

VICINITY MAP

*EXISTING DETENTION POND REPAIR
@ THE BLUES CROSSING APARTMENTS
FOR
HILLMAND DESIGN GROUP*

*LOCATED IN
ABERDEEN, NORTH CAROLINA*


INDEX

SHEET NO.	DESCRIPTION
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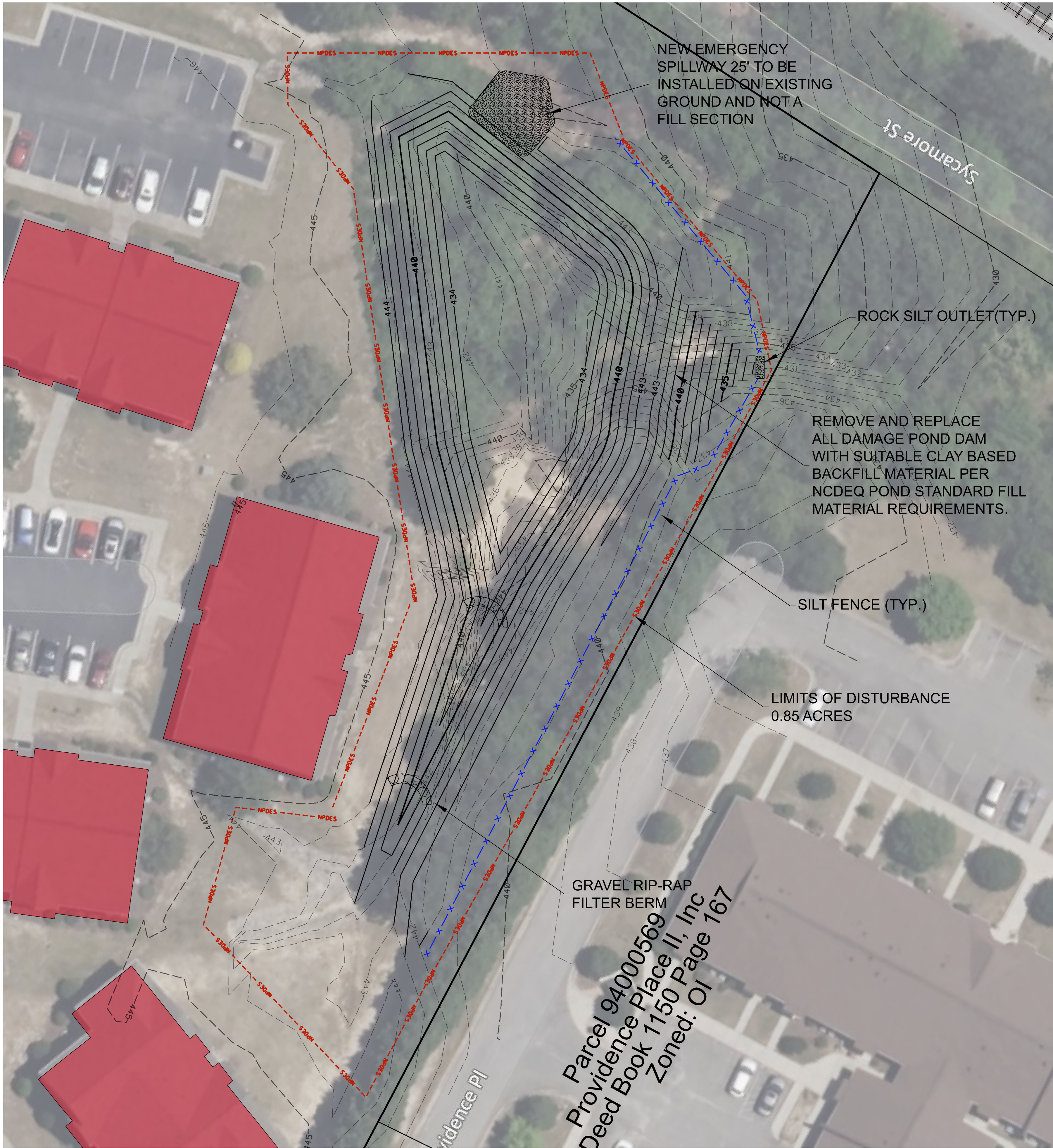
APPROVALS		PREPARED BY		SEALS		PROJECT		SHEET TITLE				NO.	DATE	REVISIONS		BY	SCALE: NTS							
Project Engr: _____ Drawn By: _____ Checked By: _____		<div><div>JOEL E. WOOD & ASSOCIATES</div><div>PLANNING • ENGINEERING • MANAGEMENT</div><div>P.O. BOX 296 CLOVER, SC 29710 (803) 684-3390</div></div>		<div><div><div>INFORMATION ONLY</div></div><div><div>JOEL E. WOOD & ASSOCIATES</div><div>ENGINEER</div></div><div><div>JOEL E. WOOD</div><div>ENGINEER</div></div></div>		EXISTING POND REPAIR		COVER											DATE: 02/10/2025					
																JOB NO.: 250108								
																								SHEET C100
Review: _____ Bid: _____ Construction: _____						ABERDEEN, NORTH CAROLINA PREPARED FOR HILLMAND DESIGN GROUP																		

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APPROVALS		PREPARED BY		SEALS		PROJECT		SHEET TITLE		NO.	DATE	REVISIONS	BY	SCALE: 1" = 50"		
Project Engr: _____ Drawn By: _____ Checked By: _____		<div><div>JOEL E. WOOD & ASSOCIATES PLANNING • ENGINEERING • MANAGEMENT</div><div>P.O. BOX 296 CLOVER, SC 29710 (803) 684-3390</div></div>		<div><div>INFORMATION ONLY</div></div>		EXISTING POND REPAIR		EXISTING CONDITIONS							DATE: 02/10/2025	
ABERDEEN, NORTH CAROLINA												JOB NO.: 250108				
PREPARED FOR												SHEET C200				
HILLMAND DESIGN GROUP																
Review: _____ Bid: _____ Construction: _____																

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NOTES:

EXISTING POND DESIGN AS AS-BUILT REQUIRED 72,152 CU.FT. OF STORAGE.

THE AS-BUILT TOP OF POND WAS 444.00 AND THE BOTTOM OF POND WAS 434.00 THE SURVEYED TOP OF POND IS 443.00 AND THE LOW POINT AT BREACH LOCATION IS 431.52. THE POND WILL REQUIRE A REGRADING TO MEET THE ORIGINAL DESIGNED STORAGE VOLUME. THE NEW TOP OF POND IS 443.00 AND THE BOTTOM OF THE POND WILL BE 434.00. THE UPDATED GRADES SHOWN WILL GENERATE A NEW STORAGE VOLUME OF 74,185 CU.FT. THIS WILL EXCEED ORIGINAL DESIGN VOLUME. THE POND RISER IS TO BE CLEANED AND REPAIRS MADE TO RESTORE TO ORIGINAL DESIGN.

- EROSION CONTROL NOTES**
1. THE APPROVED STORMWATER SEDIMENT CONTROL PLANS MUST BE AVAILABLE AT THE SITE.
2. THE DEVELOPER ENGAGED IN OR CONDUCTING THE LAND-DISTURBING ACTIVITY SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES AND FACILITIES DURING THE DEVELOPMENT OF A SITE AS REQUIRED BY THE APPROVED PLAN OR ANY PROVISION OF THE PERMIT.
3. BEGIN INSTALLATION OF INTERIM EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT MEASURES WITHIN 48 HOURS OF COMMENCEMENT OF LAND DISTURBING ACTIVITIES.
4. CONTROL STRUCTURES INDICATED ON THE PLANS ARE TO BE INSTALLED PRIOR TO ANY DIGGING OR DISRUPTION OF VEGETATION. CONTRACTOR SHALL MAINTAIN ALL ROADSIDE DITCHES AND STORM DRAINAGE STRUCTURES FREE OF SEDIMENT.
5. WITHIN 7 CALENDAR DAYS FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, ALL PERIMETER SEDIMENT AND CONTROL SHALL BE INSTALLED AND TEMPORARY STABILIZATION MEASURES SHALL BE COMPLETED ON TOPSOIL STOCKPILES. ALL SOIL STOCKPILES MUST HAVE SEDIMENT BARRIERS PLACED AROUND THEM.
6. AREAS AT FINAL GRADE SHALL RECEIVE PERMANENT STABILIZATION WITHIN 7 CALENDAR DAYS OF FINAL GRADE BEING REACHED.
7. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL COMPLETION OF ALL ACTIVITIES & ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES IN A SATISFACTORY MANNER THROUGH PERIODIC MAINTENANCE OR BY RECONSTRUCTING THE CONTROL STRUCTURES WHEN NECESSARY.
8. ALL SEDIMENT & CONTROL DEVICES SHALL BE INSPECTED EVERY 7 CALENDAR DAYS OR AFTER EACH RAINFALL OCCURRENCE THAT EXCEEDS 0.5 INCHES. DAMAGED OR INEFFECTIVE DEVICES SHALL BE REPAIRED OR REPLACED.
9. CONSTRUCTION EASEMENTS SHALL NOT BE CLEARED UNLESS ABSOLUTELY NECESSARY.
10. ALL REASONABLE EFFORTS SHOULD BE MADE TO MAINTAIN A NATURAL BUFFER (UNDISTURBED VEGETATION) BETWEEN CONSTRUCTION AREAS, STREAMS, AND OTHER SENSITIVE AREAS. CONSTRUCT AND MAINTAIN DIVERSION DITCHES ON THE STREAM SIDE OF CONSTRUCTION. WHEN CLEANING SEDIMENT FROM THE DIVERSION DITCHES, DEPOSIT THE EXCAVATED MATERIAL ON THE UPHILL SIDE OF THE DITCH OR IN AN AREA WHICH EMPTIES TO A SEDIMENT TRAP OR BASIN.
11. UNFORSEEN SEDIMENT. ADDITIONAL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSTALLED IF NECESSARY TO CONTAIN ANY UNFORSEEN SEDIMENT FLOW FROM THE CONSTRUCTION SITE.
12. ALL SLOPES THAT EXCEED 8 FEET IN HEIGHT AND ARE 3:1 OR GREATER REQUIRE A ROLLED EROSION CONTROL PRODUCT.
13. ALL RIP-RAP IS TO BE INSTALLED PRIOR TO CONSTRUCTION EXCEPT IN LOCATIONS WHERE THE LINE ACTUALLY CROSSES PROPOSED RIP-RAP AREAS.
14. USE RIP-RAP WHERE REQUIRED ON ANY DISTURBED STREAM BANKS UNLESS RESTRICTED BY PERMITTING. CONTRACTOR SHALL PLAN WORK SO THAT STOCKPILES OF EXCAVATED MATERIAL ARE NOT SUBJECT TO WASHING INTO ANY STREAM OR DRAINAGE STRUCTURE.
15. STORM DRAIN STRUCTURES SHALL HAVE INLET PROTECTION AND SHALL BE REQUIRED THROUGHOUT CONSTRUCTION TO PREVENT SILTATION OF PIPES.
16. 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 14 DAYS UNLESS ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME WITHIN 21 DAYS.
17. VEHICLE TRACKING OF SEDIMENT FROM LAND DISTURBING ACTIVITIES ONTO PAVED ROADS SHALL BE MINIMIZED. IF SEDIMENT IS TRACKED ONTO THE ROAD THE DEVELOPER IS RESPONSIBLE FOR DAILY REMOVAL OF THE SEDIMENT BY EITHER MEANS LISTED.
- A) STREET SWEEPER
- B) SHOVELS & BROOMS
- C) WASHED OFF (THE WATER MUST BE DIRECTED TO AN APPROVED SEDIMENT TRAP)
18. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED BEFORE BEING PUMPED OUT OF THE CONSTRUCTION AREA TO REMOVE ANY SEDIMENTS.
19. UPON GRADING AREAS TO FINAL ELEVATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND LEGAL DISPOSAL OF ALL WASTE MATERIALS FROM THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE THAT THE DISPOSAL METHODS UTILIZED SHALL NOT CONTRIBUTE TO ACCELERATION OF EROSION OR SEDIMENT DAMAGE TO OFF-SITE WASTE AREAS. THERE WILL BE NO BURIAL ON-SITE OF SITE WASTE.
20. ALL AREAS NOT TO BE COVERED WITH A "HARD SURFACE" ARE TO BE GRASSED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
21. ONCE GROUND COVER IS FIRMLY ESTABLISHED, ALL TEMPORARY EROSION CONTROL STRUCTURES ARE TO BE REMOVED.
22. THE RESPONSIBILITY FOR MAINTAINING ALL PERMANENT AND SEDIMENT CONTROL MEASURES AND FACILITIES AFTER SITE LAND DISTURBING ACTIVITY IS COMPLETE SHALL LIE WITHIN THE LANDOWNER OR PERSON IN POSSESSION OR CONTROL, EXCEPT FACILITIES AND MEASURES INSTALLED WITHIN ROAD OR STREET RIGHT-OF-WAYS OR EASEMENTS ACCEPTED FOR MAINTENANCE BY THE GOVERNING MUNICIPALITY.

Dry Storm Water Detention Ponds

Dry pond inside slopes should not be more than 3:1

The pond floor should have a minimum slope of 2% toward the outlet or underdrain system. Adequate maintenance access must be provided for all dry detention and dry ED ponds.

Low Flow Channel

A low flow channel should be provided to prevent standing water conditions. This channel should be protected to prevent scouring. The remainder of the pond should drain toward this channel. Where recreational uses are desired, the low-flow channel should be placed to one side instead in the middle of the pond.

Outfall

For a dry detention pond, the outlet structure is sized for water quality control and water quantity control (based upon hydrologic routing calculations) and can consist of a weir, orifice, outlet pipe, combination outlet, or other acceptable control structure.

A low flow orifice capable of releasing the water quality volume over 24 hours must be provided. The water quality orifice should have a minimum diameter of 2-inches and should be adequately protected from clogging by an acceptable external trash rack.

The outfall of dry ponds should always be stabilized to prevent scour and erosion. If the pond discharges to a channel with dry weather flow, care should be taken to minimize tree clearing along the downstream channel, and to reestablish a forested riparian zone in the shortest possible distance.

For design of sediment basins, refer to the North Carolina Department of Environmental Quality, Erosion and Sediment Control Planning and Design Manual.

Emergency Spillway:

An emergency spillway must be included to pass the 100-year storm event. The spillway prevents pond water levels from overtopping the embankment and causing structural damage. The spillway must be designed and installed to protect against erosion problems.

Anti-seep Collars:

Seepage control or anti-seep collars should be provided for all outlet pipes.

SEDIMENT AND EROSION CONTROL
PERMANENT POND MAINTENANCE PLAN

1. GENERAL – The following maintenance plan is developed to ensure proper maintenance of the permanent storm water detention facility for Mill Creek Subdivision. The plan provides for periodic inspections and/or maintenance of the detention facility to ensure that necessary repairs and maintenance of the facility is performed in a timely manner. The objective of the plan is to establish procedures to be followed to ensure that the pond functions as a stormwater management device. There are three maintenance and/or repair frequencies for inspections and repairs. The three frequencies are 1) after each significant rainfall event, with the significant rainfall being defined as one (1) inch within twenty-four hours, 2) bi-monthly being every other week, and 3) annually with the anniversary date being on or about the first week of January. There are specific items that must be performed for each frequency and the work plan for each frequency is provided below and/or as directed by York County Stormwater Management.
2. ANNUAL INSPECTION AND MAINTENANCE
- 2.1. Inspect the pond to determine the amount of sediment that has accumulated over the past year. Clean any build-up of sediment from the pond and dispose of the sediment by spreading and drying the sediment on site or by removing the sediment from the site and disposing of the sediment at an approved disposal site. If the sediment is disposed of on site, apply the sediment in a six-inch layer, spread over an area no larger than one-half an acre, and allow the sediment to dry. The area shall be protected by silt fence to contain the sediment within the disposal area. After the disposal area dries, prepare the area for seeding and seed the area in accordance with the seeding schedule shown on the original Sediment and Erosion Control Plans.
- 2.2. As part of the sediment removal process, regrade the pond to provide proper drainage toward the pond outlets. Reseed the bottom of the pond disturbed during the sediment removal process.
- 2.3. All outlet structures and outlet pipes shall be cleaned, inspected and repaired as necessary.
- 2.4. Remove any trees or shrubs that are growing in the bottom of the pond or on any side slopes.
3. BI-MONTHLY INSPECTION AND MAINTENANCE
- 3.1. Mow and weed-eat all grassed areas as needed to maintain the appearance of a well-kept yard.
- 3.2. Inspect the site and, if necessary, remove and properly dispose of any debris and trash that has accumulated within and around the site.
4. SIGNIFICANT RAINFALL INSPECTION AND MAINTENANCE
- 4.1. Inspect the site and, if necessary, remove and properly dispose of any debris and trash that has accumulated within and around the site.
- 4.2. Inspect the outlet structure and outlet pipe and repair as necessary.
- 4.3. Inspect the discharge point and clean and repair as necessary.
- 4.4. Inspect the emergency spillway and clean and repair as necessary.
- 4.5. Inspect all inlets and side slopes for erosion. Make repairs and reseed as necessary. If erosion occurs on more than two consecutive occasions in any twelve-month period provide additional erosion control measures as needed to armor the eroding areas.
5. DOCUMENTATION
- 5.1. Prepare a "check list" for each of the frequency schedules listed above to include the date, time and person making the inspection. Document the conditions at the site and list any items that require attention and provide a suspense date for any corrective actions needed.
- 5.2. On each subsequent visit, document the status of repairs previously noted and actions taken to make the corrections. All items noted on previous reports should be corrected prior to subsequent inspection or a detailed explanation documenting the delays in accomplishing the need repairs such as adverse weather conditions.

GENERAL NOTES:

DEVELOPER: (SAME AS OWNER)

PROPERTY OWNER: BLUES CROSSING APARTMENTS, LLC
PO BOX 10009
GREENSBORO, NC 27404
PHONE NUMBER 704-341-0652
DEED BOOK 3217; PAGE 460
PLAT BOOK 34; PAGE 488

PERSON RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING
STORMWATER MANAGEMENT & SEDIMENT REDUCTION PLAN:
(SAME AS DEVELOPER)

TAX PARCEL NUMBER: #00056564

ZONING DISTRICT: MF-6

EXISTING STRUCTURES: MULTI FAMILY APARTMENTS

PROPOSED STRUCTURES: MULTI FAMILT APARTMENTS

EASEMENTS: (SEE PLAN)

RIGHTS-OF-WAY: (SEE PLAN)

DRAINAGE WAYS: (SEE PLAN)

FLOODWAYS: NONE ON SITE

WETLANDS: PROJECT WILL COMPLY WITH ALL LOCAL, STATE,
AND FEDERAL REGULATIONS REGARDING PRESER-
VATION OF WETLANDS.

HISTORIC DISTRICT: SITE IS NOT LOCATED IN A HIST. DIST.

FIRE DISTRICT: ABERDEEN

SIGNAGE: NOT PART OF THIS PACKAGE


ROAD IMPROVEMENTS: NO ROAD IMPROVEMENTS PROPOSED

ON SITE WASTE DISPOSAL: NO WASTE TO BE BURIED ON SITE

CONSTRUCTION TO BEGIN APPROXIMATELY AS PER THE
FOLLOWING SCHEDULE:

BEGIN: 2/30/2025
END: 8/30/2025

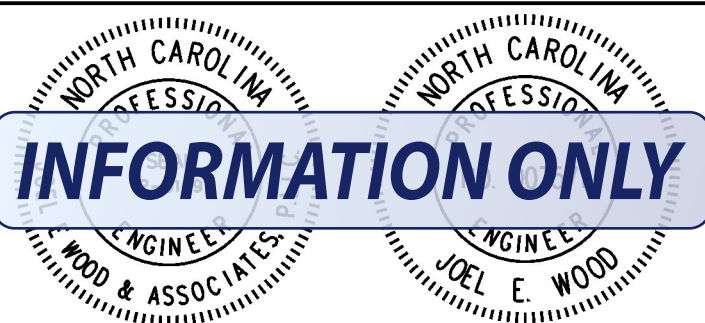
APPROVALS	
Project Engr:	_____
Drawn By:	_____
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Construction:	_____



JOEL E. WOOD & ASSOCIATES
PLANNING • ENGINEERING • MANAGEMENT

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SEALS



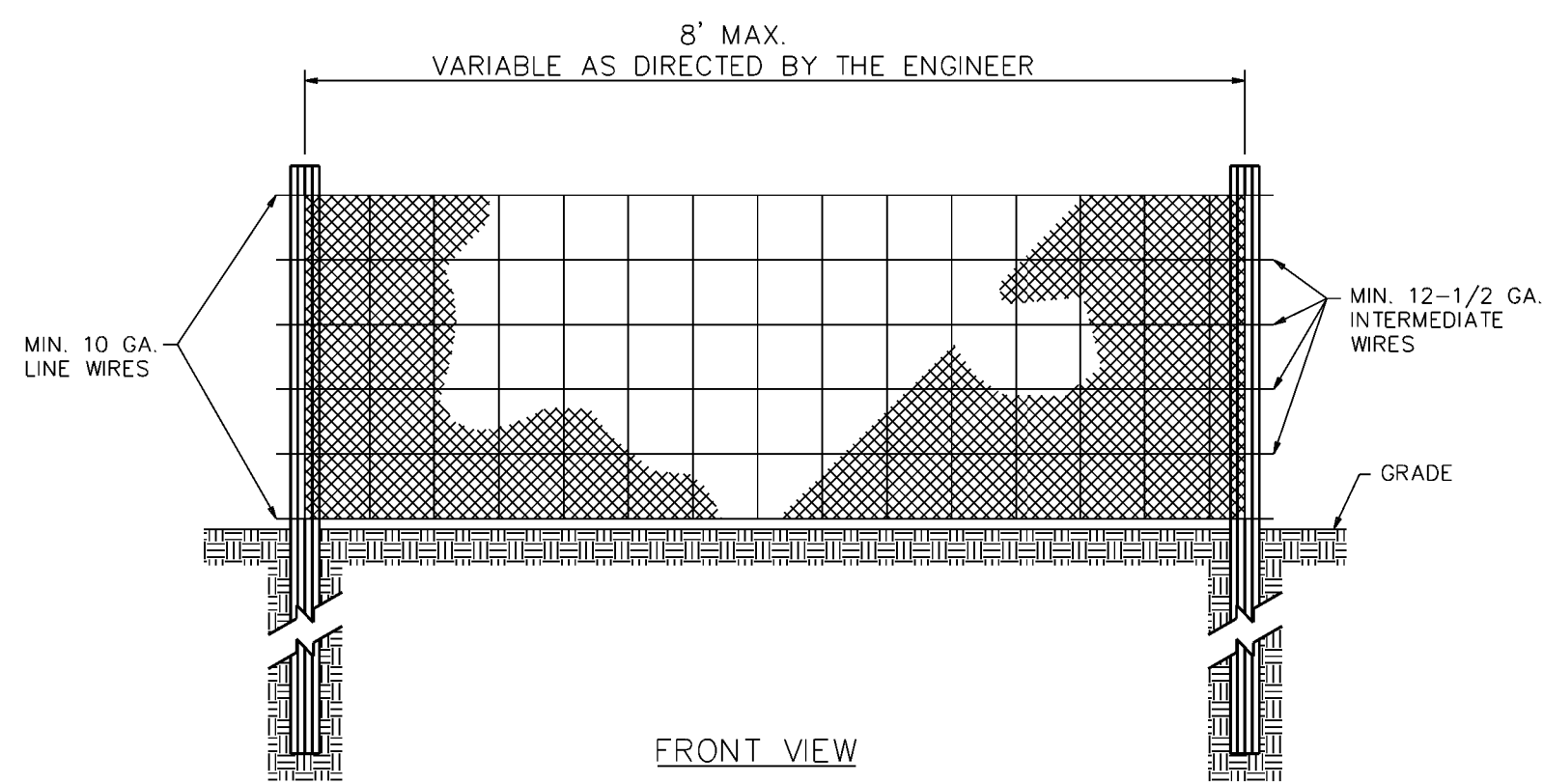
PROJECT

EXISTING POND REPAIR

ABERDEEN, NORTH CAROLINA
PREPARED FOR
HILLMAND DESIGN GROUP

SHEET TITLE		NO.	DATE	REVISIONS	BY	SCALE: 1" = 20'
SEDIMENT & EROSION CONTROL PLAN						DATE: 02/10/2025
						JOB NO.: 250108
						SHEET C300

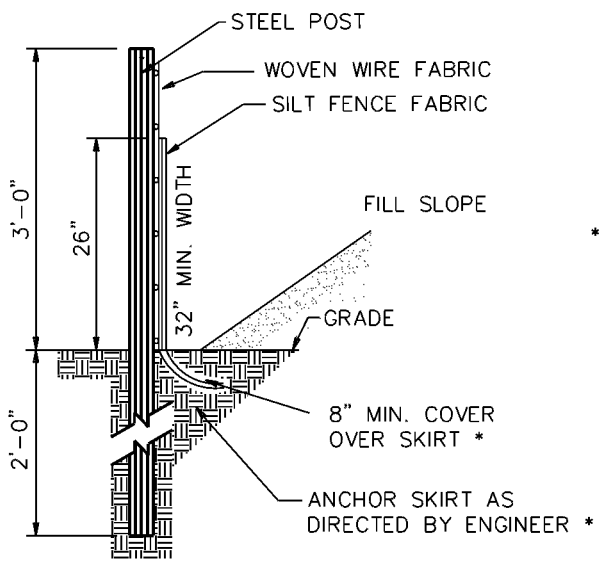
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2/14/2025



A TEMPORARY SILT FENCE

NOTE:

-USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW



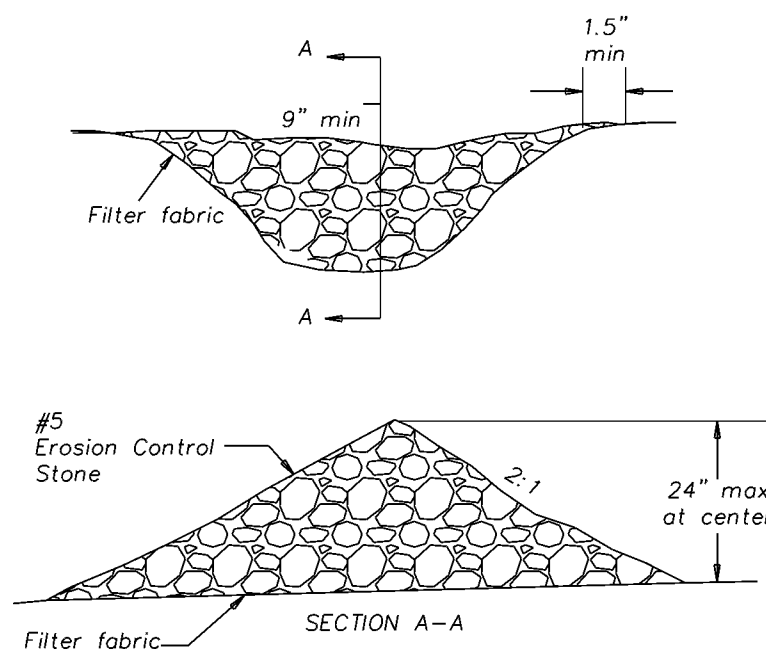
B SILT FENCE ROCK OUTLET

SCALE=NTS

D CHECK DAM CONSTRUCTION & MAINTENANCE

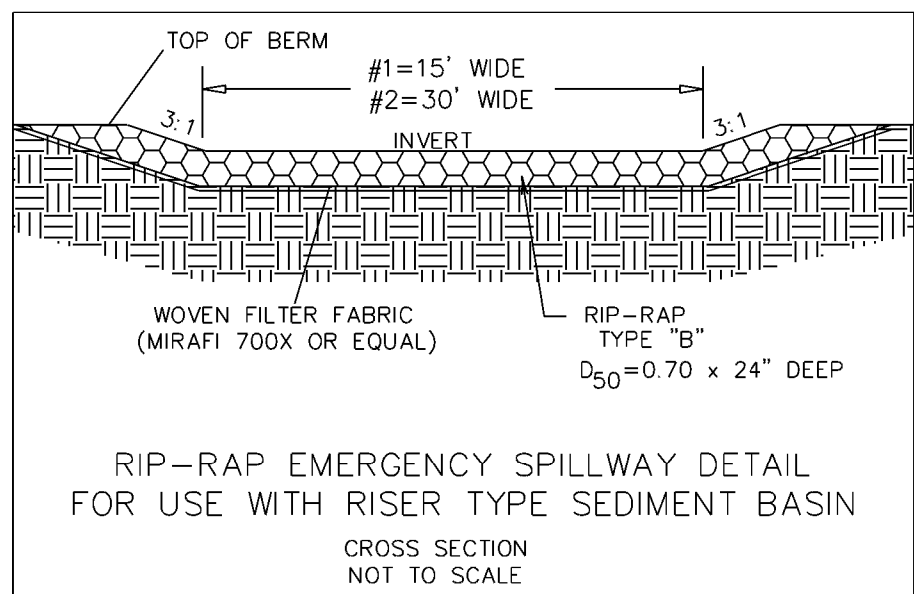
SCALE=NTS

- Place stones (2" to 15") on filter fabric where specified on the contract drawings. Insure that the center of the dam is lower than the edges.
- Construct temporary check dam as shown in the detail.
- Set spacing between dams to assure that the elevation at the top of the lower dam is the same as the toe elevation of the upper dam.
- Ensure protection of the channel below the lowest dam from overflow.
- Stone check dams should be constructed of riprap varying in size with no pieces weighing more than 150 pounds. At least 20% the stones, excluding spalls, should weigh more than 60 pounds & no more than 20% the stones, excluding spalls, should weigh less than 25 pounds.
- Inspect channels and dams weekly and after each storm event which exceeds 0.5 inches of rainfall. Erosion caused by high flows around the edges of the dams should be corrected immediately. If sediment accumulates & reaches 1/2 the original height of the dam, the sediment should be removed.



C TEMPORARY CONSTRUCTION ENTRANCE / EXIT

SCALE=NTS



SEDIMENT AND EROSION CONTROL NOTES

- Control structures indicated on the plans are to be installed prior to any digging or disruption of vegetation. Contractor shall maintain all roadside ditches and storm drainage structures free of sediment.
- Construction easements shall not be cleared unless absolutely necessary.
- All reasonable efforts should be made to maintain a natural buffer (undisturbed vegetation) between construction areas, streams and other sensitive areas construct and maintain diversion ditches on stream side of construction. When cleaning sediment from the diversion ditches, deposit the excavated material on the uphill side of the ditch or in an area which employs to a sediment trap or basin.
- All rip-rap is to be installed prior to construction except in locations where the line actually crosses proposed rip-rap area.
- Use rip-rap where required on any disturbed stream banks. Contractor shall plan work so that stockpiles of excavated material are not subject to washing into any stream or drainage structure.
- Contractor shall maintain all erosion control measures in a satisfactory manner through periodic maintenance or by reconstructing the control structures when necessary.
- Upon grading areas to final elevation, the contractor shall be responsible for the removal and legal disposal of all waste materials from the project. The contractor shall be responsible that the disposal methods utilized shall not contribute to acceleration erosion or sediment damage to off-site waste areas.
- All areas not to be covered with a "hard surface" are to be grassed in accordance with the approved erosion and sediment control plan.
- Once ground cover is firmly established, all temporary erosion control structures are to be removed.
- All sediment control measures shall be inspected at least once every seven calendar days and after any storm event of greater than 0.5 inches of precipitation during any 24-hour period. All sediment control features shall be maintained until final stabilization has been obtained.
- If water is encountered while trenching, the water should be filtered before being pumped out of the construction area to remove any sediments.
- Additional control devices may be required during construction in order to control erosion and/or offsite sedimentation.

SEEDING AND MULCHING NOTES

Ground Cover – Whenever land-disturbing activity is undertaken on a tract comprising more than one acre, if more than one contiguous acre is uncovered a ground cover sufficient to restrain erosion must be planted or otherwise provided within 30 working days on that portion of the tract upon which further active construction is not being undertaken, provided that this subsection shall not apply to cleared land forming the basin of a reservoir later to be inundated.

Graded Slopes and Fills – The angle for graded slopes and fills shall be no greater than the angle which can be retained by vegetative cover or other adequate erosion control devices or structures. In any event, slopes left exposed shall, within 30 working days of completion of any phase of grading, be planted or otherwise provided with ground cover, devices or structures sufficient to restrain erosion.

Seed Bed Preparation – The seed bed shall be prepared by pulverizing the soil in an approved manner to a depth of three inches for field conditions or slopes that are 3:1 or flatter and/or to a depth of one inch to three inches, as determined on sites for slopes steeper than 3:1. Tillage shall continue until a well pulverized, firm, uniform seed bed is prepared conforming substantially to ground elevations as shown on the plans and/or as was existing prior to construction, blending with the adjacent topography. Good surface drainage must be provided, allowances for settlement made and ground elevations adjusted accordingly. All stones, roots, sticks, rubbish, and other objectionable material shall be removed.

Seeding and Fertilization

Fertilizer shall be applied at a rate of 20 pounds per 1000 square feet – if using 5-10-10 fertilizer, and 30 pounds per 1000 square feet – if using 10-10-10 fertilizer for established lawn areas. Lime shall be applied to a rate of 100 pounds per 1000 square feet.

All seeding material shall be labeled to show that it meets the latest requirements of South Carolina Seed Law. Seed shall have been tested within the last six months. Kentucky Fescue #31 shall be a minimum 85% pure live seed; maximum 1% weed seed; minimum 90% germination. Rye Grass shall be a minimum 98% pure live seed; maximum 0.10% weed seed; 85% germination.

When the work is performed within the South Carolina Departments of Transportation's rights-of-way, the Contractor shall furnish the State Landscape Supervisor the name of the supplier of seed, the seed type and the total amount of seed to be used in restoring the disturbed ground cover. Seeding shall be done within thirty (30) days after the initial ground disturbance. The seed bed shall be in a good friable condition. Seed shall be applied at the rate recommended by the supplier and raked or tilled into the topsoil with the resulting furrows running across the natural ground slope. The following materials shall be used for reseeding disturbed areas. Note all rates are per 1000 square feet.

September 15 thru March 1
6# Kentucky Fescue No. 31
2# Rye Grain
30# Fertilizer (10-10-10)
100# Lime

February 1 thru October 15
6# Kentucky Fescue No. 31
30# Fertilizer (10-10-10)
100# Lime

May 1 thru September 30
Add 0.4# Sudan or Millet to above

Mulching – After fertilizing, seeding, raking and tilling dried straw shall be uniformly spread over the area at a rate of 90 pounds per 100 square feet. Approximately 1/4 of the ground should remain visible to avoid smothering the seedlings. The straw shall be sprayed with liquid asphalt to bond the straw together and another it in place, preventing it from being scattered by the wind and rain.

Asphalt Application – Liquid asphalt (thinned with kerosene) used during freezing weather shall be either rapid or medium curing, applied at a rate of 200 gallons per ton of straw (approximately 9 gallons per 1000 square feet). Emulsified asphalt (thinned with water) used when temperatures are less severe shall be rapid cure only, applied at a rate of 150 gallons per ton of straw (approximately 7 gallons per 1000 square feet).


Matting – Jute matting or "Held Gro" shall be used for temporary stabilization during the establishment of permanent cover on problem areas such as future grassed ditches, channels, long slopes and steep banks.

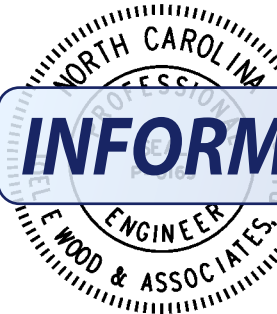

Miscellaneous – Established lawns and landscaped areas damaged by construction shall be restored to their former condition.

Seeding and mulching shall be paid for at the unit price, per square yard, applied, as approved by the construction observer.

Fill, cover and temporary seeding at the end of each day is recommended.

APPROVALS	
Project Engr:	_____
Drawn By:	_____
Checked By:	_____
Review:	_____
Bid:	_____
Construction:	_____

PREPARED BY	
	JOEL E. WOOD & ASSOCIATES PLANNING • ENGINEERING • MANAGEMENT P.O. BOX 296 CLOVER, SC 29710 (803) 684-3390

SEALS	
	

PROJECT
EXISTING POND REPAIR
ABERDEEN, NORTH CAROLINA PREPARED FOR HILLMAND DESIGN GROUP

SHEET TITLE		NO.	DATE	REVISIONS	BY	SCALE: NTS
NOTES/ DETAILS						DATE: 02/10/2025
						JOB NO.: 250108
						SHEET C400

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DIVISION 2 SITE WORK

SECTION 0201 STAKING

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE:

A. ENTIRE SPECIFICATION IS RELATED TO THIS SECTION.

1.02 QUALITY ASSURANCE:

A. SURVEYOR EMPLOYED TO PROVIDE LOCATION AND GRADE STAKING MUST CHECK INTO KNOWN REFERENCE LINES AND BENCH MARKS AS SHOWN BY THE CONSTRUCTION DRAWINGS.

B. THE CONTRACTOR WILL BE DIRECTLY RESPONSIBLE FOR ALL LOCATION AND GRADE STAKING PROVIDED BY HIM OR HIS SUBCONTRACTORS.

1.03 SUBMITTALS:

A. THE CONTRACTOR WILL UPON COMPLETION OF THE WORK, FURNISH THE ENGINEER WITH TWO (2) SETS OF AS-BUILT DRAWINGS, SHOWING THE FINAL GRADE ELEVATIONS, AND LOCATIONS OF ALL SERVICE LINES, VALVES, FIRE HYDRANTS, MANHOLES, CLEANOUTS, METER BOXES, ETC., REFERENCED TO EASILY DELINEATED MONUMENTS, SUCH AS LOT CORNERS.

PART 2 PRODUCTS:

NOT APPLICABLE THIS SECTION

PART 3 EXECUTION:

3.01 THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING ALL LOCATION AND GRADE STAKING REQUIRED FOR THE COMPLETION OF THE WORK.

3.02 THE CONTRACTOR WILL PROVIDE THE ENGINEER WITH ALL NECESSARY AS-BUILT DRAWINGS.

END OF SECTION 0201

DIVISION 2 SITE WORK

SECTION 0210 CLEARING AND GRUBBING

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE:

A. GRADING, SECTION 0220

1.02 PROTECTION:

A. STREETS, ROADS, ADJACENT PROPERTY AND OTHER WORKS TO REMAIN SHALL BE PROTECTED THROUGHOUT THE WORK, AS REQUIRED BY THE LOCAL AUTHORITY, STATE HIGHWAY DEPARTMENT AND ADJACENT PROPERTY OWNERS.

1.03 MEASUREMENT AND PAYMENT:

A. THE ACCEPTED QUANTITIES WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE OR PER UNIT OF MEASUREMENT.

B. CLEARING AND/OR GRUBBING DONE FOR CONTRACTOR'S CONVENIENCE WILL NOT BE CONSIDERED IN PAYMENT FOR THE WORK UNDER THIS SECTION.

1.04 REQUIREMENTS OF REGULATORY AGENCIES:

A. STATE AND LOCAL CODE REQUIREMENTS SHALL CONTROL THE DISPOSAL OF TREES AND SHRUBS.

B. EROSION CONTROL ORDINANCE. (POLLUTION PREVENTION PLAN)

C. STORM DRAINAGE ORDINANCE.

PART 2 PRODUCTS

NOT APPLICABLE THIS SECTION

PART 3 EXECUTION

3.01 CLEARING AND GRUBBING:

A. LIMITS OF CLEARING AND GRUBBING: REMOVE ALL TREES, SAPLING, SHRUBS, BUSHES, AND UNDERGROWTH FROM AREAS TO BE REGRADED AND AS SHOWN O THE PLANS.

B. CLEARING SHALL CONSIST OF THE FELLING AND CUTTING UP OF TREES WITHIN THE CONSTRUCTION LIMITS. CLEARING SHALL ALSO INCLUDE THE SATISFACTORY DISPOSAL OF THE TREES AND OTHER VEGETATION FROM THE SITE TOGETHER WITH THE DOWN TIMBER, SNAGS, BRUSH AND RUBBISH OCCURRING WITHIN THE AREAS TO BE CLEARED. TREES AND OTHER VEGETATION, AND ALL STUMPS, ROOTS AND BRUSH IN THE AREAS TO BE CLEARED SHALL BE CUT OFF BELOW THE ORIGINAL GROUND SURFACE. CLEARING OPERATIONS SHALL BE CONDUCTED SO AS TO PREVENT DAMAGE BY FALLING TREES TO LEFT STANDING, TO EXISTING STRUCTURES AND INSTALLATIONS, AND SO AS TO PROVIDE FOR THE SAFETY OF EMPLOYEES AND OTHERS.

C. GRUBBING SHALL CONSIST OF THE REMOVAL AND DISPOSAL OF ALL STUMPS, ROOTS AND MATTED ROOTS FROM THE SITE. IN ROADWAY AREAS, STUMPS, ROOTS, LOGS OR OTHER TIMBER, MATTED ROOTS AND OTHER DEBRIS SHALL BE EXCAVATED AND REMOVED TO A DEPTH NOT LESS THAN 18 INCHES BELOW ANY SUBGRADE, SHOULDER, OR SLOPE. ALL DEPRESSIONS EXCAVATED BELOW THE ORIGINAL GROUND SURFACE FOR OR BY THE REMOVAL OF STUMPS AND ROOTS, SHALL BE REFILLED WITH SUITABLE MATERIAL AND COMPACTED TO MAKE THE SURFACE CONFORM TO THE SURROUNDING GROUND SURFACE.

3.02 DISPOSAL:

A. ALL TIMBER, LOGS, STUMPS, ROOTS, BRUSH, ROTTEN WOOD, AND OTHER REFUSE FROM THE CLEARING AND GRUBBING OPERATIONS SHALL BE REMOVED FROM THE SITE AND PLACED IN AN APPROVED OFF-SITE DISPOSAL AREA PROVIDED BY THE CONTRACTOR, OR OTHERWISE DISPOSED OF AS APPROVED BY THE ENGINEER. WHEN APPROVED BY THE ENGINEER AND LOCAL AUTHORITY, BURNING SHALL BE DONE AT SUCH LOCATION AND IN SUCH MANNER THAT WILL AVOID ALL PUBLIC NUISANCE AND ALL HAZAROUS, SUCH AS PROGRESS, TREES, AND VEGETATION.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE W WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS RELATIVE TO THE BUILDING OF FIRES. DISPOSAL BY BURNING SHALL BE KEPT UNDER CONSTANT ATTENDANCE UNTIL THE FIRES HAVE BURNED OUT OR HAVE BEEN EXTINGUISHED.

END OF SECTION 0210

DIVISION 2 SITE WORK

SECTION 0220 GRADING

PART 1 GENERAL:

1.01 SCOPE:

A. THIS SECTION COVERS GRADING FOR THE ENTIRE SITE, INCLUDING DITCHES, SWALES, FORMATION OF EMBANKMENTS AND FINISHING AND DRESSING OF ALL GRADED EARTH AREAS.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

A. SITE CLEARING AND GRUBBING, SECTION 0210.

B. SEE GRASSING, SECTION 0280.

1.03 PROTECTION:

A. STREETS, ROADS, ADJACENT PROPERTY AND OTHER WORKS TO REMAIN SHALL BE PROTECTED THROUGHOUT CONSTRUCTION OPERATIONS BY THE CONTRACTOR. THE CONTRACTOR SHALL, AT NO TIME, LEAVE THE SITE IN A CONDITION SUCH THAT THE SITE WOULD CONTRIBUTE DAMAGE TO ADJACENT PROPERTY OWNERS.

1.04 MEASUREMENT AND PAYMENT:

A. QUANTITIES SHALL BE MEASURED AND PAYMENT MADE AT THE CONTRACT LUMP SUM PRICE FOR GRADING.

1.05 SUBMITTALS:

A. THE CONTRACTOR SHALL CERTIFY THAT SUITABLE MATERIALS HAVE BEEN USED AND THAT COMPACTION REQUIREMENTS HAVE BEEN ACCOMPLISHED.

1.06 REQUIREMENTS OF REGULATORY AGENCIES:

A. THE CONTRACTOR SHALL COMPLY WITH STATE AND LOCAL SEDIMENT AND EROSION CONTROL ORDINANCES AND DRAINAGE ORDINANCES.

PART 2 PRODUCTS

2.01 SELECTION OF BORROW MATERIAL:

A. BORROW MATERIAL SHALL BE SELECTED TO MEET REQUIREMENTS AND CONDITIONS OF THE PARTICULAR FILL FOR WHICH IT IS TO BE USED AS DESCRIBED HEREIN. MATERIAL SHALL CONSIST OF SOILS CAPABLE OF BEING READILY SHAPED AND COMPACTED TO REQUIRED DENSITIES AND SHALL BE FREE OF ROOTS, TRASH, AND ANY OTHER DELETERIOUS MATERIAL ANY NECESSARY CLEARING, GRUBBING, DISPOSAL OF DEBRIS AND SATISFACTORY TRIMMING AND DRAINAGE OF BORROW AREAS SHALL BE CONSIDERED INCIDENTAL TO OPERATIONS OF THE BORROW EXCAVATION AND SHALL BE PERFORMED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

B. BORROW AREA (S): CONTRACTOR SHALL FURNISH BORROW MATERIAL FROM THE SITE OR PRIVATE SOURCES SELECTED BY HIM AND APPROVED BY THE ENGINEER, CONSISTING OF A SUITABLE MATERIAL OF THE TYPE MENTIONED ABOVE.

PART 3 EXECUTION

3.01 CONSERVATION OF TOPSOIL:

A. EXCEPT WHERE OTHERWISE NOTED ON THE PLANS, REMOVE TOPSOIL FROM AREAS TO BE GRADED WITHOUT CONTAMINATION WITH SUBSOIL AND SPREAD ON AREAS ALREADY GRADED AND PREPARED FOR TOPSOIL, OR TRANSPORT AND DEPOSIT IN APPLICATION OF TOPSOIL LATER, OR AT LOCATION INDICATED. STRIP TOPSOIL TO A DEPTH OF SIX INCHES AND, WHEN STORED, KEEP SEPARATE FROM OTHER EXCAVATED MATERIALS AND STOCKPILE FREE OF ROOTS, STONES, AND OTHER FOREIGN MATERIALS.

3.02 EXCAVATION:

A. AFTER ALL STRIPPING HAS BEEN DONE, EXCAVATION OF EVERY DESCRIPTION AND OF WHATEVER SUBSTANCES ENCOUNTERED WITHIN THE GRADING LIMITS OF THE PROJECT SHALL BE PERFORMED TO THE LINES AND GRADES INDICATED ON THE DRAWINGS. ALL SUITABLE EXCAVATED MATERIAL SHALL BE TRANSPORTED TO AND PLACED IN THE FILL AREAS WITHIN THE LIMITS OF THE WORK SPECIFIED, AS SHOWN ON THE DRAWINGS, OR AS OTHERWISE DIRECTED BY THE ENGINEER. WHERE MATERIAL ENCOUNTERED WITHIN THE LIMITS IS OF THE WORK IS CONSIDERED UNSUITABLE AND ANY SURPLUS OF EXCAVATED MATERIAL WHICH IS NOT REQUIRED FOR FILL SHALL BE KNOWN AS "WASTE" AND SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS OWN EXPENSE AND RESPONSIBILITY. UNLESS OTHERWISE DIRECTED, ALL WASTE SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE WORK. DURING CONSTRUCTION, EXCAVATION AND FILLING SHALL BE PERFORMED IN A MANNER AND SEQUENCE THAT WILL PROVIDE DRAINAGE AT ALL TIMES. WATER ACCUMULATED IN THE EXCAVATION SHALL BE REMOVED BY PUMPS OR OTHER MEANS APPROVED BY THE ENGINEER. UNSUITABLE MATERIALS SHALL BE CONSIDERED HIGHLY PLASTIC CLAY SOILS OF OH AND MH DESCRIPTION AND ORGANIC SOILS OF PT, OL, AND OH DESCRIPTION BASED ON THE UNIFIED SOILS CLASSIFICATIONS SYSTEM. ALL MATERIAL DESIGNATED AS UNSUITABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. IF SUBSURFACE WATER CONDITIONS ARE DISCOVERED, THEY SHALL BY HANDLED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND IN WRITING, IF ANY SUBSURFACE WATER CONDITIONS ARE ENCOUNTERED.

3.03 SWALES AND DITCHES:

A. SWALES AND DITCHES SHALL BE CONSTRUCTED AT THE LOCATIONS AND OF THE GENERAL SIZE AND SHAPE AS SHOWN ON THE PLANS WITH A MAXIMUM SLIDE SLOPE OF 3:1, UNLESS OTHERWISE DETAILED ON THE PLANS. DEGREE OF SLIDE SLOPE AND DEPTH MAY BE REVISED AT THE DIRECTION OF THE ENGINEER TO OBTAIN A PLEASING AND NATURAL APPEARANCE. SWALES SHOWN TO BE CONSTRUCTED IN WOODED AREAS SHALL BE LOCATED TO MINIMIZE CLEARING OF LARGE TREES AND OTHER DESIRABLE PLANTS. HOWEVER, ALL SWALES SHALL BE CONSTRUCTED IN SUCH A WAY AS TO PROVIDE POSITIVE DRAINAGE CHARACTERISTICS. THE ENGINEER MAY DIRECT CONTRACTOR TO CREATE FILLS OR SWALES IN ADDITION TO THOSE SHOWN ON PLANS.

3.04 PREPARATION OF GROUND SURFACE FOR FILL:

A. ALL VEGETATION, SUCH AS ROOTS, BRUSH, HEAVY SODS, HEAVY GROWTH OF GRASS, AND ALL DECAYED VEGETABLE MATTER, RUBBISH AND OTHER UNSUITABLE MATERIAL WITHIN THE AREA UPON WHICH FILL IS TO BE PLACED SHALL BE STRIPPED OR OTHERWISE REMOVED BEFORE FILL IS STARTED. IN NO CASE WILL UNSUITABLE MATERIAL REMAIN IN OR UNDER FILL AREA. SLOPED GROUND SURFACE, STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL ON WHICH FILL IS TO BE PLACED, SHALL BE PLOWED, STEPPED OR BENCHED, OR BROKEN UP TO ASSURE THAT THE FILL MATERIAL WILL BOND WITH EXISTING SURFACE. PREPARED SURFACES ON WHICH COMPACTED FILL IS TO BE PLACED SHALL BE WETTED OR DRIED TO OBTAIN COMPACTION SPECIFIED.

3.05 FILL:

A. CONSTRUCT FILLS AND EMBANKMENT AT LOCATIONS AND TO LINES AND GRADES INDICATED. COMPLETES FILL SHALL CORRESPOND TO SHAPE OF CONTOURS INDICATED OR SHALL MEET REQUIREMENTS OF THE PARTICULAR CASE. SUITABLE MATERIAL REMOVED FROM EXCAVATION SHALL BE USED IN FORMING FILL. FILL MATERIAL SHALL EXCLUDE ALL MATERIALS CLASSIFIED AS UNSUITABLE IN THE FOREGOING PARAGRAPH ENTITLED "EXCAVATION" AND SHALL BE REASONABLY FREE FROM ROOTS, OTHER ORGANIC MATERIAL AND TRASH; AND FROM STONES HAVING MAXIMUM DIMENSION GREATER THAN 6 INCHES. NO FROZEN MATERIAL WILL BE PERMITTED IN FILL. STONES HAVING A MAXIMUM DIMENSION LARGER THAN 4 INCHES SHALL NOT BE PERMITTED IN THE UPPER 6 INCHES OF FILL OR EMBANKMENT. MATERIAL SHALL BE PLACED IN SUCCESSIVE HORIZONTAL LAYERS OF 8 INCHES TO 12 INCHES IN LOOSE DEPTH FOR FULL WIDTH OF CROSS SECTION AND SHALL BE COMPACTED AS REQUIRED HEREIN.

3.06 COMPACTION: WHEN BUILDINGS ARE INVOLVED, SEE ARCHITECTURAL SPECIFICATIONS FOR COMPACTION REQUIREMENTS UNDER BUILDINGS.

A. COMPACT EACH LAYER OF FILL OR EMBANKMENT BY ROLLING WITH TAMPING ROLLER, THREE-WHEELED POWER ROLLER, OR OTHER APPROVED COMPACTION EQUIPMENT TO ASSURE A MINIMUM COMPACTION OF 98% STANDARD PROCTOR OR 95% MODIFIED ACCORDING TO ASTM SPECIFICATIONS.

3.07 FINISHED EXCAVATION, FILLS, AND EMBANKMENTS

A. UNIFORMLY SMOOTH GRADE ALL AREAS COVERED BY PROJECT, INCLUDING EXCAVATED AND FILLED SECTIONS AND ADJACENT TRANSITION AREAS. FINISHED SURFACE SHALL BE SMOOTH, COMPACTED, AND FREE FROM IRREGULAR SURFACE CHANGES. THE DEGREE OF FINISH SHALL BE THAT ORDINARILY OBTAINABLE FROM EITHER BLADEGRADER OR SCRAPER OPERATIONS, SUPPLEMENTED WITH HAND RAKING AND FINISHING, EXCEPT AS OTHERWISE SPECIFIED. FINISHED DITCHES TO PERMIT ADEQUATE DRAINAGE. SURFACE OF EMBANKMENT, OR EXCAVATED AREAS FOR ROAD CONSTRUCTION OR OTHER AREAS ON WHICH A BASE COURSE OR SURFACE TREATMENT IS TO BE PLACED SHALL NOT VARY MORE THAN 0.05 FOOT FROM ESTABLISHED GRADE AND CROSS SECTION. IN AREAS WHERE BULKING OF SOIL, AS A RESULT OF GRASSING OPERATIONS WILL TEND TO RETARD SURFACE DRAINAGE ALONG EDGE OF PAVEMENT, FINISHED GRADES SHALL BE LEFT 0.1 FOOT BELOW GRADE PRIOR TO GRASSING. IN ALL CASES, POSITIVE DRAINAGE SHALL BE ACCOMPLISHED.

3.08 PLACEMENT OF TOPSOIL BLANKET:

EXCEPT AS SPECIFICALLY SPECIFIED HEREIN, PLACE TOPSOIL ON ALL SHOULDER SLOPES, AND OTHER EARTH AREAS GRADED UNDER THIS CONTRACT, EXCLUDING BORROW AREAS. THE COMPACTED SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF 2 INCHERS FOR THE BONDING OF TOPSOIL WITH THE SUBSOIL. TOPSOIL SHALL THEN BE EVENLY SPREAD, COMPACTED, AND GRADED TO A THICKNESS OF 4 INCHES AND TO THE ELEVATIONS AND SLOPES SHOWN ON THE DRAWING. THE SURFACES SHALL THEN BE THOROUGHLY LOOSENED TO A DEPTH OF 4 INCHES BY PLOWING, DISKING, HARROWING, OR OTHER APPROVED METHODS, UNTIL TILLAGE IS ACCEPTABLE FOR GRASSING.

END OF SECTION 0220

DIVISION 2 SITE WORK

SECTION 0250 SITE DRAINAGE

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE:

A. GRADING, SECTION 0220

B. EXCAVATION, TRENCHING AND BACKFILLING FOR PIPE LINES, SECTION 0255

C. CAST IN PLACE CONCRETE, SECTION 0330

1.02 PROTECTION:

A. THE CONTRACTOR SHALL EXECUTE WORK FOR SITE DRAINAGE IN SUCH A MANNER AS TO PROTECT ADJACENT PROPERTY AGAINST DAMAGES FROM ANY CAUSES.

1.03 REQUIREMENTS OF REGULATORY AGENCIES:

A. THE CONTRACTOR SHALL COMPLY WITH STATE AND LOCAL SEDIMENT AND EROSION CONTROL ORDINANCES.

PART 2 PRODUCTS

2.01 MATERIALS:

A. ALL STORM DRAINAGE PIPE SHALL BE CLASS III REINFORCED CONCRETE UNLESS INDICATED OTHERWISE. THE PIPE SHALL CONFORM TO ASTM C76, LATEST REVISION.

B. FRAMES, GRATES, AND COVERS SHALL BE AS INDICATED ON THE PLANS. THEY SHALL BE TRUE TO PATTERN IN FORM AND DIMENSION; FREE FROM POURING DEFECTS, SPONGINESS, CRACKS, BLOW HOLES, AND OTHER DEFECTS AFFECTING THEIR STRENGTH AND VALUE FOR THE SERVICE INTENDED.

C. BRICK OR CONCRETE BLOCK SHALL BE NEW, WHOLE, AND SHALL CONFORM TO THE LATEST REQUIREMENTS OF ASTM SPECIFICATIONS. THE BRICK OR CONCRETE BLOCKS SHALL HAVE A STRAIGHT AND PARALLEL EDGE AND SQUARE CORNER AND SHALL BE OF COMPACT TEXTURE, FREE FROM INJURIOUS CRACKS

D. MORTAR SHALL BE COMPOSED OF ONE PART PORTLAND CEMENT, ONE PART HYDRATED LIME, AND SIX PARTS SAND BY VOLUME. BRICKMXT, MAGNAOLIA, MASTER-MIX OR FLAMINGO PREPARED MORTAR MAY BE USED AT THE OPTION OF THE CONTRACTOR.

PART 3 EXECUTION:

3.01 PREPARATION:

A. EACH PIPE SHALL BE CAREFULLY EXAMINED BEFORE BEING LAID, AND DEFECTIVE OR DAMAGED PIPE SHALL NOT BE USED. UNDER NO CIRCUMSTANCES SHALL PIPE BE LAID IN WATER, AND NO PIPE SHALL BE LAID WHEN TRENCH CONDITIONS OR WEATHER ARE UNSUITABLE FOR SUCH WORK.

B. TRENCHING, BEDDING AND BACKFILLING SHALL BE IN ACCORDANCE WITH SECTION 0255 OF THESE SPECIFICATIONS.

3.02 CONSTRUCTION:

A. CATCH BASINS AND DROP INLETS SHALL BE CONSTRUCTED AS SHOWN ON THE DRAWINGS, OF CONCRETE AND WHEN ALLOWED BY THE GOVERNING AUTHORITY, BRICK MAY BE USED.

B. EXCAVATION FOR INSTALLATION SHALL BE OF AMPLE WIDTH FOR THE WORKMEN TO ENGAGE IN LAYING BRICK TO CARRY ON WORK, AND ALSO AMPLE ROOM FOR PLASTERING THE EXTERIOR SIDE OF THE WALLS. WHERE ROCK IS ENCOUNTERED IN EXCAVATING FOR STRUCTURES, ONE (1) FOOT SHALL BE ALLOWED OUTSIDE FOR THE ROCK LINES OF THE STRUCTURE.

C. ALL BRICKWORK SHALL BE LAID UP TRUE AND PLUMB AND HORIZONTAL JOINTS SHALL NOT BE MORE THAT 1/2 INCH. THE BRICKS SHALL BE LAID IN A FULL BED OF MORTAR, AND ALL JOINTS IN EACH COURSE SHALL BE SLUSHED AND FILLED SOLID WITH MORTAR BEFORE ANOTHER COURSE IS LAID ON TOP.

D. ALL BRICKS SHALL BE WET BEFORE BEING LAID IN WARM WEATHER. BRICKS SHALL NOT BE LAID IN FREEZING WEATHER.

E. THE CONTRACTOR SHALL PROTECT ALL BRICKWORK FROM THE WEATHER WHEN STORMING OR FREEZING AND AT ALL OTHER TIMES WHEN NECESSARY DURING THE PROGRESS OF THE WORK.

F. THE CATCH BASIN FRAMES SHALL BE SET IN A FULL BED OF MORTAR AND AT THE ELEVATION ESTABLISHED ON THE DRAWINGS.

G. THE CATCH BASIN WALLS SHALL BE PLASTERED ON THE OUTSIDE WITH PORTLAND CEMENT MORTAR. THE MORTAR SHALL BE COMPOSED OF ONE (1) PART PORTLAND CEMENT, 10 PERCENT OF HYDRATED LIME AND (2) TWO PARTS OF SAND, MIXED WITH A SUFFICIENT QUANTITY OF WATER TO FORM A PLASTIC MORTAR.

H. THE INVERT SHALL BE PLASTERED WITH THE SAME MORTAR AND FINISHED WITH A STEEL TROWEL TO SECURE A SMOOTH AND DENSE SURFACE.

I. THE BACKFILL AROUND THE STRUCTURES SHALL BE MADE WITH EMBANKMENT MATERIALS, FREE FROM LUMPS OR ROCKS, AND BACKFILLING SHALL BE PLACED IN ONE (1) FOOT LAYERS AND THOROUGHLY TAMPED.

3.03 GRADES AND ELEVATIONS:

A. PIPE GRADES AND STRUCTURE ELEVATIONS SHALL BE AS SHOW ON THE DRAINAGE PLAN.

END OF SECTION 0250

DIVISION 2 SITE WORK

SECTION 0255 EXCAVATING, TRENCHING, AND BACKFILLING FOR PIPE LINES

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. GRADING, SECTION 0220

B. SITE DRAINAGE, SECTION 0250

1.02 QUALITY ASSURANCE:

3.05 BACKFILLING

A. TRENCHES AND OTHER EXCAVATIONS SHALL NOT BE BACKFILLED UNTIL ALL REQUIRED TESTS ARE PERFORMED AND THE WORK INSTALLED CONFORMS TO THE REQUIREMENTS OF THE SECTIONS OF THESE SPECIFICATIONS COVERING THE INSTALLATION OF THE PIPE AND APPURTENANT STRUCTURES.

B. THE TRENCHES SHALL BE CAREFULLY BACKFILLED WITH THE EXCAVATED LOAM, SANDY CLAY, AND GRAVEL, SOFT SHALE, OR OTHER APPROVED MATERIALS. NO MATERIAL SHALL BE USED FOR BACKFILLING THAT CONTAINS STONES, BLASTED ROCK, BROKEN CONCRETE, PAVEMENT, OR OTHER HARD MATERIALS HAVING ANY DIMENSION GREATER THAN 6 INCHES; OR LARGE CLODS OF EARTH, DEBRIS FROZEN EARTH, OR EARTH WITH AN EXCEPTIONALLY HIGH VOID CONTENT. NO WOOD IS TO BE LEFT IN THE TRENCH.

C. SUITABLE MATERIAL SHALL BE DEPOSITED IN 6 INCH LAYERS THOROUGHLY COMPACTED UNTIL THE PIPE HAS A COVER OF 1 FOOT. THE REMAINDER OF THE BACKFILL MATERIAL MAY THEN BE DEPOSITED IN LAYERS UP TO 12 INCHES THICK, CAREFULLY COMPACTED, TO GRADE.

D. THE SURFACE SHALL BE RESTORED TO THE REQUIRED GRADE AND COMPACTION, MOUNDED OVER, AND SMOOTHED OFF TO THE SATISFACTION OF THE ENGINEER. ANY TRENCHES IMPROPERLY REOPENED TO THE DEPTH REQUIRED FOR PROPER COMPACTION, THEN REFILLED AND COMPACTED.

E. TRENCHES CROSSING PROPOSED ROADWAYS SHALL BE BACKFILLED TO ASSURE A MINIMUM COMPACTION OF 93% STANDARD ACCORDING TO ASTM SPECIFICATIONS. FLOWABLE FILL MAY BE REQUIRED BY LOCAL AUTHORITY, OR BY DESIGN ENGINEER, WHOSE NAME APPEARS ON THESE PLANS.

G. DUCTILE IRON PIPE SHALL BE USED WHEN ADEQUATE COVER CANNOT BE ACHIEVED FOR WATER AND SEWER MAINS OR FOR SEWER SERVICES. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF THIS CONDITION EXISTS.

END OF SECTION 0255S

PART 2 PRODUCTS

NOT APPLICABLE THIS SECTION

PART 3 EXECUTION

3.01 EXCAVATION:

A. EXCAVATION SHALL COMPRISE THE SATISFACTORY REMOVAL AND DISPOSITION OF ALL EXCAVATED MATERIALS REGARDLESS OF CLASSIFICATION. THE CONTRACTOR SHALL PERFORM ALL EXCAVATION OF EVERY DESCRIPTION AND OF WHATEVER SUBSTANCES ENCOUNTERED TO PROVIDE 36 INCHES COVER OVER THE BARREL OF THE PIPE OR, WHERE SHOWN ON THE DRAWINGS, TO GRADE INDICATED. THE BANKS OF TRENCHES SHALL BE KEPT AS NEARLY VERTICAL AS PRACTICABLE, AND WHERE REQUIRED, SHALL BE PROPERLY SHEETED AND BRACED. THE WIDTH OF TRENCHES AT AND BELOW THE LEVEL OF THE PIPE SHALL BE NO GREATER THAN NECESSARY TO PERMIT SATISFACTORY JOINTING AND THOROUGH TAMPING OF THE BEDDING MATERIAL UNDER AND AROUND THE PIPE. THE WIDTH OF THE TRENCH ABOVE THIS LEVEL MAY BE MADE WIDER AS NECESSARY FOR SHEETING AND BRACING, AND PROPER INSTALLATION IF THE WORK. THE BOTTOM OF THE TRENCHES SHALL BE ACCURATELY GRADED TO PROVIDE UNIFORM BEARING SUPPORT FOR EACH SECTION OF PIPE ON UNDISTURBED EARTH AT EVERY POINT ALONG ITS ENTIRE LENGTH EXCEPT FOR PORTIONS OF THE PIPE SECTIONS WHERE IT IS NECESSARY TO EXCAVATE FOR BELL HOLES AND FOR PROPER SEALING OF PIPE JOINTS. BELL HOLES OR JOINTING DEPRESSIONS SHALL BE BUG BY HAND AFTER THE TRENCH BOTTOM HAS BEEN GRADED, STRICTLY IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER. TRENCHERS SHALL BE DRY WHEN THE TRENCH BOTTOM IS PREPARED. EXCEPT AT LOCATIONS WHERE EXCAVATION OF ROCK OR UNSUITABLE MATERIAL FROM THE BOTTOM OF TRENCHES IS REQUIRED, CARE SHALL BE TAKEN NOT TO EXCAVATE BELOW THE DEPTHS INDICATED. WHERE ROCK EXCAVATION IS REQUIRED, THE ROCK SHALL BE EXCAVATED TO MINIMUM OVER DEPTH OF 4 INCHES BELOW THE NORMAL REQUIRED TRENCH DEPTH. THE OVER DEPTH ROCK EXCAVATION AND ALL EXCESS TRENCH EXCAVATION SHALL BE BACKFILLED WITH LOOSE, MOIST EARTH, THOROUGHLY TAMPED. WHENEVER WET OR OTHERWISE UNSUITABLE SOIL IS ENCOUNTERED, THAT IS, IN THE OPINION OF THE ENGINEER, INCAPABLE OF PROPERLY SUPPORTING THE PIPE, SUCH SOIL SHALL BE REMOVED IT THE DEPTHS REQUIRED AND FOR THE DISTANCE DESIGNATED BY THE ENGINEER.

3.02 GRADING AND STAKING:

A. GRADING IN THE VICINITY OR TRENCH EXCAVATIONS TO PREVENT SURFACE GROUND WATER FROM FLOWING INTO THE TRENCHES. ANY WATER ACCUMULATED IN THE TRENCHES SHALL BE REMOVED BY PUMPING OR OTHER APPROVED METHODS.

B. DURING EXCAVATION, MATERIAL SUITABLE FOR BACKFILLING SHALL BE STACKED IN AN ORDERLY MANNER SUFFICIENT DISTANCE BACK FROM THE EDGES OF TRENCHES TO AVOID OVERLOADING AND PREVENT SLIDES OR CAVE-INS. MATERIALS UNSUITABLE FOR BACKFILLING SHALL BE WASTED OR REMOVED AS DIRECTED BY THE ENGINEER.

3.03 SHORING AND SHEETING:

A. PROVIDE SHORING, SHEETING AND BRACING AS NECESSARY TO PERFORM THE WORK, PROTECT THE EXCAVATION AN ADJACENT STRUCTURES, AND TO FULLY SAFEGUARD EMPLOYEES AND THE PUBLIC. COMPLY WITH THE PROVISIONS OF THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTIONS", OF THE ASSOCIATED GENERAL CONTRACTOR OF AMERICA, INC. THE FAILURE OF THE ENGINEER TO DIRECT THE PLACING OF SUCH PROTECTION SHALL NOT RELIEVE THE CONTRACTOR OF FULL LIABILITY FOR DAMAGE RESULTING FROM ITS OMISSION.

3.04 WATER REMOVAL:

A. WHERE WATER IS ENCOUNTERED, IT SHALL BE PREVENTED FROM ACCUMULATING IN EXCAVATED AREAS BY WELL- POINTING AND PUMPING, OR BY OTHER MEANS APPROVED BY THE ENGINEER AS TO CAPACITY AND EFFECTIVENESS. WATER REMOVED FROM EXCAVATIONS SHALL BE DISCHARGED AT POINTS WHERE IT WILL NOT CAUSE INJURY TO PUBLIC OR PRIVATE PROPERTY, OR THE WORK COMPLETED OR IN PROGRESS. UNDER NO CIRCUMSTANCES SHAPE TRENCH BOTTOM, LAY PIPE, OR INSTALL APPURTENANCES IN WATER, OR ALLOW WATER TO RISE IN UNBACKFILLED EXCAVATIONS AFTER PIPE OR STRUCTURES HAVE BEEN PLACED.

3.05 BACKFILLING

A. TRENCHES AND OTHER EXCAVATIONS SHALL NOT BE BACKFILLED UNTIL ALL REQUIRED TESTS ARE PERFORMED AND THE WORK INSTALLED CONFORMS TO THE REQUIREMENTS OF THE SECTIONS OF THESE SPECIFICATIONS COVERING THE INSTALLATION OF THE PIPE AND APPURTENANT STRUCTURES.

B. THE TRENCHES SHALL BE CAREFULLY BACKFILLED WITH THE EXCAVATED LOAM, SANDY CLAY, AND GRAVEL, SOFT SHALE, OR OTHER APPROVED MATERIALS. NO MATERIAL SHALL BE USED FOR BACKFILLING THAT CONTAINS STONES, BLASTED ROCK, BROKEN CONCRETE, PAVEMENT, OR OTHER HARD MATERIALS HAVING ANY DIMENSION GREATER THAN 6 INCHES; OR LARGE CLODS OF EARTH, DEBRIS FROZEN EARTH, OR EARTH WITH AN EXCEPTIONALLY HIGH VOID CONTENT. NO WOOD IS TO BE LEFT IN THE TRENCH.

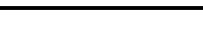
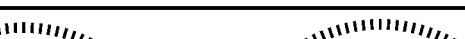

C. SUITABLE MATERIAL SHALL BE DEPOSITED IN 6 INCH LAYERS THOROUGHLY COMPACTED UNTIL THE PIPE HAS A COVER OF 1 FOOT. THE REMAINDER OF THE BACKFILL MATERIAL MAY THEN BE DEPOSITED IN LAYERS UP TO 12 INCHES THICK, CAREFULLY COMPACTED, TO GRADE.

D. THE SURFACE SHALL BE RESTORED TO THE REQUIRED GRADE AND COMPACTION, MOUNDED OVER, AND SMOOTHED OFF TO THE SATISFACTION OF THE ENGINEER. ANY TRENCHES IMPROPERLY REOPENED TO THE DEPTH REQUIRED FOR PROPER COMPACTION, THEN REFILLED AND COMPACTED.

E. TRENCHES CROSSING PROPOSED ROADWAYS SHALL BE BACKFILLED TO ASSURE A MINIMUM COMPACTION OF 93% STANDARD ACCORDING TO ASTM SPECIFICATIONS. FLOWABLE FILL MAY BE REQUIRED BY LOCAL AUTHORITY, OR BY DESIGN ENGINEER, WHOSE NAME APPEARS ON THESE PLANS.

G. DUCTILE IRON PIPE SHALL BE USED WHEN ADEQUATE COVER CANNOT BE ACHIEVED FOR WATER AND SEWER MAINS OR FOR SEWER SERVICES. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF THIS CONDITION EXISTS.

END OF SECTION 0255S

APPROVALS		PREPARED BY		SEALS		PROJECT		SHEET TITLE		NO.	DATE	REVISIONS		BY	SCALE: NTS			
Project Engr: _____ Drawn By: _____ Checked By: _____		<div><div>JOEL E. WOOD & ASSOCIATES PLANNING • ENGINEERING • MANAGEMENT</div><p>P.O. BOX 296 CLOVER, SC 29710 (803) 684-3390</p></div>		<div><div>INFORMATION ONLY</div></div>		PROJECT		NOTES									DATE: 02/10/2025	
EXISTING POND REPAIR														JOB NO.: 250108				
ABERDEEN, NORTH CAROLINA PREPARED FOR HILLMAND DESIGN GROUP														SHEET C401				
Review: _____ Bid: _____ Construction: _____																		