

## ARCHITECTURAL

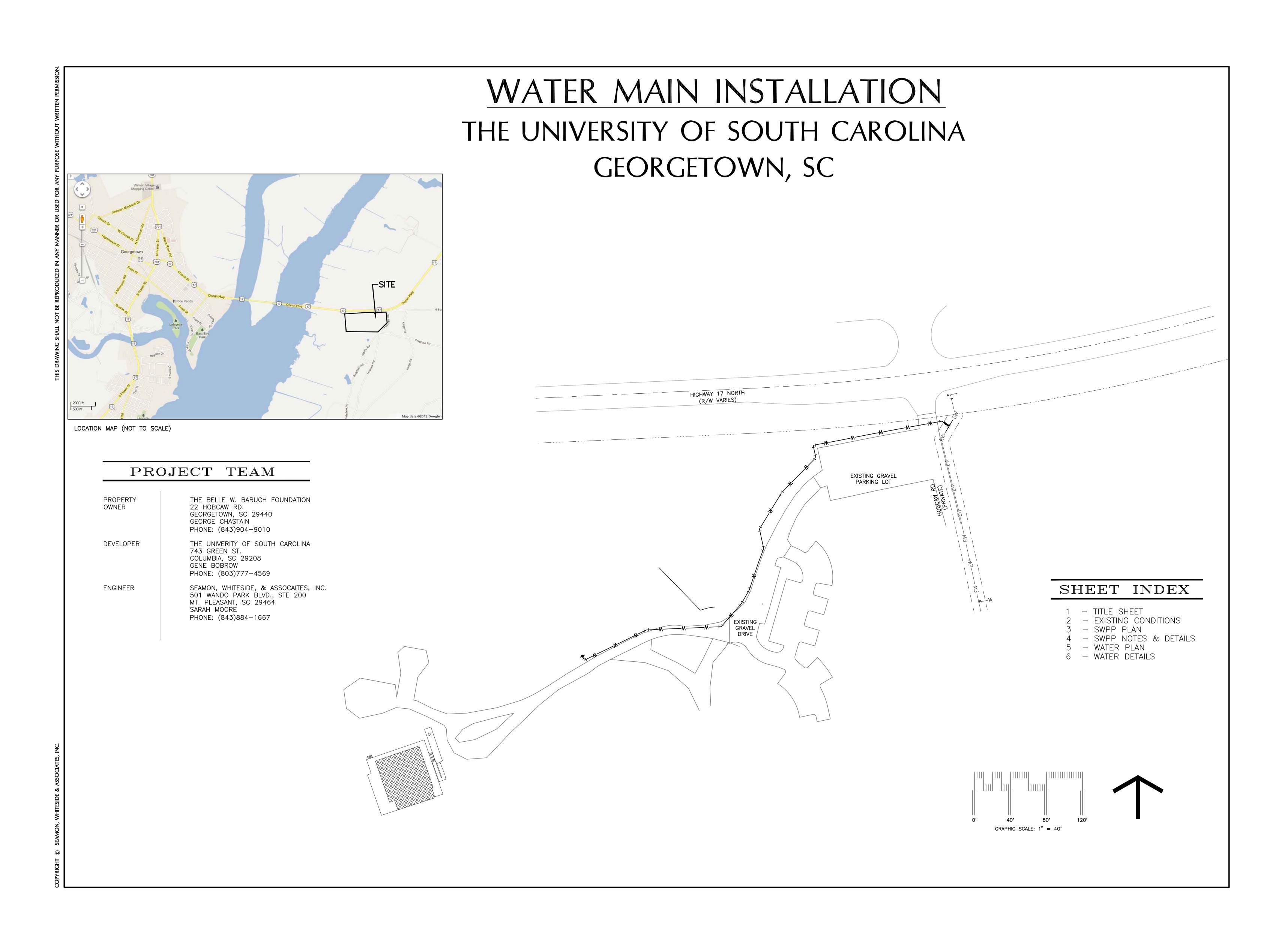
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## CIVIL ENGINEER

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## SURVEYING

ROBERT L BELLAMY & ASSOC. 4706 Oleander Drive Myrtle Beach, SC 29577 Tel: (843) 449-9453 Fax: (843) 449-8359

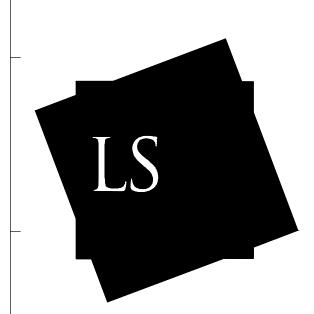


WATER LINE EXTENSION AND NEW FIRE HYDRANT

THE BELLE W. BARUCH FOUNDATION

THE UNIVERSITY OF



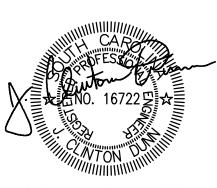


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Seamon Landscape Architecture Park Blvd., Suite 200 sant, SC 29464-7849 57 (f) 843.884.6944	SeamonWhiteside +ASSOCIATES	Civil Engineering Urban Design 607 Pendleton Street, Suite 100 Greenville, SC 29601-3319 864.298.0534 (f) 864.298.8018	
Land Plannir  Sol Wando  Mount Pleas  843.884.166		Land Planning 501 Wando Park Bly Mount Pleasant, SC 843.884.1667 (f) 8	

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1. 11.18.12 GCWSD COMMENTS REVISIONS jrt



PROJECT: 2402-062

DATE: DECEMBER

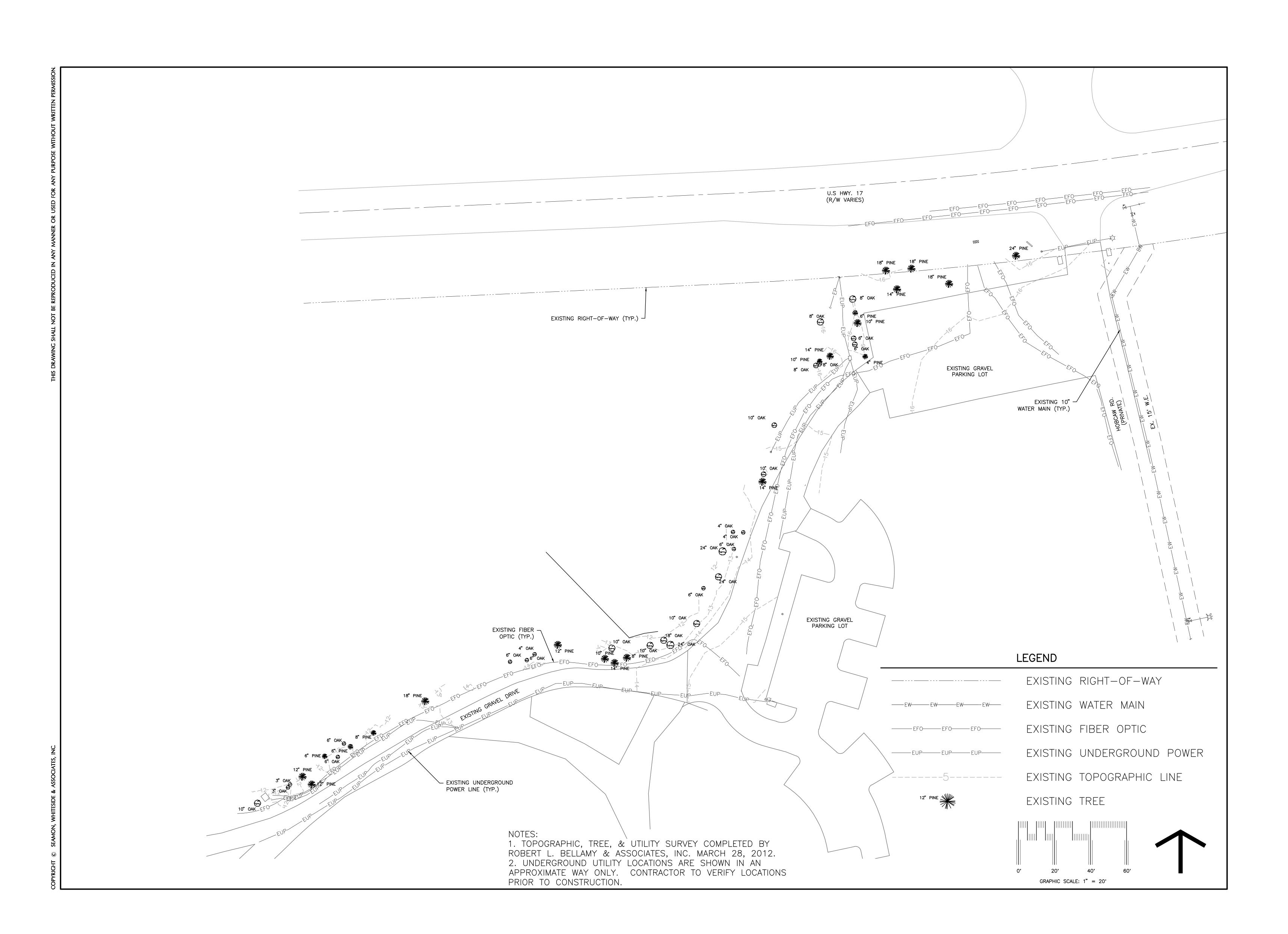
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SHEET 1 OF

TITLE SHEET

SOLUTIONS THROUGH LISTENING

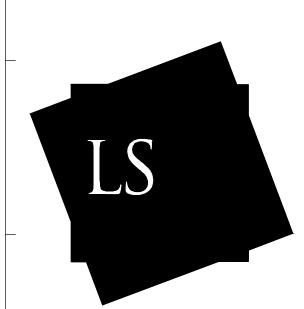


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PROJECT: 2402-062

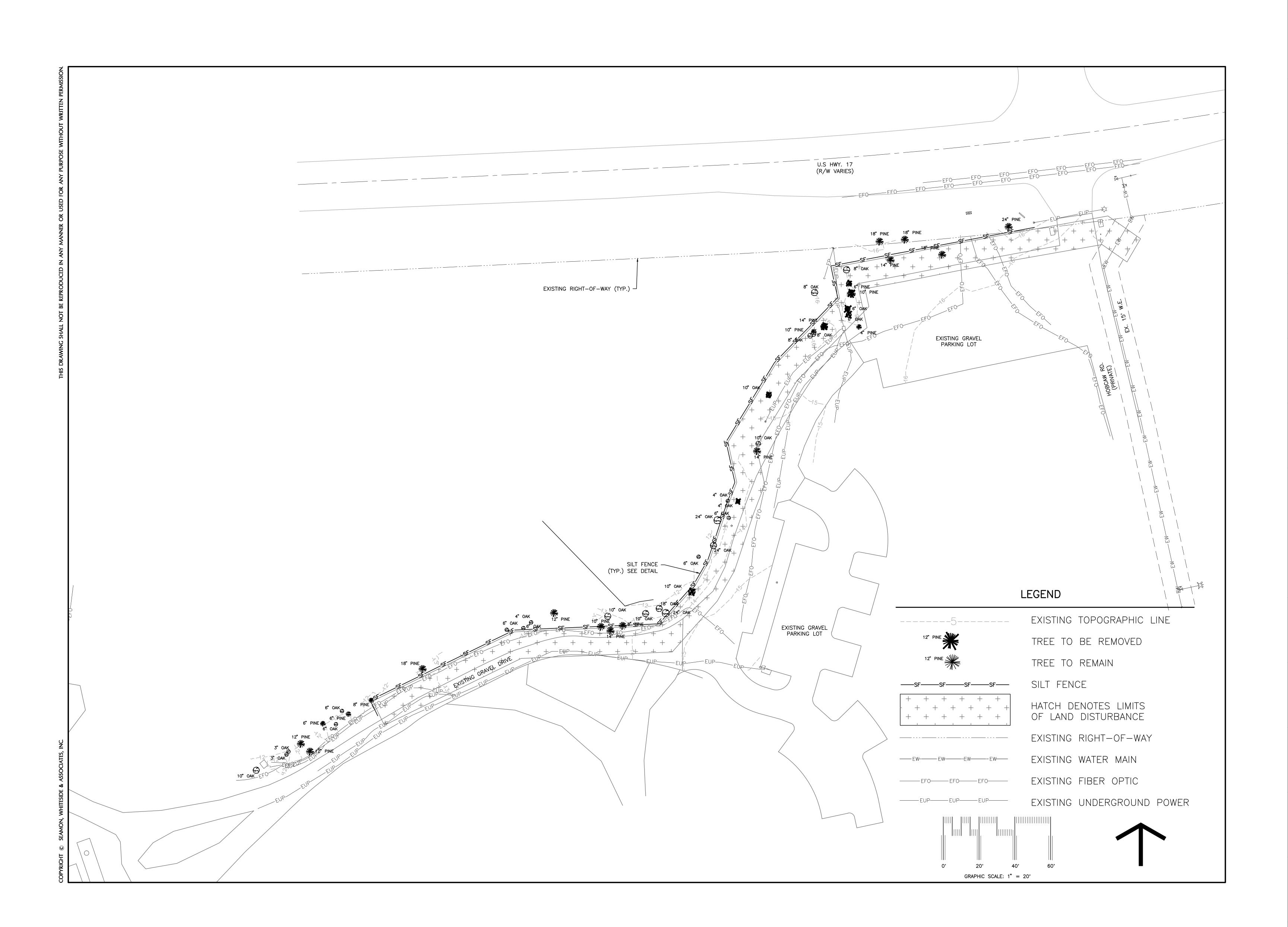
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SHEET 2 OF 6
EXISTING
CONDITIONS

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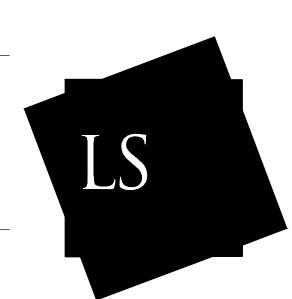


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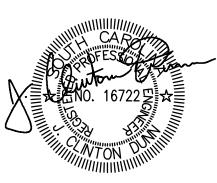


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SHEET 3 OF 6SWPP PLAN

SOLUTIONS THROUGH LISTENING

"U" OR "T" SECTION STEEL POST. MAX DRAINAGE FACILITIES MAINTENANCE PLAN SPACING = 6' O.C.. These plans have been prepared to meet the initial requirements of a Stormwater Pollution Prevention Plan (SWPPP) for coverage under 1. Temporary stormwater and sediment controls (SSC's): SILT FENCE FABRIC the NPDES General Permit for Stormwater Discharges from Large and Small Construction Activities (NPDES). The Owner and a. The Contractor shall be responsible for all maintenance including but not necessarily limited to: Contractor(s) are advised that additional requirements, which are beyond the scope of these plans, must be met in order to assure i. During construction (until final acceptance by the Engineer): continued coverage under the NPDES. (1) Daily: EXCAVATE TRENCH FOR FULL (a) Observing paved areas that are utilized for site access to look for signs of soil being tracked from the site and LENGTH OF SILT FENCE, POSITION 2. Coverage under the NPDES is initiated by the SC Dept. of Health and Environmental Control's (SCDHEC) approval of the project for taking corrective action as necessary (see note #3 under "Stormwater and Sediment Control"). FABRIC, THEN BACKFILL AND construction. The Owner's submittal of an Environment Protection Agency (EPA) Notice of Intent (NOI) serves as the Owner's COMPACT WITH EXCAVATED SOIL. certification that he has prepared, and will implement and maintain, a SWPPP throughout the construction period. Furthermore, it (b) Correcting any damage to SSC's as soon as possible when it occurs. NOTES:

1. REMOVE ACCUMULATED

THENEVER IT certifies that he will document and where required, report site conditions, remedial efforts, SWPPP modifications, and other stormwater (2) Weekly (see note #6 under "Stormwater and Sediment Control"): related activities in accordance with NPDES requirements. Coverage under the NPDES is terminated upon the Owner's submittal of an SEDIMENT WHENEVER IT (a) Inspecting SSC's for damage and accumulated sediment. Removing sediment and repairing or replacing damaged EPA Notice of Termination (NOT) when SCDHEC approval of the completed project has been received. REACHES A DEPTH OF 8". SSC's as necessary. (b) Evaluating performance and amending, modifying, improving, or relocating SSC's as necessary. 3. The Owner is advised that SWA's scope of services does not necessarily include efforts to document and report activities in accordance (c) Logging inspection observations, recommendations, repairs, relocations, amendments, and improvements as with NPDES requirements. While SWA can perform these services upon request, they can also be provided by third party firms who specialize in documentation and reporting of NPDES related activities. Regardless, these activities must be accomplished, documented, necessary. and where required, reported throughout the construction period in order to avoid an NPDES violation. (a) Evaluating site and installing permanent landscaping or temporary seeding as necessary (see note #7 under 4. Additional parties who are associated with land disturbing activities for a project that has received NPDES coverage may share "Stormwater and Sediment Control"). responsibility for compliance under the NPDES Co-permittee Regulations. In addition, parties who are associated with land disturbances that are part of a "Larger Common Plan" (LCP) that has received NPDES coverage may also share responsibility for compliance under ii. At completion of construction (upon final acceptance by Engineer) the NPDES Co-permittee Regulations. All parties associated with any construction activities are advised to clarify their responsibilities (1) Removal of all temporary SSC's (see note #12 under "Stormwater and Sediment Control"). with regard to compliance with the requirements of the NPDES. Pond(s) and/or Detention Basin(s) 5. For projects that disturb more than 10 acres and projects that are associated with a LCP that disturbs more than 10 acres, a. During construction (until final acceptance by the Engineer): contractor shall coordinate with SWA to ensure that the NPDES required Pre-Construction Meeting is held prior to initiation of land i. The Contractor shall be responsible for all maintenance including but not necessarily limited to: (1) Removing accumulated sediment. 6. Residential subdivisions require stormwater and sediment control features (SSC's) for infrastructure as well as individual lot construction. (2) Maintaining pond banks including prevention and repair of slope erosion. Individual lot owners shall follow these plans during construction or obtain approval of an individual plan in accordance with the SC (3) Establishing and maintaining temporary and permanent stabilization (landscaping and/or grass as indicated on the SILT FENCE Standards for Stormwater Management and Sediment Reduction (SCR 72-300 et seq.) and the NPDES General Permit (SCR 100000). (NOT TO SCALE) b. After construction: i. The Owner or his Assigns shall be responsible for perpetual maintenance including but not necessarily limited to: STORMWATER AND SEDIMENT CONTRO Bi-weekly: (a) Aesthetic maintenance of the banks and surrounding common areas including mowing, landscape maintenance, and 1. Any clearing or land disturbance outside of the limits defined by the plans is prohibited. removal of trash and debris. (2) Every 6 months: 2. The SSC's shown on these plans represent the Engineer's opinion of reasonable measures to control stormwater and to prevent sediment from leaving the site; however, stormwater and sedimentation control is a dynamic process that requires monitoring, (a) Inspection of the pond(s) and associated outlet structure(s). maintenance and adaptation to changing site conditions. The Contractor shall implement and maintain any and all measures necessary (b) Removal of any blockages and accumulated debris at the outlet structure(s). to control stormwater and to prevent sediment from leaving the site, whether shown on these plans or not, until final acceptance of (c) Repair and stabilization of any bank erosion. the Project by the Engineer. (d) Repair or replacement of any damage to the outlet structure(s). 3. The Contractor shall take any and all necessary actions to prevent tracking of soil onto paved areas that are utilized for access to the (3) Every 12 months: site. Should tracking occur the Contractor shall immediately: cease causal operations, remove the soil in a manner that will not result (a) Treatment, as necessary, for aquatic weed control. in uncontrolled sedimentation, and implement or perform maintenance on controls as necessary to eliminate the problem before (4) Every 5 years: resuming operations. (a) Removal and proper disposal of accumulated sediment. 4. 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 (or as otherwise required by authority having jurisdiction) (or as otherwise required by authority having jurisdiction) shall be installed in 3. Drainage culverts and structures: all areas where a 50 ft buffer cannot be maintained between the disturbed area and the WoS. In addition, a 10 ft buffer shall be a. During construction (until final acceptance by the Engineer): maintained between the nearest row of silt fence and the WoS. The Contractor shall be responsible for all maintenance including but not necessarily limited to: (1) Protecting the culverts and structures from damage. (2) Preventing sediment from entering the culverts and structures. 6. Litter, construction debris, oils, fuels, chemicals, and building products with significant potential for impact (such as stockpiles of freshly (3) Repair of any damage or removal of sediment as soon as possible after it occurs. treated lumber) shall be prevented from entering or otherwise polluting stormwater discharges. b. After construction: 7. The Contractor shall inspect all SSC's at least once every 7 calendar days. If site inspections identify SSC's that are damaged or are i. The Owner or his Assigns shall be responsible for perpetual maintenance including but not necessarily limited to: not operating effectively, maintenance or replacement shall be performed as soon as possible and before the next storm event (1) Every 12 months: whenever practicable. (a) Inspection of the culverts and structures for sedimentation, damage, or evidence of leakage. (b) Removal of sediment and repair as necessary. 8. Stabilization measures (either permanent landscaping or temporary grassing) shall be installed as soon as practical on portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after construction has ceased, except as stated below: SEQUENCE OF CONSTRUCTION a. Where stabilization before the 14th day is precluded by snow cover or frozen ground conditions, stabilization measures shall be Items must occur in the order listed; items cannot occur concurrently unless specifically noted. installed as soon as practicable. b. Where construction activity on a portion of the site has temporarily ceased and land disturbing activities will resume within 14 days, temporary stabilization measures are not required on that portion of the site. 1. Receive NPDES coverage from DHEC. 3. Temporary diversion berms and/or ditches shall be installed as needed during construction to protect work areas from upslope runoff 2. Conduct pre-construction meeting (on-site if more than 10 disturbed and non-linear). and/or to divert sediment laden water to appropriate traps or stable outlets. 3. Notify DHEC EQC Regional office or OCRM office 48 hours prior to beginning land-disturbing activities. 9. Where necessary, slopes that exceed 8 vertical feet in height shall be stabilized with synthetic or vegetative mats, in addition to seeding as indicated below. Temporary slope drains and/or berms shall be installed as necessary until final grade and stabilization is 4. Install construction entrance(s) and begin maintenance of all temporary sediment controls as necessary. Continue maintenance until all final stabilization measures are in place and removal of controls is approved by the designated authority. 10.Install silt fence and/or other SSC's where required to control erosion during utility construction. All disturbed areas shall be cleaned, graded and stabilized by permanent seeding, or other measures where indicated on the plans, immediately after utility construction is 5. Clear & grub only as necessary for installation of perimeter controls. complete. Backfilling of the trench at the end of each day is mandatory and temporary seeding is recommended. 6. Install perimeter controls (silt fence). 11. Water that is being pumped from trenches or excavations shall be filtered to remove sediment prior to being discharged offsite or into any WoS. In addition, the intake of sediment shall be minimized by equipping the intake with a float or by embedding it in filter rock. 7. Clear & grub areas for basins/ traps/ ponds. Erosion at the pump outlet shall be minimized through the use an energy dissipater, sediment basin or other appropriate SSC's. 12. The Contractor shall remove all temporary SSC's upon final acceptance of the Project by the Engineer. Removal shall not be initiated 8. Install basins/ traps/ ponds and diversions to those structures (outlet structures must be completely installed as shown on the details until all trapped sediment has been removed, permanent grass and landscaping has been established, and the Engineer has approved before proceeding to the next step; areas draining to these structures cannot be disturbed until the structures and diversions to the structures are completely installed). TEMPORARY SEEDING (To be used only for temporary stabilization during construction) 9. Clear & grub the remainder of the site or complete demolition if applicable (sediment & erosion control measures for these areas must already be installed). 1. All preparation, installation, and maintenance of temporary seeding shall be in accordance with applicable portions of Section 810 of the SCDOT Standard Specifications for Highway Construction (latest edition). 10.Complete rough grading. 2. In particular the Contractor shall: a. Establish a stand of vegetation that is capable of erosion control. 11.Initiate building construction and install utilities as applicable. b. Provide minimum density coverage of 70% throughout the seeded area. c. Maintain the stand of vegetation until replaced by permanent landscaping or subsequent construction. 12.Install storm drain system including sediment protection as each drainage structure is installed. 3. Temporary seed shall be in accordance with Appendix C of the South Carolina DHEC Storm Water Management BMP Handbook. 13. Complete site surface improvements including curbs, walks, pavement, etc. Seed species and application rate shall be as indicated for the Project location, soil type, and date of installation. 14.Install landscaping and establish permanent soil stabilization. PERMANENT SEEDING (To be used where permanent turf by seeding is indicated on plans or details) 15. Where required, clean, re—grade, and re—establish permanent soil stabilization for detention basins that were used as sediment control structures; where necessary, modify the detention basin riser to convert it to the permanent outlet structure. 1.All preparation, installation, and maintenance shall be in accordance with the landscaping specifications for the Project or, in instances where landscaping specifications do not exist, in accordance with applicable portions of Section 810 of the SCDOT Standard 16.Remove temporary sediment & erosion control measures after the entire area draining to each measure is permanently stabilized and Specifications for Highway Construction (latest edition). approved by the designated authority. 2.In particular the Contractor shall, at a minimum unless otherwise specified as indicated above: 17.Perform as—built surveys of all detention structures and submit to DHEC or MS4 for acceptance. a. Establish a uniform perennial stand of vegetation with a root system that is sufficiently developed to survive dry periods and winter weather and be capable of re—establishment in the spring. 18. Submit a Notice of Termination (NOT) to DHEC. b. Provide minimum density coverage of 70% throughout the seeded area. c. Maintain the stand of vegetation including mowing; fertilizing; weed, disease and insect control; and watering as necessary, until final acceptance by the Engineer 8 4

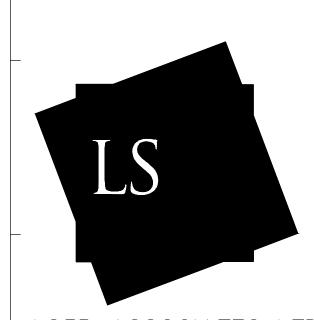
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SeamOfficial SeamOnWhiteSide

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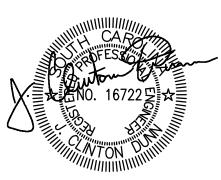
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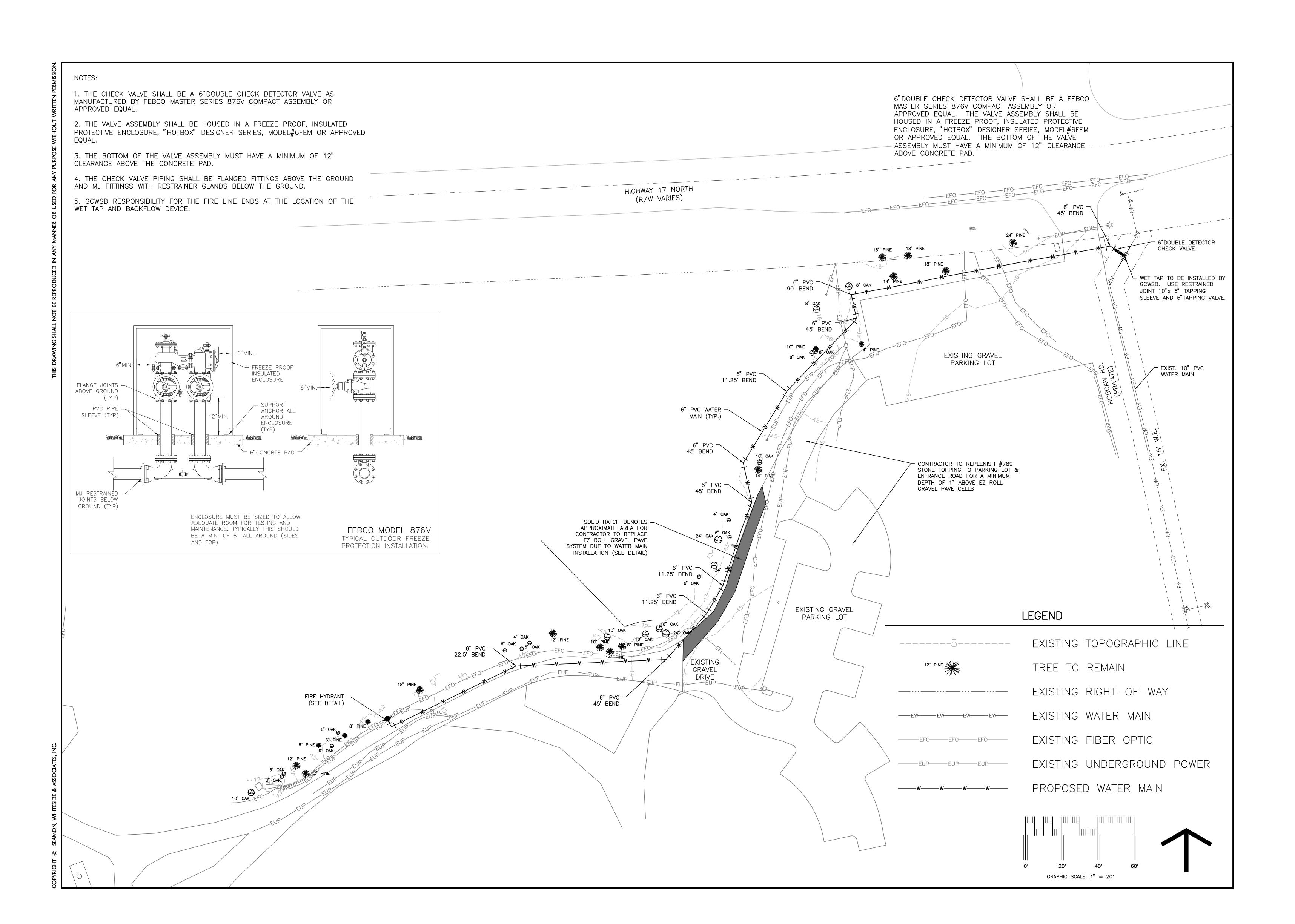
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SHEET 4 OF 6
SWPP NOTES
& DETAILS

SOLUTIONS THROUGH LISTENING

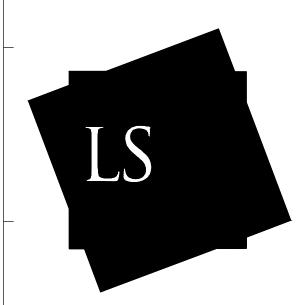


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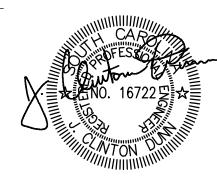
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PROJECT: 2402–062141

DATE: DECEMBER 3, 2012

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SHEET 5 OF 6

WATER PLAN

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SOLUTIONS THROUGH LISTENING

NOTE: HYDRANT SHALL BE STANDARD THREADS OF LOCAL FIRE DEPARTMENT. ALL HYDRANTS SHALL BE BAGGED AFTER INSTALLATION UNTIL FINAL PROJECT APPROVAL TYPICAL FIRE HYDRANT INSTALLATION - SECTION FIRE HYDRANT (NOT TO SCALE) 'VM' DR 'LM' STAMPED IN MARKER GEORGETOWN COUNTY WATER & SEWER DISTRICT LINE & VALVE MARKER 2 LINE & VALVE MARKER (NOT TO SCALE) X TYPICAL LOCATOR WIRE INSTALLATION - SECTION DATE 6-26-00 SCALE N.T.S. NO. 12 - W
DRAWN CHECKED C.L.E. TYPICAL LOCATOR WIRE INSTALLATION (NOT TO SCALE) EZ ROLL GRAVEL PAVING SYSTEM BY NDS, INC. COLOR AS SELECTED BY ARCHITECT FROM STANDARD RANGE. FILL WITH CONSOLIDATED #789 STONE. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS. 6" COMPACTED THICKNESS OF SANDY \_\_\_ GRAVEL BASE COURSE. SEE "EARTH MOVING" SPECIFICATION SECTION FOR MATERIAL, GRADATION, AND COMPACTION REQUIREMENTS. SEPARATION (WOVEN) GEOTEXTILE FABRIC (SEE SPECS) PREPARED SUBGRADE (SEE NOTE #1) 1. CONTRACTOR IS SPECIFICALLY CAUTIONED NOT TO COMPACT SUBGRADE BENEATH POROUS PAVEMENTS BEYOND THAT SPECIFIED BY THE GEOTECHNICAL TESTING AGENCY. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. 2. CONTRACTOR IS ADVISED THAT PAVING DESIGN RECOMMENDED BY GEOTECHNICAL ENGINEER IS BASED ON PREDICTED TRAFFIC LOADING AND ESTABLISHED STRENGTHS FOR PROPERLY INSTALLED PAVEMENTS. CONTRACTOR MUST COORDINATE REQUIRED GEOTECHNICAL TESTING & INSPECTION TO ENSURE THAT SUBGRADE AND PAVEMENT STRENGTH REQUIREMENTS ARE MET. EZ ROLL GRAVEL PAVING SYSTEM (NOT TO SCALE) Plotted: December 04, 2012 @ 11:24:36 a.m.
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Xrefs: 6206\_TB.DWG, 6206\_Xbase.DWG,

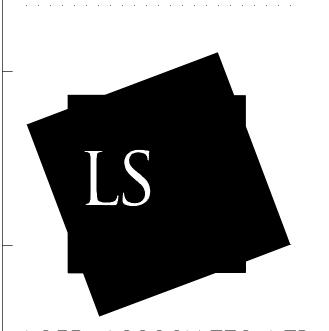
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WATER LINE EXTENSION AND NEW FIRE HYDRANT

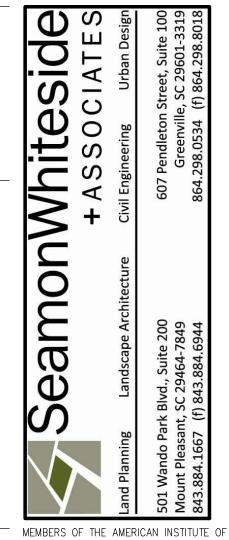
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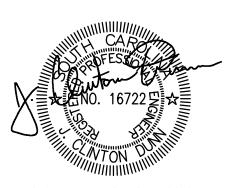
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PROJECT: 2402-062141

DATE: DECEMBER 3, 2012

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SHEET 6 OF 6

WATER DETAILS

SOLUTIONS THROUGH LISTENING