011 Page 4

GEOTECHNICAL SPECIFICATION FOR DAM CONSTRUCTION

A. A MINIMUM OF ONE (1) IN-PLACE DENSITY TEST SHOULD BE PERFORMED IN ACCORDANCE WITH ASTM D-1556 FOR EACH 2,500 S.F. OF LIFT AREA WITH A MINIMUM OF TWO TESTS PER LIFT. IMPROPER COMPACTION MAY RESULT IN PREMATURE DETERIORATION OF THE EMBANKMENT AREA AND/OR DIFFERENTIAL SETTLEMENT OF FOUNDATIONS. SEE GEOTECHNICAL REPORT FOR MORE DETAILED SPECIFICATIONS RELATING TO SELECTION AND PLACEMENT OF STRUCTURAL FILL.

B. FILL PLACED WITHIN THE CONSTRUCTED DAM EMBANKMENTS SHOULD BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698 (STANDARD PROCTOR). ALL FILL PLACED WITHIN THE UPPER ONE (1) FOOT OF THE RISER FOUNDATION AND THE SPILLWAY SUBGRADE SHOULD BE COMPACTED TO A MINIMUM OF 98 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698 (STANDARD PROCTOR). ALL FILL MATERIAL SHOULD BE PLACED AND MECHANICALLY COMPACTED IN UNIFORM LIFTS NOT EXCEEDING NINE (9) INCHES IN LOOSE THICKNESS. THE MOISTURE CONTENT OF ALL FILL AT THE TIME OF THE PLACEMENT SHOULD BE WITHIN +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT AS ESTABLISHED BY THE STANDARD PROCTOR TEST. SEE GEOTECHNICAL REPORT FOR MORE DETAILED SPECIFICATIONS RELATING TO THE SELECTION AND PLACEMENT OF STRUCTURAL FILL.

C. ALL FILL TO BE UTILIZED AT THE SITE SHOULD BE SELECTED ON THE BASIS OF ITS PLASTICITY CHARACTERISTICS AND LABORATORY COMPACTION TESTS. ON-SITE SOILS WHICH ARE FOUND TO CONTAIN DELETERIOUS MATERIAL, INCLUDING ORGANICS AND TOPSOIL, SHOULD NOT BE USED AS STRUCTURAL FILL FOR THE SUPPORT OF STRUCTURES OR PAVEMENT. THE CORE MATERIAL SHOULD HAVE A USCS CLASSIFICATION OF MH, CH, CL OR ML. PRIOR TO EXCAVATION THE CONTRACTOR SHOULD HAVE THE CORE TRENCH MATERIAL TESTED AND APPROVED BY THE GEOTECHNICAL ENGINEER. THIS TESTING SHOULD INCLUDE DOUBLE HYDROMETER TESTING TO ENSURE THAT THE SOILS ARE NOT DISPERSIVE IN NATURE.

D. CONTRACTOR TO COORDINATE CONSTRUCTION OF DAMS WITH A GEOTECHNICAL FIRM EXPERIENCED IN FIELD TESTING SERVICES FOR EARTHEN DAM CONSTRUCTION. SPECIFICATIONS GIVEN ON THESE PLANS ARE RECOMMENDATIONS ONLY. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL SPECIFICATIONS. E. ALL FILL MATERIAL USED FOR CONSTRUCTION OF DAM CORE AND EMBANKMENTS TO BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.

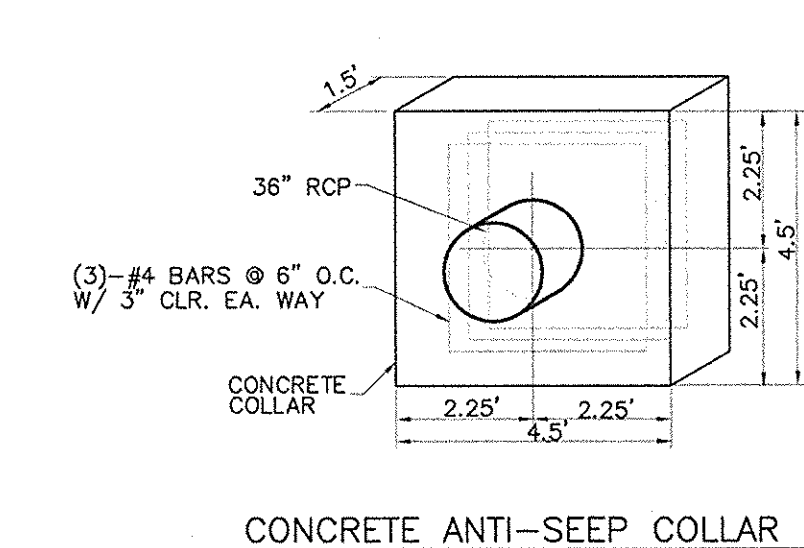
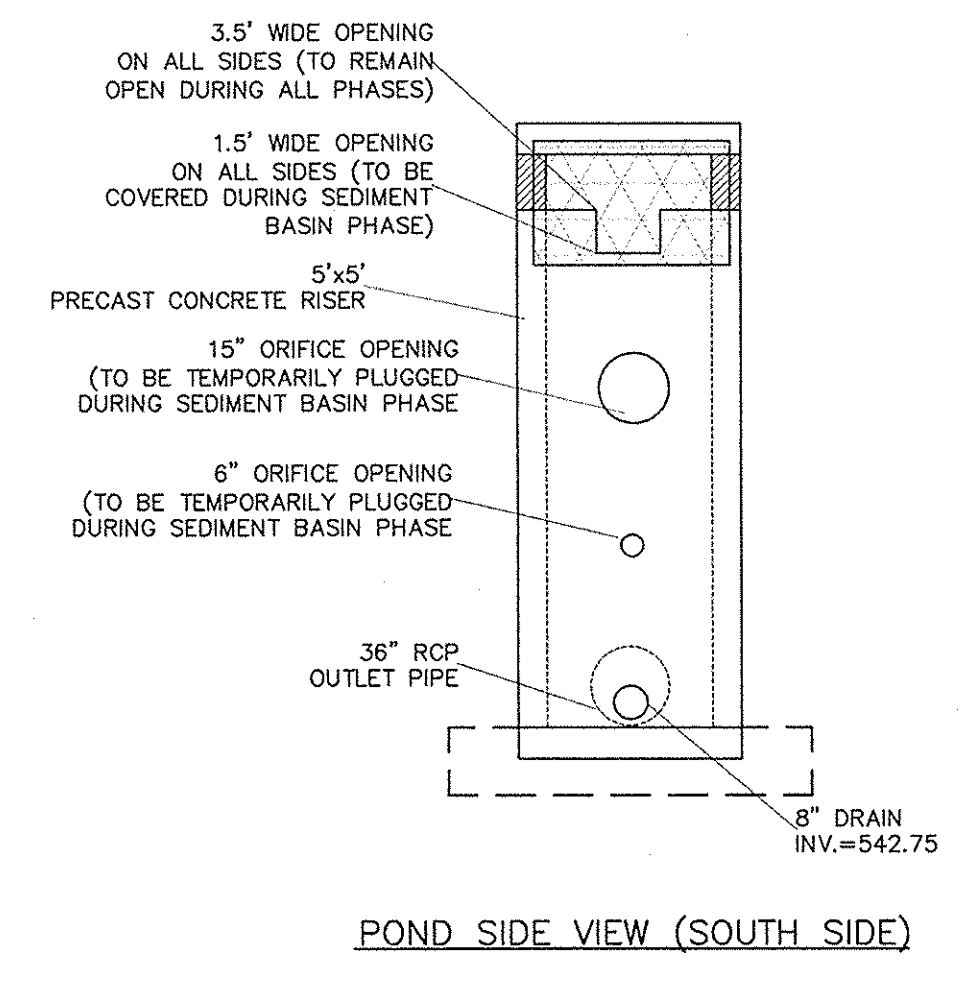
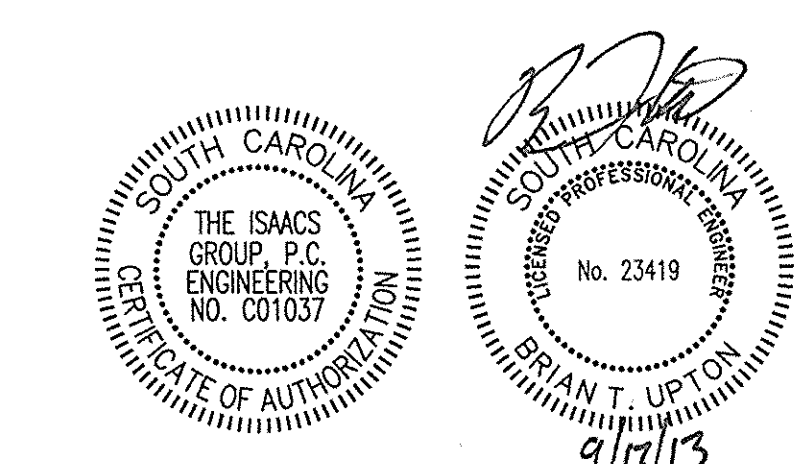


Table 3: Minimum Biological Growth Stimulant Requirements

BGS Property	Test Method ¹	Required Value
Physical Humic/fulvic Acid		1% minimum
Acute Toxicity	ASTM 7101 EPA 2001.0-1	Non Toxic
Performance		
Seed Germination	ASTM D7322 ²	200% minimum
Plant Height	ASTM D7322 ²	200% minimum
Plant Mass	ASTM D7322 ²	100% minimum

¹ Alternative to 4 Methods from independent 3rd party testing facilities will be accepted until January 31, 2017.
² ASTM test methods developed for Road and Tunnel Control Products (RCPs) that have been modified for comparison to control between 14 and 21 days.



PROJECT GEKKO
 996 PARAGON WAY
 ROCK HILL, SOUTH CAROLINA

DETAILS

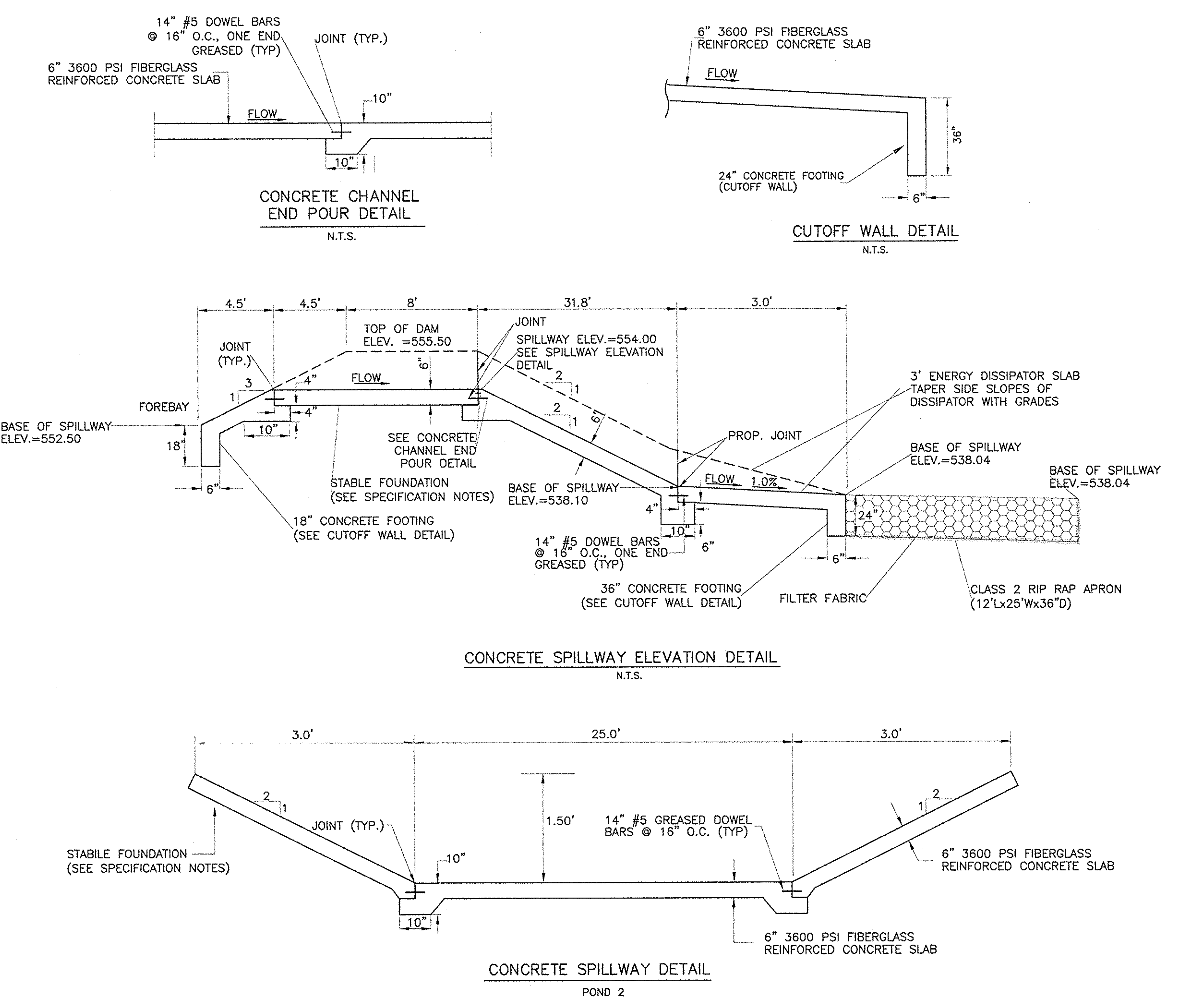
File #: 13020-PS.dwg Date: 05/01/13 Project Egr: B.T.U.
 Design By: F.B.L.
 Drawn By: F.B.L.
 Scale: 1"=30'

8720 RED OAK BOULEVARD, SUITE 420
 CHARLOTTE, N.C. 28217
 PHONE (704) 527-3440 FAX (704) 527-8335

C5.2

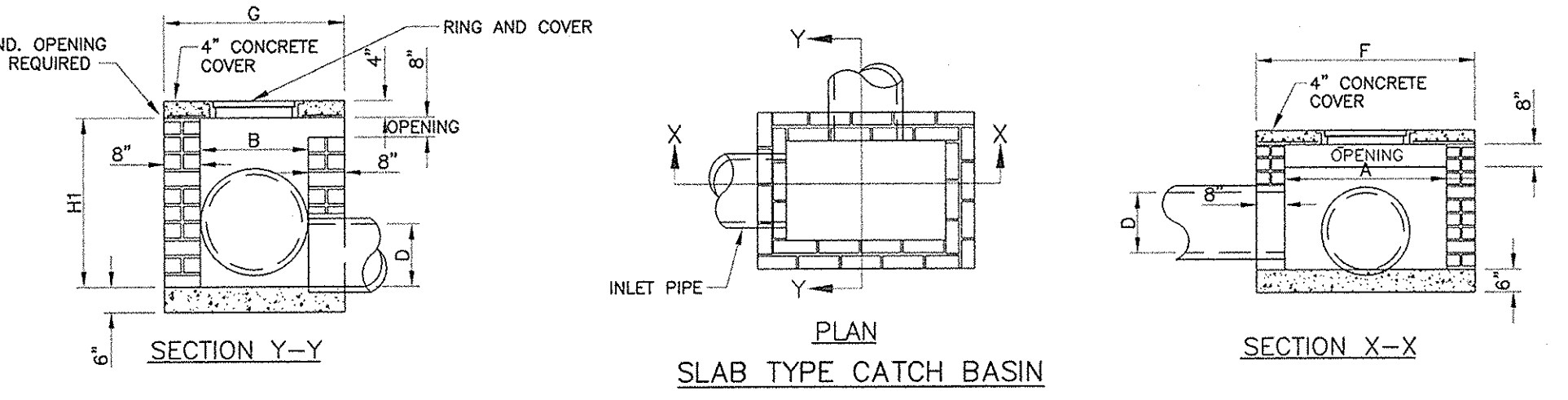
NO. BY DATE REVISION

1	FBL	06/13/13	PER CITY COMMENTS
2	FBL	06/18/13	PER CITY COMMENTS
3	CBH	06/26/13	FOR FULL SUBMITTAL
4	FBL	06/29/13	PER CITY COMMENTS
5	FBL	09/10/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

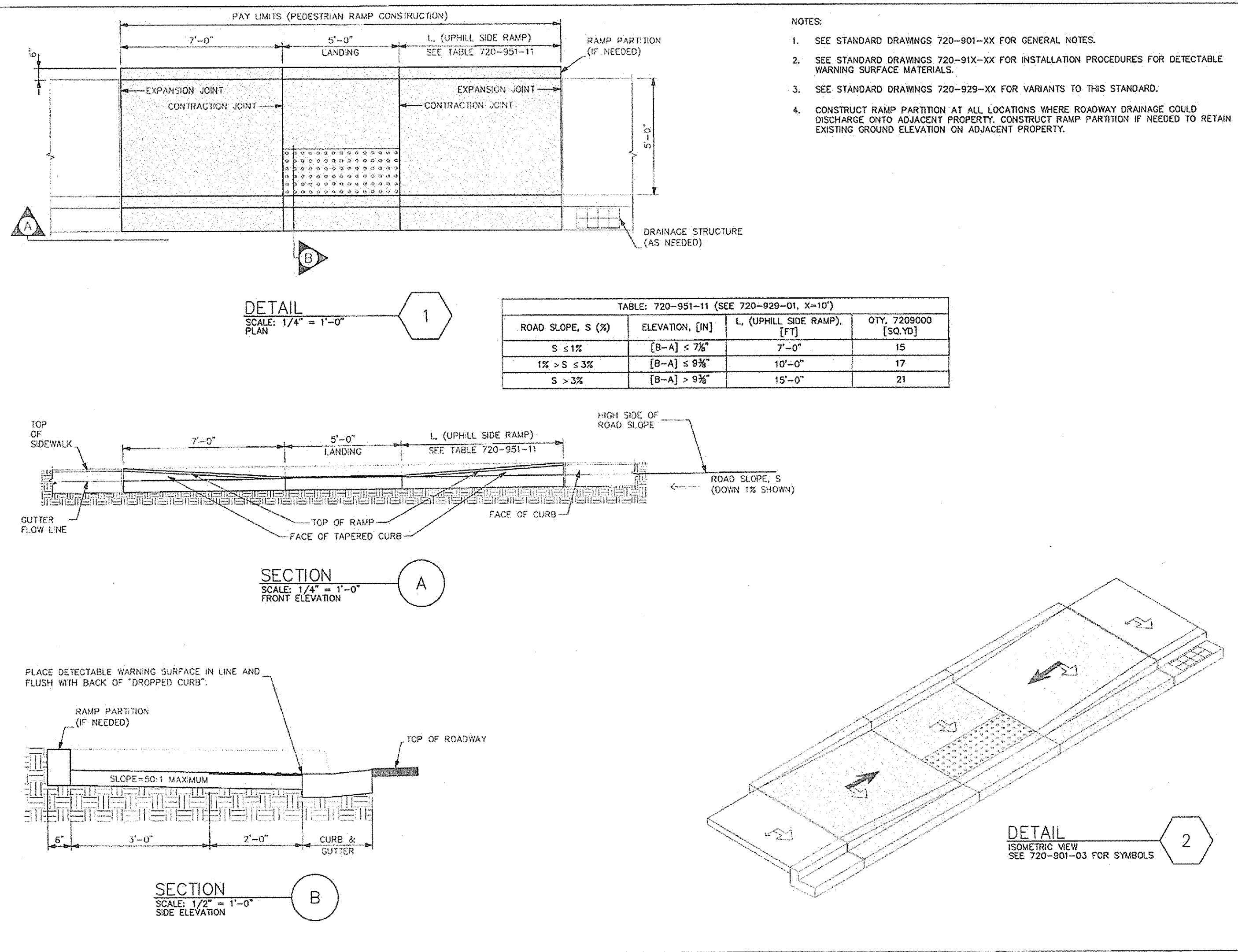


- GENERAL NOTES:**
- MORTAR JOINTS SHOULD BE BETWEEN 3/8" AND 5/8" THICK.
 - ALL CONCRETE TO BE 3600 P.S.I. COMPRESSIVE STRENGTH.
 - THE 6" OPENING SHOWN MAY BE INCREASED TO 8" MAX. IF DEEMED TO BE NECESSARY BY THE ENGINEER.
 - ALL CATCH BASIN OVER 3'-4" IN DEPTH SHALL BE PROVIDED WITH STEPS 1'-2" ON CENTERS. STEPS SHALL BE IN ACCORDANCE WITH STD. 20.12.
 - CONCRETE BRICK MAY BE USED IN LIEU OF HARD COMMON CLAY BRICK.
 - JUMBO BRICK WILL BE PERMITTED.
 - FOR 8'-0" IN HEIGHT OR LESS USE 8" WALL OVER 8'-0" IN HEIGHT USE 12" WALL TO 4'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 8'-0".
 - ALL EXPOSED JOINTS WILL BE CONCAVE TOOLED.
 - ALL PIPE IN STORM DRAIN STRUCTURE SHALL BE STRUCK EVEN WITH THE INSIDE WALL, GROUTED AND BRUSHED SMOOTH.
 - NEEP HOLES SHALL BE PLACED IN BACK WALL WITH FILTER FABRIC OR STONE ON BACK SIDE.
 - THIS CATCH BASIN IS NOT TO BE USED WITHIN STREET RIGHT OF WAY UNLESS OTHERWISE APPROVED BY CITY ENGINEER.

DIMENSIONS OF BOX AND PIPE		COVER DIMENSION	
PIPE	SPAN	WIDTH	HEIGHT
D	A	B	H (MIN)
15"	3'-6"	2'-3"	2'-7"
18"	4'-0"	2'-8"	2'-11"
24"	4'-0"	2'-8"	3'-5"
30"	4'-0"	3'-6"	3'-11"
36"	4'-0"	3'-6"	4'-6"
42"	4'-0"	3'-6"	4'-11"
48"	4'-6"	4'-0"	5'-5"

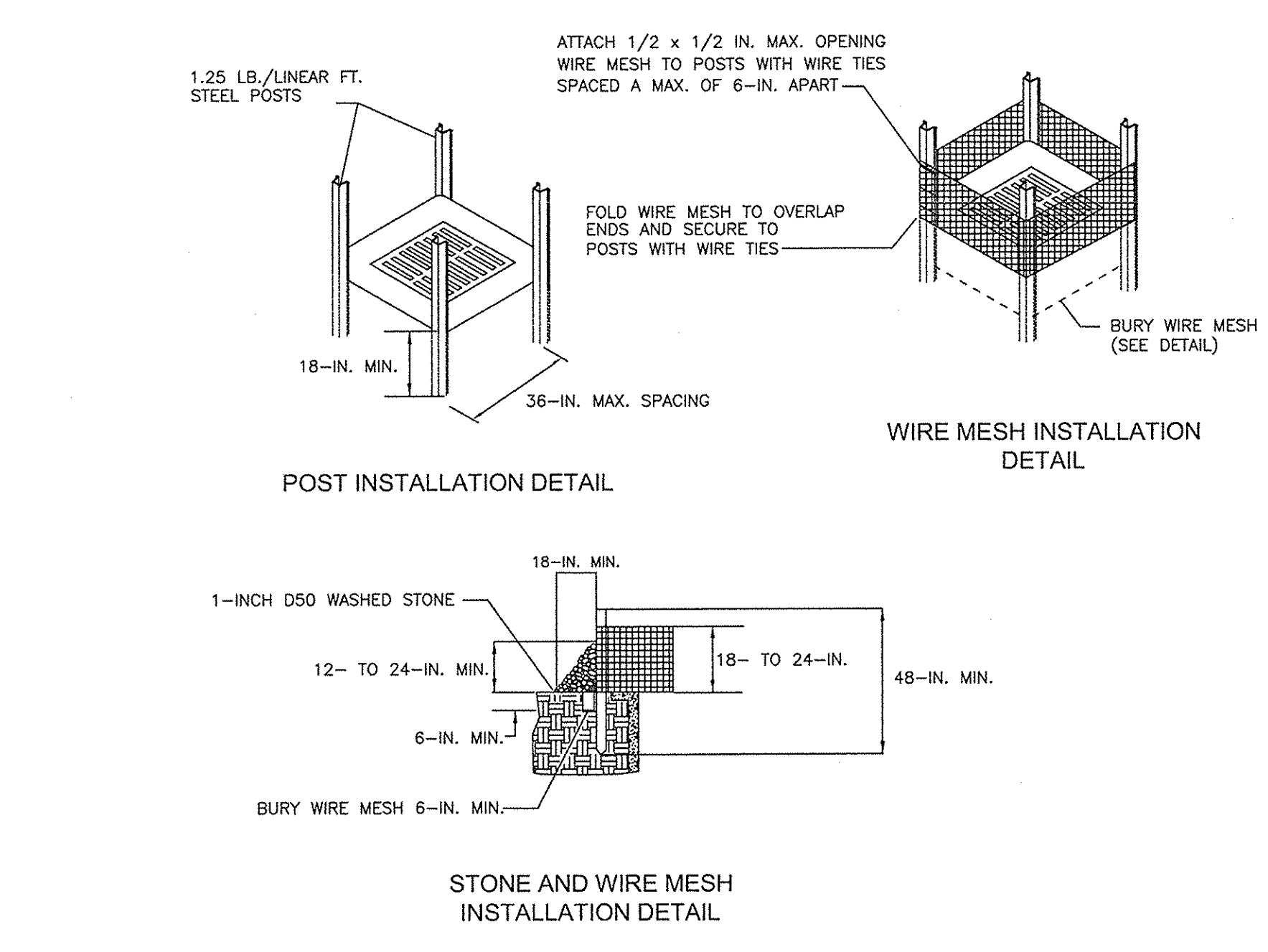


ROAD SLOPE, S (%)	ELEVATION, [N]	L (UPHILL SIDE RAMP), [FT]	QTY, 7209000
S ≤ 1%	[B-A] ≤ 7/8"	7'-0"	15
1% > S ≤ 3%	[B-A] ≤ 9/8"	10'-0"	17
S > 3%	[B-A] > 9/8"	15'-0"	21



DETAIL ISOMETRIC VIEW SEE 720-901-03 FOR SYMBOLS

BMP OUTLET STRUCTURE TRASH RACK CIRCULAR ORIFICE



STONE AND WIRE MESH INSTALLATION DETAIL

TYPE B - WIRE MESH AND STONE INLET PROTECTION

MATERIALS:
 USE HARDWARE FABRIC OR COMPARABLE WIRE MESH WITH MAXIMUM OPENINGS OF 0.5-INCHES X 0.5-INCHES AS THE SUPPORTING MATERIAL.
 USE STEEL POSTS THAT MEET THE FOLLOWING MINIMUM PHYSICAL REQUIREMENTS: BE COMPOSED OF HIGH STRENGTH STEEL WITH MINIMUM YIELD STRENGTH OF 50,000 PSI. HAVE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND NOMINAL "T" LENGTH OF 1.48-INCHES.
 WEIGH 1.25 POUNDS PER FOOT (± 8%).
 BE PAINTED WITH A WATER BASED BAKED ENAMEL PAINT.
 USE HEAVY-DUTY WIRE TIES TO ATTACH THE WIRE MESH MATERIAL TO THE STEEL POSTS.
 PLACE AGGREGATE NO. 5 WASHED STONE AGAINST THE HARDWARE FABRIC ON ALL SIDES.

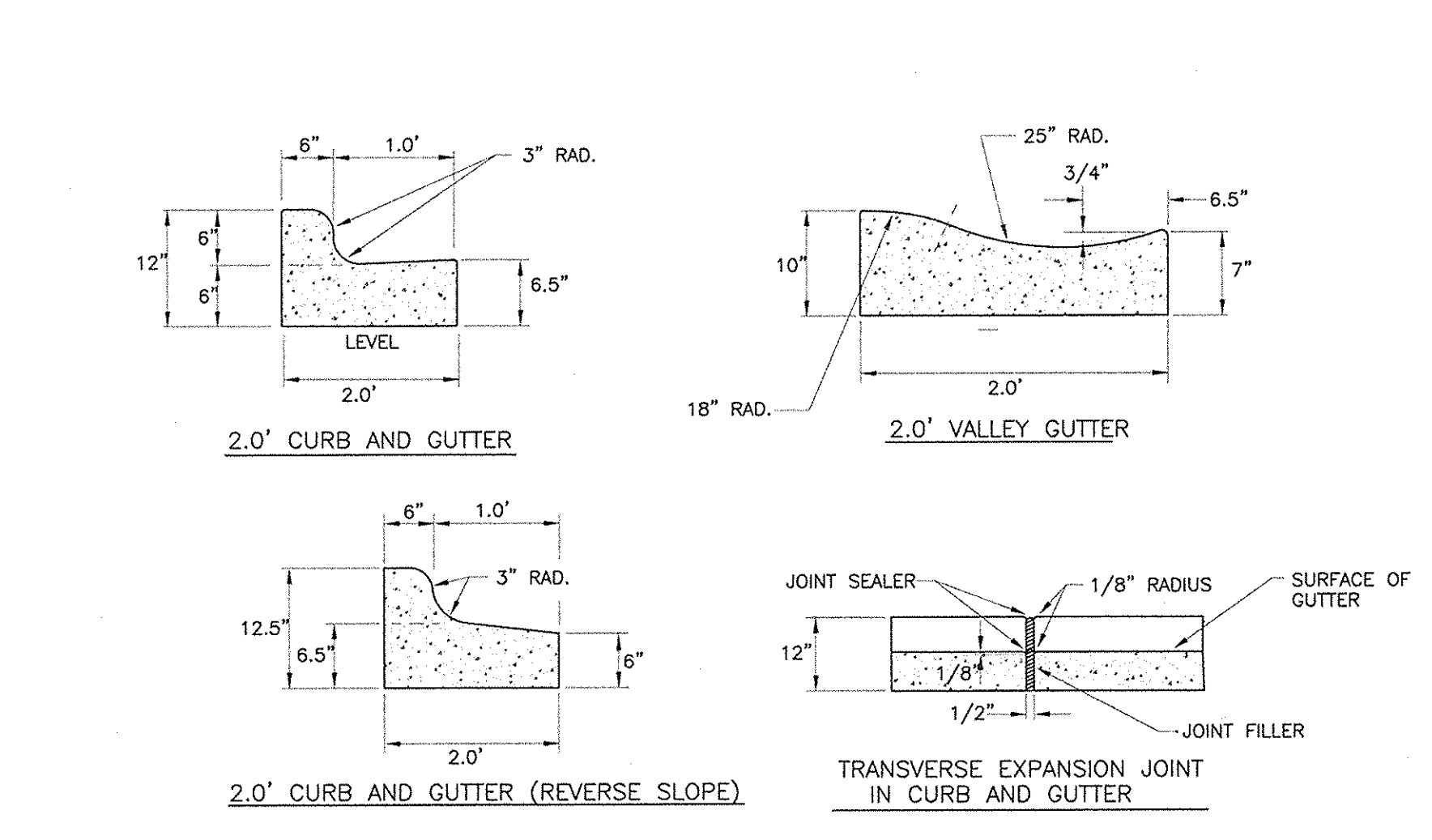
INSTALLATION:
 EXCAVATE A TRENCH 6-INCHES DEEP AROUND THE OUTSIDE PERIMETER OF THE INLET.
 USE HARDWARE FABRIC OR COMPARABLE WIRE MESH WITH MAXIMUM OPENINGS OF 0.5-INCHES BY 0.5-INCHES AS THE SUPPORTING MATERIAL. EXTENDED THE FABRIC A MINIMUM OF 6-INCHES INTO THE GROUND. BACKFILL THE TRENCH WITH SOIL OR CRUSHED STONE AND COMPACT OVER THE FABRIC.
 USE STEEL POSTS WITH A MINIMUM POST LENGTH OF 36-INCHES CONSISTING OF STANDARD "T" SECTIONS WITH A WEIGHT OF 1.25 POUNDS PER FOOT (± 8%). INSTALL THE WIRE MESH FABRIC ABOVE GRADE A MINIMUM OF 18-INCHES WITHOUT EXCEEDING 24-INCHES.
 SPACE THE STEEL POSTS A MAXIMUM OF 3- FEET APART AROUND THE PERIMETER OF THE INLET AND DRIVE THEM INTO THE GROUND A MINIMUM OF 18-INCHES.
 USE HEAVY-DUTY WIRE TIES SPACED A MAXIMUM OF 6-INCHES APART TO ATTACH THE WIRE MESH MATERIAL TO THE STEEL POSTS.
 PLACE AGGREGATE NO. 5 WASHED STONE TO A MINIMUM HEIGHT OF 12-INCHES, AND A MAXIMUM HEIGHT OF 24-INCHES AGAINST THE HARDWARE FABRIC ON ALL SIDES.

INSPECTION AND MAINTENANCE:
 IF THE STONE BECOMES CLOGGED WITH SEDIMENT, PULL THE STONES AWAY FROM THE INLET AND CLEAN OR REPLACE THEM.
 SINCE CLEANING OF GRAVEL AT A CONSTRUCTION SITE MAY BE DIFFICULT, AN ALTERNATIVE APPROACH WOULD BE TO USE THE CLOGGED STONE AS FILL AND PUT FRESH STONE AROUND THE INLET.

REMOVE ACCUMULATED SEDIMENT FROM STONE WHEN SEDIMENT REACHES 3/4 OF THE HEIGHT OF THE STRUCTURE.

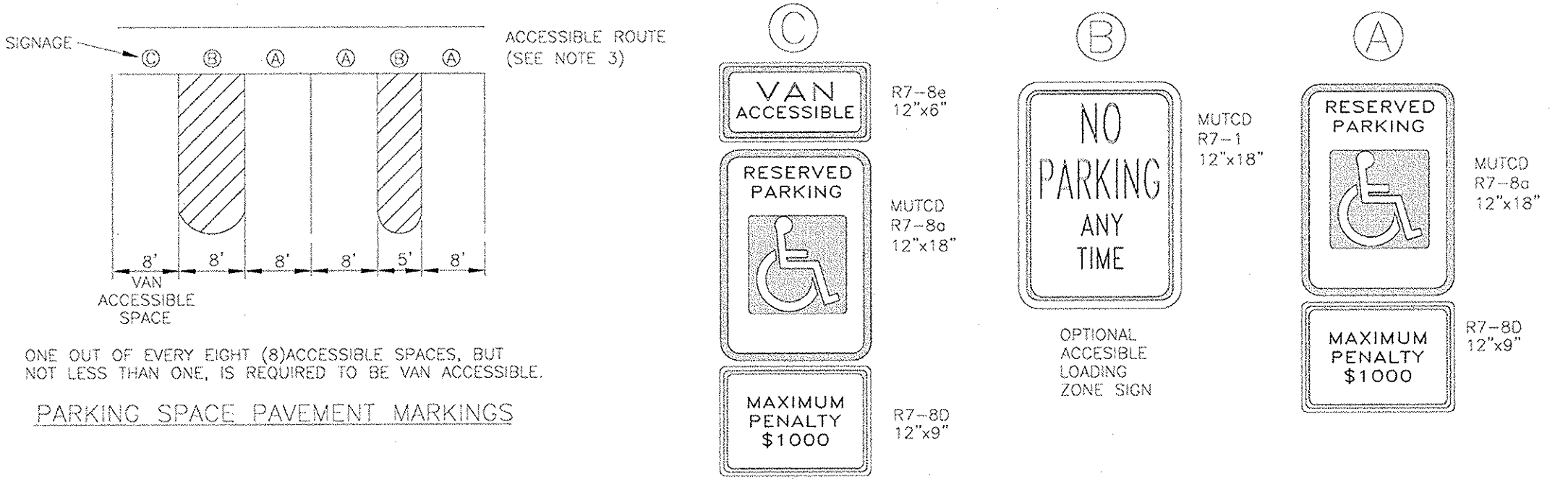
TYPE B - HARDWARE FABRIC AND STONE INLET PROTECTION STD. DRAWING SC-08

BMP OUTLET STRUCTURE TRASH RACK OPENING IN BOX

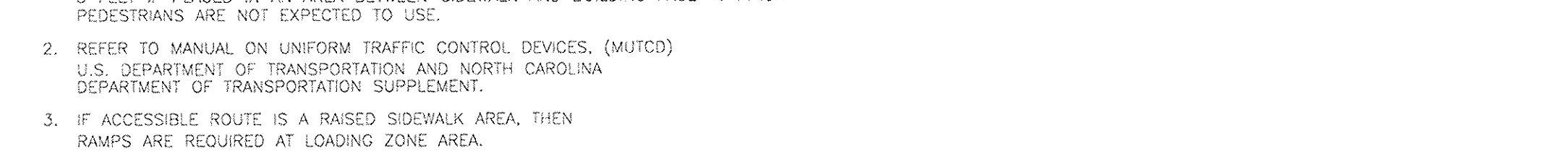


- GENERAL NOTES:**
- CONTRACTION JOINTS SHALL BE SPACED AT 10 FOOT INTERVALS. FOR VALLEY GUTTER, A 15 FOOT SPACING MAY BE USED WHEN A MACHINE IS USED. JOINT SPACING MAY BE ALTERED BY THE ENGINEER TO PREVENT UNCONTROLLED CRACKING.
 - CONTRACTION JOINTS MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MINIMUM DEPTH OF 1 1/2" SHALL BE OBTAINED.
 - ALL EXPANSION JOINTS SHALL BE SPACED AT 90 FOOT INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS. JOINTS SHALL MATCH LOCATIONS WITH JOINTS IN ADJUTING SIDEWALK.
 - CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 PSI IN 28 DAYS.
 - CURB SHALL BE DEPRESSED AT INTERSECTIONS TO PROVIDE FOR FUTURE ACCESSIBLE RAMPS.
 - TOP 6" OF SUBGRADE BENEATH CURB AND GUTTER SHALL BE COMPACTED TO 100% STANDARD PROCTOR DENSITY.

CURB AND GUTTER



PARKING SPACE PAVEMENT MARKINGS

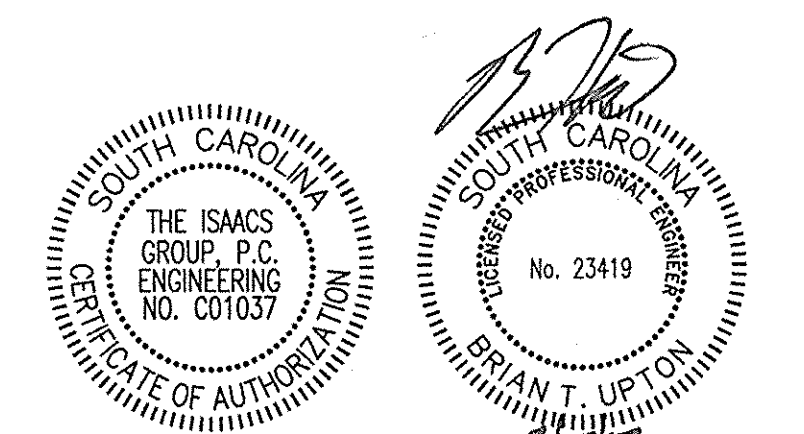


ACCESSIBLE PARKING AND SIGNAGE STANDARDS

ACCESSIBLE PARKING REQUIREMENTS

TOTAL PARKING SPACES PROVIDED	MINIMUM NUMBER OF ACCESSIBLE SPACES REQUIRED	MINIMUM NUMBER OF ACCESSIBLE SPACES REQUIRED TO BE VAN ACCESSIBLE
1 TO 25	1	1
26 TO 50	2	1
51 TO 75	3	1
76 TO 100	4	1
101 TO 150	5	1
151 TO 200	6	1
201 TO 300	7	1
301 TO 400	8	1
401 TO 500	9	2
501 TO 1000	2% OF TOTAL	1 IN EVERY 8 ACCESSIBLE SPACES
1001 AND OVER	2% PLUS 1 FOR EACH 100 OVER 1000	1 IN EVERY 8 ACCESSIBLE SPACES

SECTION 4.1.2 (3) OF THE AMERICANS WITH DISABILITIES ACT (ADA).
 SEE 4.1.2.(5) (4) FOR MEDICAL CARE FACILITIES



REFERENCES

NATIONAL DOCUMENTS
 REVISED DRAFT GUIDELINES FOR ACCESSIBLE PUBLIC RIGHTS-OF-WAY NOVEMBER, 2005. MUTCD 2009

SCDOT DOCUMENTS
 SCDOT TRANSITION PLAN QPL 01

RELATED DRAWINGS & KEYWORDS
 720-929-01
 720-929-02

THIS DRAWING IS ONLY VALID FOR CONSTRUCTION WHEN SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA. CHECK MISSOURI DOT FOR LATEST UPDATE.

Professional Engineer Seal: Brian T. Upchurch, No. 21242

Amesha K. Vardell, S.C. Professional Engineer
 9-27-2012
 DATE

NO.	DATE	DESCRIPTION
6		
5		
4		
3		
2		
1		
0	1/13/05	NEW DRAWING
1		

SCDOT
 SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DESIGN STANDARDS OFFICE
 935 PARK STREET
 COLUMBIA, SC 29201

STANDARD DRAWING
 PEDESTRIAN RAMP
 NO GRASS
 (PARALLEL RAMP)

720-951-11
 PREPARED (ISSUE DATE) JANUARY 2012

PROJECT GEKKO
 996 PARAGON WAY
 ROCK HILL, SOUTH CAROLINA

DETAILS

File #: 13020-PB.dwg Date: 05/01/13 Project Egr: BTU
 Design By: FBL
 Drawn By: FBL
 Scale: 1"=30'

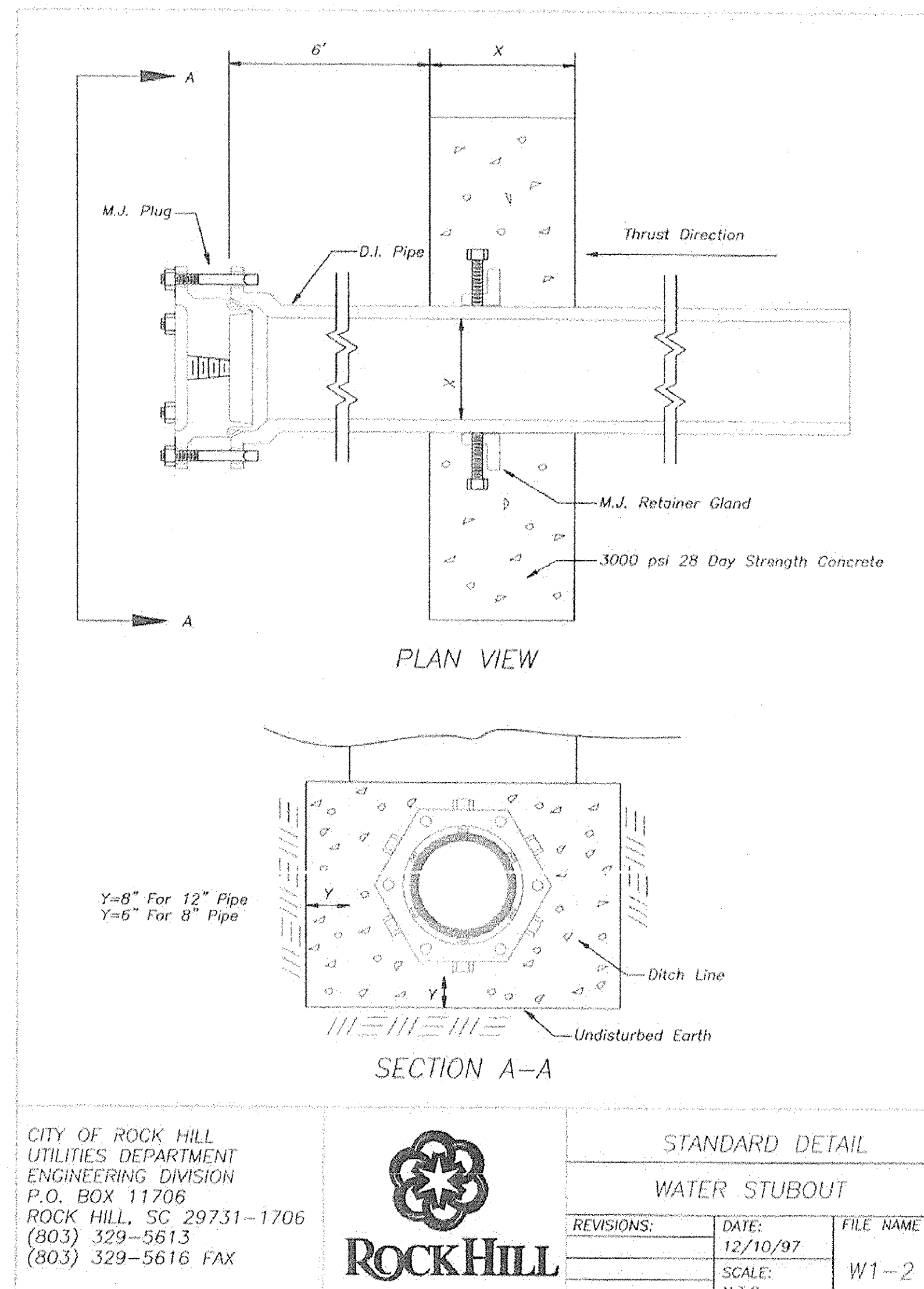
8720 RED OAK BOULEVARD, SUITE 420
 CHARLOTTE, N.C. 28217
 PHONE (704) 527-3440 FAX (704) 527-8355

ISACs
 THE ISACs GROUP, P.C. ENGINEERING
 No. 010103

REVISIONS

NO.	BY	DATE	REVISION
1	FBL	05/13/13	PER CITY COMMENTS
2	FBL	05/18/13	PER CITY COMMENTS
3	CPB	05/25/13	FOR FINAL SUBMITTAL
4	FBL	08/02/13	PER CITY COMMENTS
5	FBL	09/10/13	PER CONTRACTOR COMMENTS
6	FBL	09/17/13	CONSTRUCTION DRAWINGS

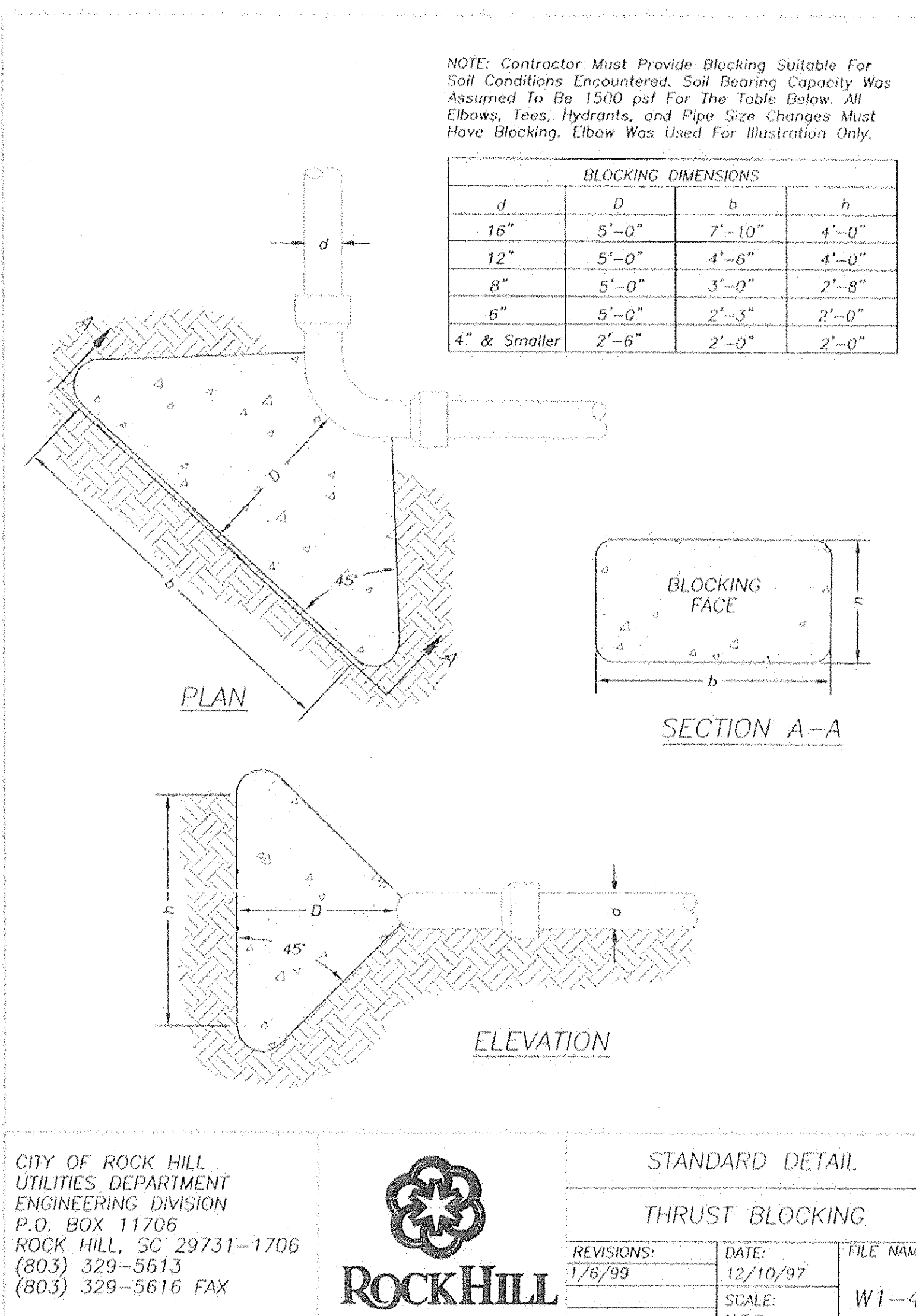
C5.3



CITY OF ROCK HILL
UTILITIES DEPARTMENT
ENGINEERING DIVISION
P.O. BOX 11706
ROCK HILL, SC 29731-1706
(803) 329-5613
(803) 329-5616 FAX

STANDARD DETAIL
WATER STUBOUT

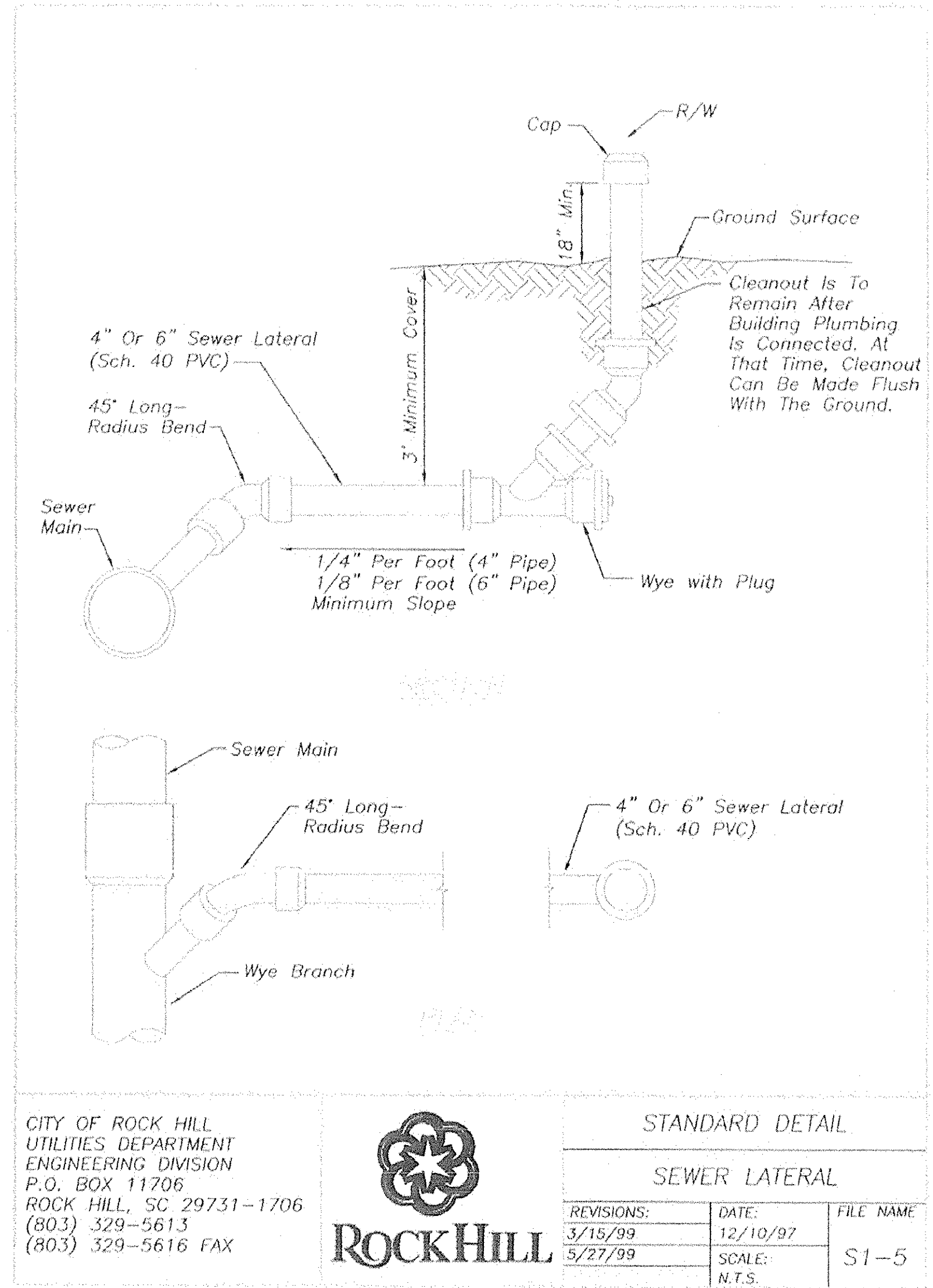
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12/10/97 W1-2
SCALE: N.T.S.



CITY OF ROCK HILL
UTILITIES DEPARTMENT
ENGINEERING DIVISION
P.O. BOX 11706
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STANDARD DETAIL
THRUST BLOCKING

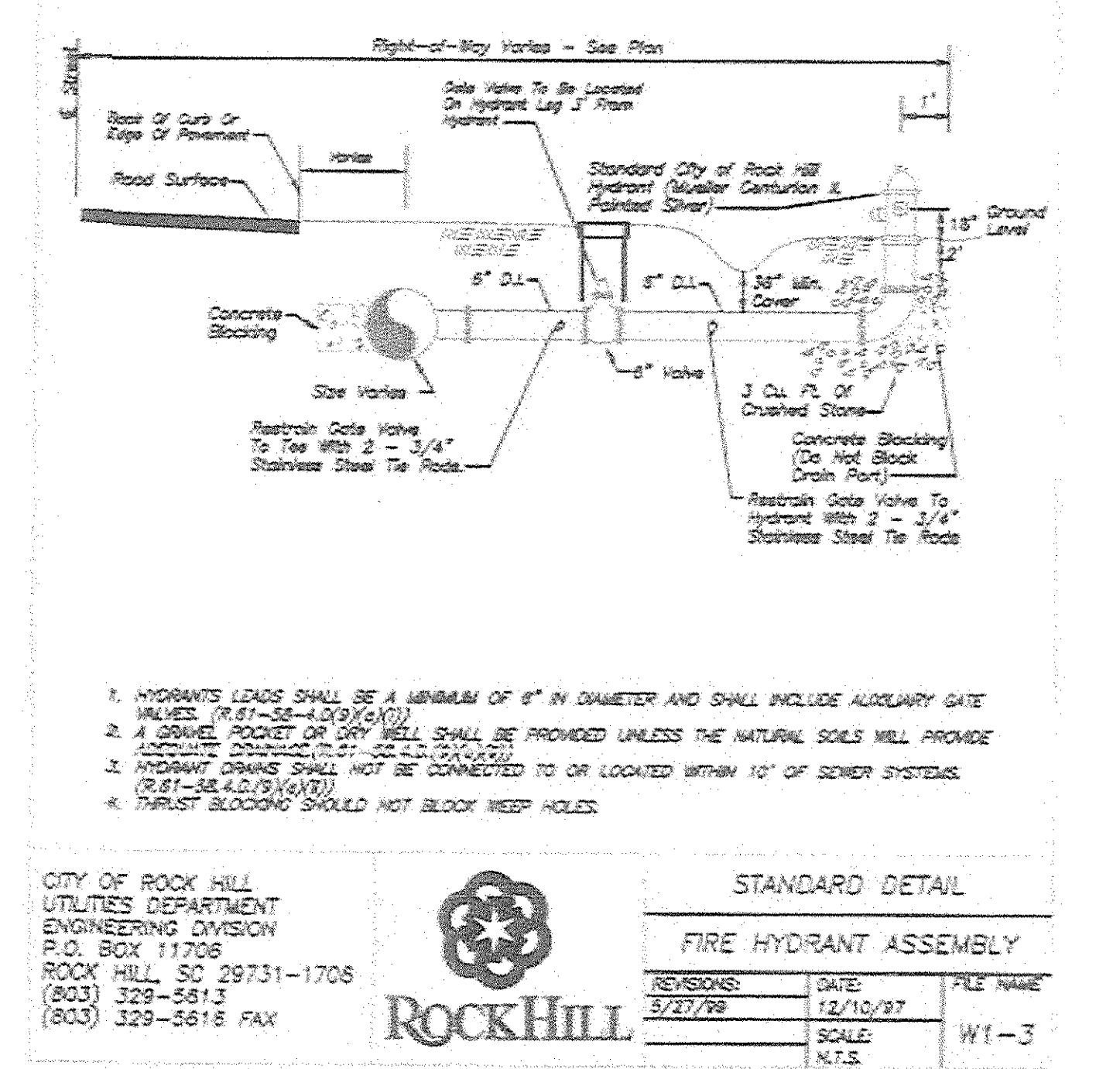
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1/6/99 12/10/97 W1-4
SCALE: N.T.S.



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ENGINEERING DIVISION
P.O. BOX 11706
ROCK HILL, SC 29731-1706
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STANDARD DETAIL
SEWER LATERAL

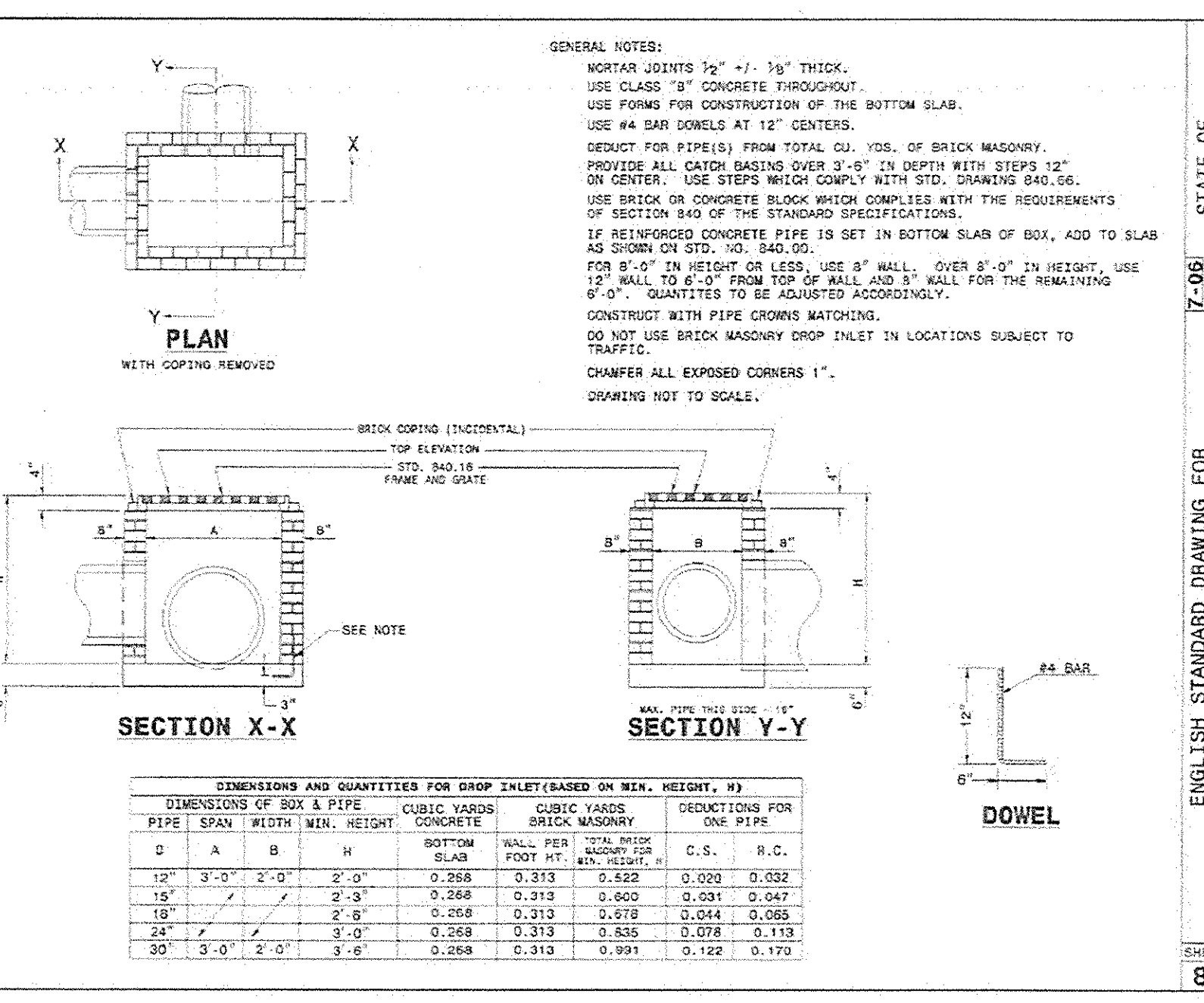
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SCALE: N.T.S.



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UTILITIES DEPARTMENT
ENGINEERING DIVISION
P.O. BOX 11706
ROCK HILL, SC 29731-1706
(803) 329-5613
(803) 329-5616 FAX

STANDARD DETAIL
FIRE HYDRANT ASSEMBLY

REVISIONS: DATE: FILE NAME:
3/27/99 12/10/97 W1-3
SCALE: N.T.S.



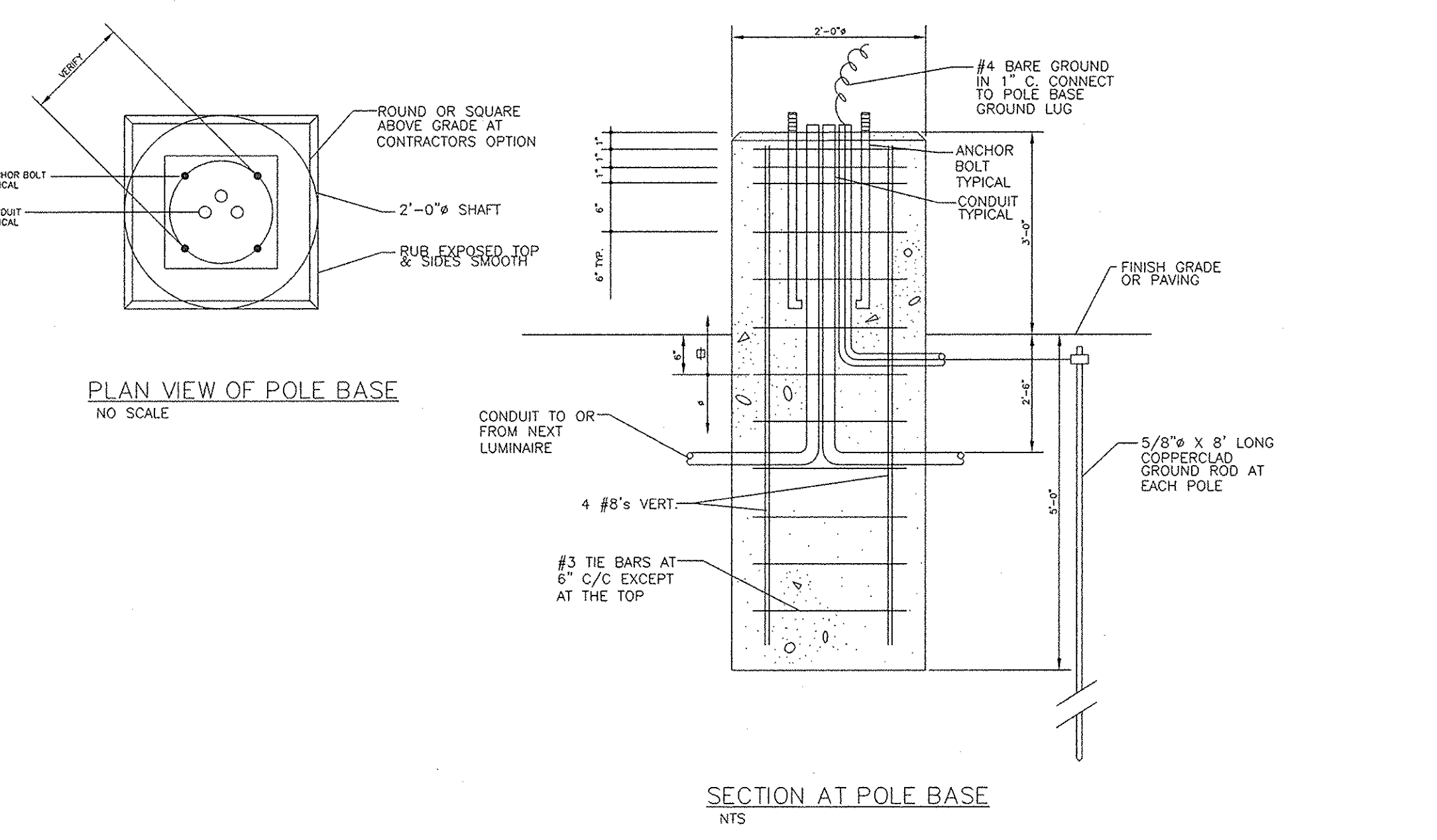
7-061 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR BRICK DROP INLET 12" THRU 30" PIPE

SHEET 1 OF 1
840.15

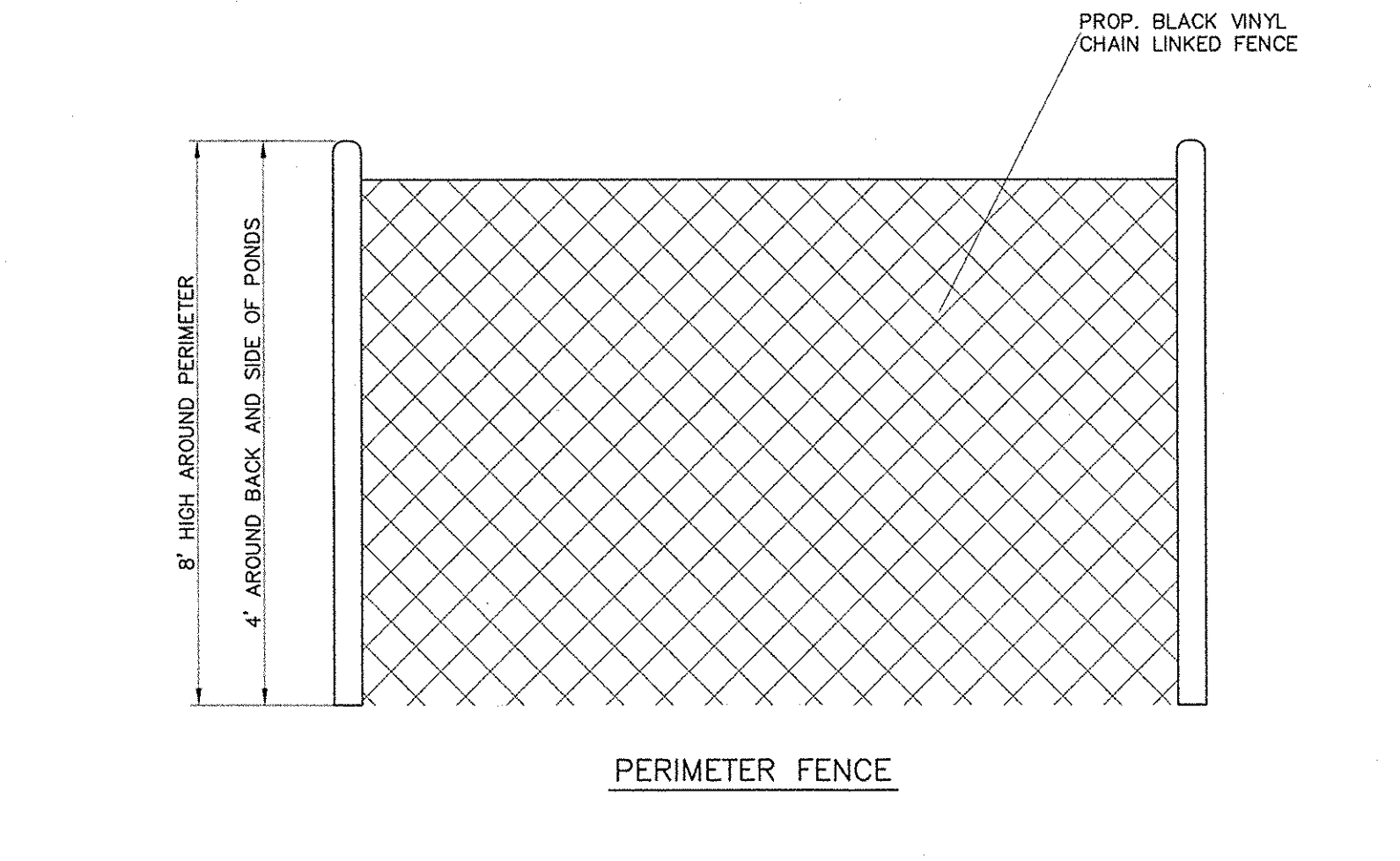
Temporary Seeding - Upstate

Species	Lbs/ac	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Browtop Millet (Alone)	40												
Browtop Millet (Mix)	10												
Rye Grass (Alone)	56												
Rye Grass (Mix)	10												
Rye Grass (Alone)	50												
Rye Grass (Mix)	8												
For Steep Slopes/Cut Slopes													
Weeping Lovegrass (Alone)	4												
Weeping Lovegrass (Mix)	2												



Permanent Seeding - Upstate

Species	Lbs/Ac	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bahia Grass (Alone)	40												
Bahia Grass (Mix)	30												
Bermuda Grass (hulled) (Alone)	8-12												
Bermuda Grass (hulled) (Mix)	4-6												
Fescue, Tall (KY31) Alone	40												
Fescue, Tall (KY31) mix	20												
Serenca Lespedeza (Scarified) Alone or Mix (inoculate with EL Inoculant)	40												
Ladino Clover (mix only)	2												
Inoculate with AB Inoculant													
For Steep Slopes/Cut Slopes													
Weeping Lovegrass (Alone)	4												
Weeping Lovegrass (Mix)	2												
Crownvetch (Mix) (Inoculate with Type M Inoculant)	8-10												



PERIMETER FENCE

THE ISACCS GROUP, P.C. ENGINEERING NO. 0101037

THE ISACCS GROUP, P.C. ENGINEERING NO. 23419

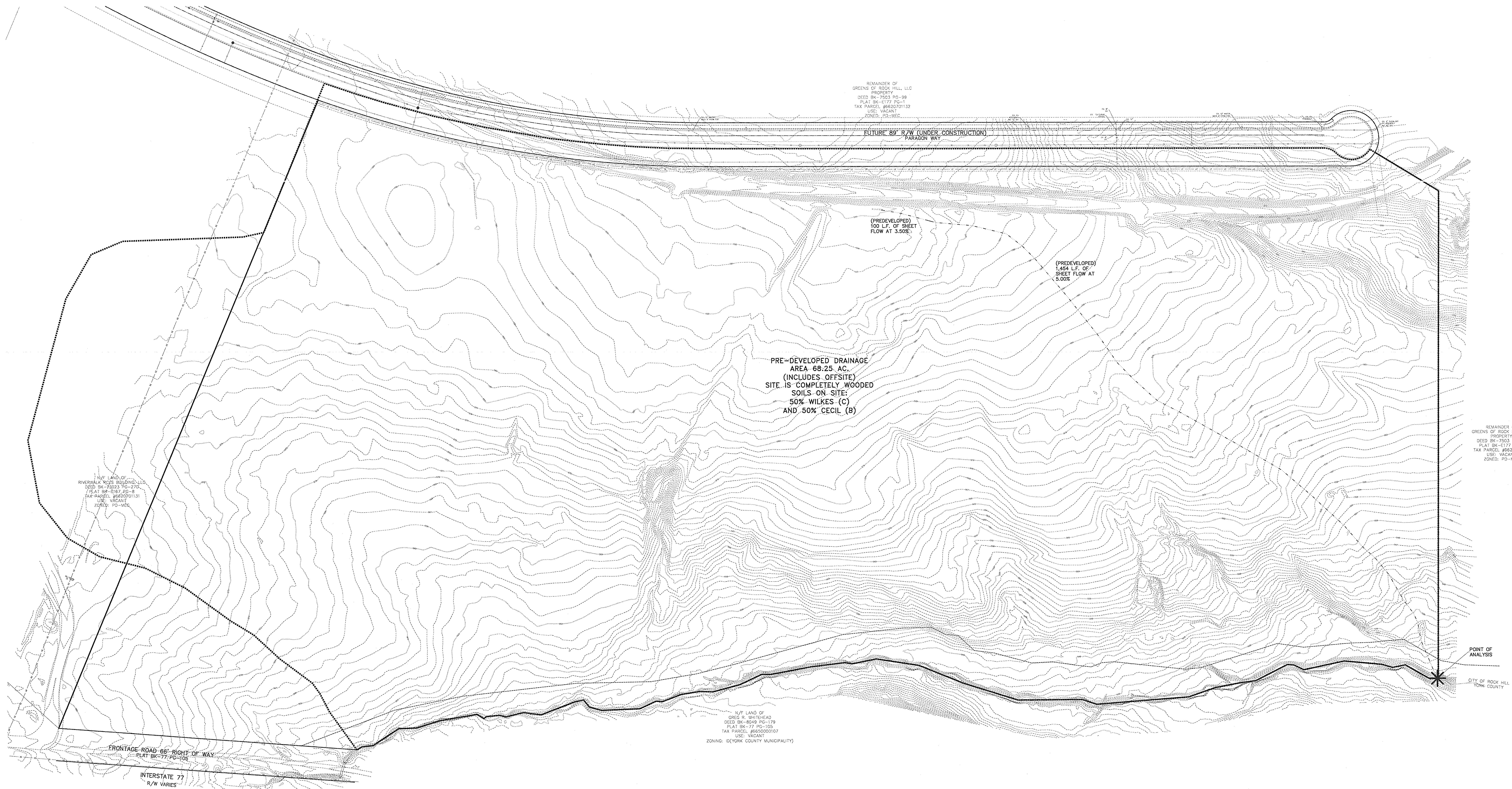
PROJECT GEKKO
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

DETAILS

NO. BY DATE REVISION
1 FBL 06/13/13 PER CITY COMMENTS
2 FBL 06/18/13 PER CITY COMMENTS
3 CBH 06/26/13 FOR FULL SUBMITTAL
4 FBL 08/02/13 PER CITY COMMENTS
5 FBL 09/10/13 PER CONTRACTOR COMMENTS
6 FBL 09/17/13 CONSTRUCTION DRAWINGS

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C5.4



REMAINDER OF
GREENS OF ROCK HILL, LLC
PROPERTY
DEED BK-7503 PG-99
PLAT BK-1177 PG-1
TAX PARCEL #662070132
USE: VACANT
ZONED: PD-MEC

FUTURE 89' R/W (UNDER CONSTRUCTION)
PARAGON WAY

(PREDEVELOPED)
100 L.F. OF SHEET
FLOW AT 3.50%

(PREDEVELOPED)
1,454 L.F. OF
SHEET FLOW AT
5.00%

PRE-DEVELOPED DRAINAGE
AREA 68.25 AC.
(INCLUDES OFFSITE)
SITE IS COMPLETELY WOODED
SOILS ON SITE:
50% WILKES (C)
AND 50% CECIL (B)

1/4 AC LAND OF
RIVERWALK KO'S SUBDIVISION, LLC
DEED BK-8023 PG-214
PLAT BK-6187 PG-5
(AKA-PAVING #662070131)
USE: VACANT
ZONED: PD-MEC

REMAINDER OF
GREENS OF ROCK HILL, LLC
PROPERTY
DEED BK-7503 PG-99
PLAT BK-1177 PG-1
TAX PARCEL #662070132
USE: VACANT
ZONED: PD-MEC

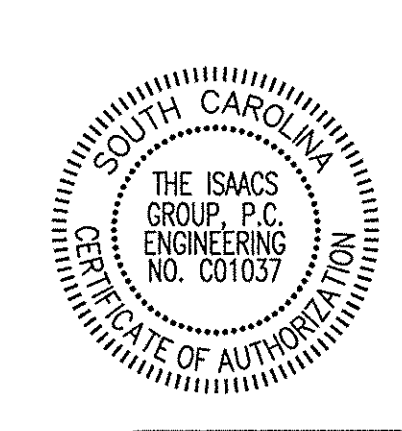
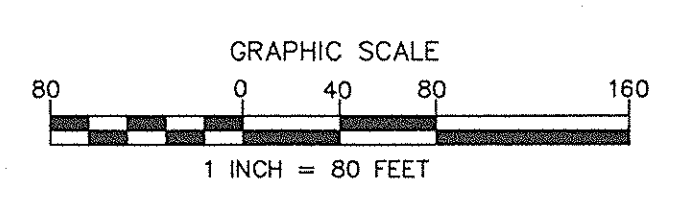
1/4 AC LAND OF
CROSS R. BRITHEAD
DEED BK-8049 PG-179
PLAT BK-17 PG-105
TAX PARCEL #662020107
USE: VACANT
ZONING: (CITY/ROCK COUNTY MUNICIPALITY)

POINT OF
ANALYSIS
CITY OF ROCK HILL
YORK COUNTY

FRONTAGE ROAD 66' RIGHT OF WAY
PLAT BK-77 PG-105

INTERSTATE 77
R/W VARIES

NOTE:
STORMWATER MITIGATION MEASURES WILL
BE CERTIFIED BY THE DESIGN ENGINEER.



Project: **PROJECT GEKKO**
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

PREDEVELOPED AREA

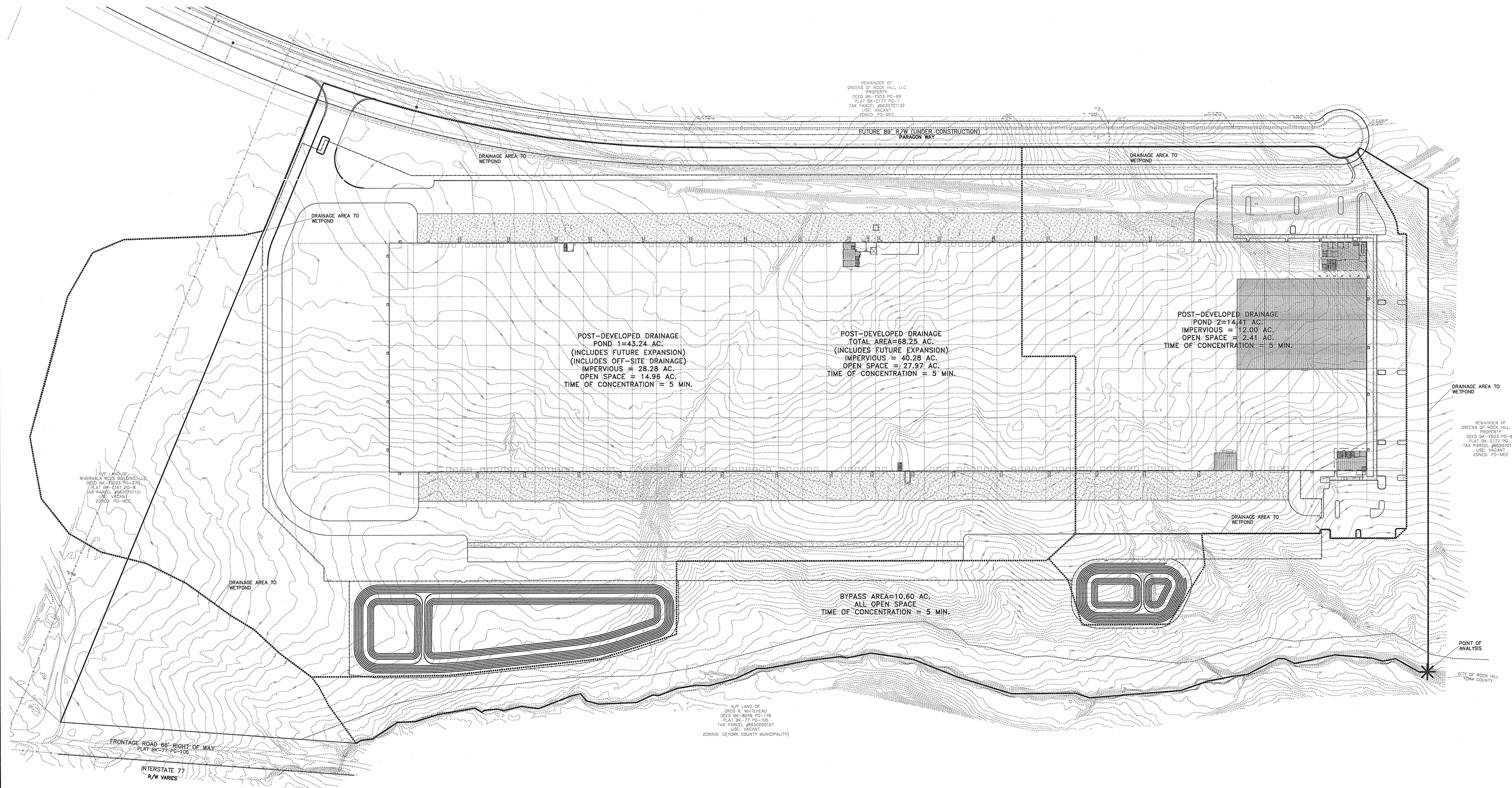
Title # 13020-PB.dwg Date: 05/01/13 Project Egr: BTJ
Design By: FBI
Drawn By: FBI
Scale: 1"=80'

ISAACS GROUP
ENGINEERING DESIGN AND LAND SURVEYING

6720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

DA1.0

NO.	BY	DATE	REVISION
1	FBL	06/12/13	PER CITY COMMENTS
2	CBH	06/26/13	FOR FULL SUBMITTAL
4	FBL	08/02/13	PER CITY COMMENTS
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6	FBL	09/17/13	CONSTRUCTION DRAWINGS



REMAINDER OF
GREENS OF ROCK HILL, LLC
PROPERTY
DEED BK-7503 PG-99
PLAT BK-E177 PG-1
TAX PARCEL #662070132
USE: VACANT
ZONED: PD-MEC

FUTURE 89' R/W (UNDER CONSTRUCTION)
PARAGON WAY

DRAINAGE AREA TO
WETPOND

DRAINAGE AREA TO
WETPOND

DRAINAGE AREA TO
WETPOND

POST-DEVELOPED DRAINAGE
POND 1=43.24 AC.
(INCLUDES FUTURE EXPANSION)
(INCLUDES OFF-SITE DRAINAGE)
IMPERVIOUS = 28.28 AC.
OPEN SPACE = 14.96 AC.
TIME OF CONCENTRATION = 5 MIN.

POST-DEVELOPED DRAINAGE
TOTAL AREA=68.25 AC.
(INCLUDES FUTURE EXPANSION)
IMPERVIOUS = 40.28 AC.
OPEN SPACE = 27.97 AC.
TIME OF CONCENTRATION = 5 MIN.

POST-DEVELOPED DRAINAGE
POND 2=14.41 AC.
IMPERVIOUS = 12.00 AC.
OPEN SPACE = 2.41 AC.
TIME OF CONCENTRATION = 5 MIN.

DRAINAGE AREA TO
WETPOND

REMAINDER OF
GREENS OF ROCK HILL, LLC
PROPERTY
DEED BK-7503 PG-99
PLAT BK-E177 PG-1
TAX PARCEL #662070132
USE: VACANT
ZONED: PD-MEC

N/4E LAND OF
RIVERBANK RZS BAUNGS, LLC
DEED BK-7653 PG-276
PLAT BK-E157 PG-8
TAX PARCEL #660070131
USE: VACANT
ZONED: PD-MEC

DRAINAGE AREA TO
WETPOND

DRAINAGE AREA TO
WETPOND

BYPASS AREA=10.60 AC.
ALL OPEN SPACE
TIME OF CONCENTRATION = 5 MIN.

POINT OF
ANALYSIS

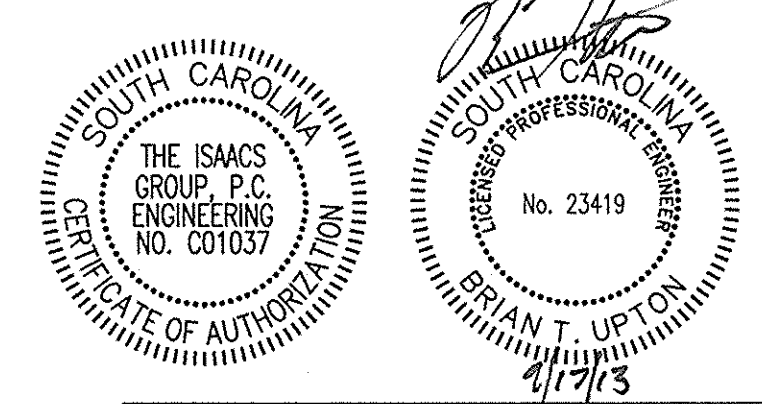
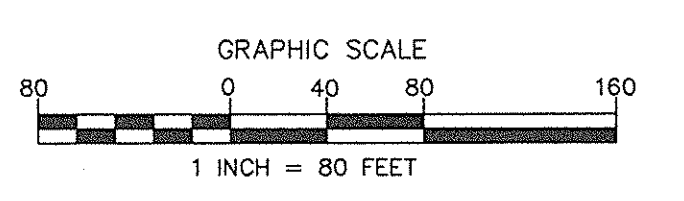
CITY OF ROCK HILL
YORK COUNTY

N/4E LAND OF
DREW S. WHITEHEAD
DEED BK-8049 PG-179
PLAT BK-77 PG-100
TAX PARCEL #655000107
USE: VACANT
ZONING: ID (YORK COUNTY MUNICIPALITY)

FRONTAGE ROAD 66' RIGHT OF WAY
PLAT BK-77 PG-100

INTERSTATE 77
R/W VARIES

NOTE:
STORMWATER MITIGATION MEASURES WILL
BE CERTIFIED BY THE DESIGN ENGINEER.



NO.	BY	DATE	REVISION
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2	CBH	06/26/13	FOR FULL SUBMITTAL
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6	FBL	09/17/13	CONSTRUCTION DRAWINGS

PROJECT GEKKO
996 PARAGON WAY
ROCK HILL, SOUTH CAROLINA

POSTDEVELOPED AREA

ISAACS
8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8355

DA2.0