

State of New Jersey

PHILIP D. MURPHY Governor

SHEILA Y. OLIVER Lt. Governor DEPARTMENT OF TREASURY DIVISION OF PROPERTY MANAGEMENT & CONSTRUCTION P O BOX 034 TRENTON NJ 08625-0034

ELIZABETH MAHER MUOIO State Treasurer

CHRISTOPHER CHIANESE Director

December 10, 2020

SUBJECT: Bulletin "B" Dated December 10, 2020

PROJECT #: **P1173-00 Re-Bid**

DESCRIPTION: Campsite Electric and Water Service CCC Camp, Belleplain State Forest Woodbine, Cape May County, NJ

To Whom It May Concern:

WE ARE FORWARDING A COPY OF THE ABOVE REFERENCED BULLETIN. PLEASE ACKNOWLEDGE RECEIPT BY RETURNING THIS FORM TO:

Division of Property Management and Construction Attention: S. Taylor Contracts & Procurement PO Box 034 Trenton NJ 08625-0034 Fax #: 609-777-1970

Sincerely,

Shawn Taylor Property Management Services Specialist Contracts and Procurement

Date Received

Firm Name

Address

Signature

Title

STATE OF NEW JERSEY DEPARTMENT OF TREASURY DIVISION OF PROPERTY MANAGEMENT AND CONSTRUCTION PO BOX 034, TRENTON, NJ 08625-0034

PROJECT#: P1173-00 Re-Bid

A/E: Gillan & Hartmann, Inc

DATE: December 10, 2020

BULLETIN B

Bidder must acknowledge receipt of this Bulletin on bid form in the space provided therefor.

This Bulletin is issued for the purpose of amending certain requirements of the original Contract Documents, as noted hereinafter, and is hereby made part of and incorporated in full force as part of the Contract Documents. Unless specifically noted or specified hereinafter, all work shall comply with the applicable provisions of the Contract Documents.

A) BIDDING INFORMATION

- Contractors are advised that bids will be received on <u>Thursday, December 17, 2020 by 2:00 PM at the</u> <u>DPMC Plan Room</u>. Firms planning to submit a bid can drop off the bid to the DPMC Plan Room or use an overnight delivery service. <u>However, bids not received by the bid deadline will be deemed non-</u> <u>responsive</u>. Bidders are permitted to attend the bid opening in person (limit one representative per firm to ensure proper social distancing measures) but are strongly urged due to the current COVID-19 pandemic emergency to view the bid opening via the ZOOM videoconferencing app instead of attending in person. The bid results will be posted on the DPMC website promptly after the opening.
 - a) To Join the Bid Opening via the Zoom app:
 - You can connect with a PC/laptop or with a iOS or Android phone.
 - Download and Launch the app on your computer or smart phone. Select the JOIN A MEETING blue bar (you do not need to create an account). Then enter the meeting ID number at the top of the next page. You can edit your name, then select "Join". You will be permitted to allow the app to access your camera and mic. You will also be permitted to select internet audio or call. You can select internet call/audio.
 - The bid opening meeting ID# for Zoom is <u>496-704-7177</u> for this project.
 - The <u>password</u> to join the meeting is <u>195286</u>.
 - Or use the following link to access the meeting:

https://us04web.zoom.us/j/4967047177

- Tutorials on how to join the opening can be found at the following link: <u>https://support.zoom.us/hc/en-us/categories/200101697</u>
 - **Please note that setting up Zoom before the meeting will be helpful.**

b) Overnight Delivery:

• The address for overnight delivery (UPS, Fedex, etc) is as follows:

Division of Property Management and Construction 33 West State Street, 9th Floor Trenton, NJ 08608 ATTN: Shawn Taylor

B) CONTRACTOR QUESTIONS:

Eastern Construction & Electric

Q1. There is a section under Paving-321216 3.7-B for pavement marking-We did not find any on the plans is it required?

- **R1.** Pavement markings are not required.
- Q2. Section 329300 calls for trees/Shrubs/Plants/Lawns we did not find any SOW on the plans please confirm the Scope of work? (what is the special warranty for under sec-329300-1.8-A-B)
- **R2.** Refer to the bid documents and specifically, Specification Section 329300 entitled Plants specifies work required for potential site restoration work resulting from the construction of the project.
- Q3. The bid proposal form page 1 of 10 is not clear, are we including the \$100,000 (ACE service fee) in the bid amount? Are is it GC bid price plus \$100,000?
- R3. The contractor's bid shall include the \$100,000 Allowance for Atlantic City Electric.
- Q4. The note #1 on CW2.1-<u>"INSTALL UNDER EXISTING ROAD. DO NOT DISTURB TREE ROOTS"</u> are you expecting us to do hand excavation at these locations? What is the criteria for deciding the tree roots size and where it has to be protected?
- R4. Refer to the bid documents and specifically, Specification Sections 311000 Site Clearing, and 312000 Earthwork. Minimal disturbance of tree roots is anticipated.
- Q5. All the roads in Meisle field and CCC camp grounds are paved?
- **R5.** Refer to the bid documents and specifically, Specification Sections 311000 Site Clearing, 312000 Earthwork and 321216 Asphalt Paving. All roads are paved.
- Q6. The Limit of disturbance and Silt fence (TYP) is pointing to the dotted line in the plan SE-1 which is the limit of disturbance.
- **R6.** Refer to the bid documents and specifically Specification Sections 311000, 312000, 312319, 315000, and 329600. Perform all work for the project within the area defined by the limit of disturbance.
- Q7. Please share the as-built drawing of the Site domestic water at CCC camp an Meisle Camp since there is demolition of existing post hydrant and disconnecting of water service piping.
- **R7.** Refer to Bulletin "B" Attachment No 1 available As-built documentation of the existing water service system.

- Q8. What happens to the existing water service piping at both the camps? Is it being abandoned in place?
- **R8.** Refer to the bid documents and specifically, Specification Sections 220010 General Requirements Plumbing, Paragraph 1.23-A Connections to Existing Systems, Paragraph 3.5-A-E Abandonment, Removal and Relocation and Section 311000 Site Clearing Paragraph 3.2 Utilities.
- Q9. What happens to the existing 3" pipe as shown on CW1.1?
- **R9.** Refer to the bid documents and specifically, Specification Sections 220010 General Requirements Plumbing, Paragraph 1.23-A Connections to Existing Systems, Paragraph 3.5-A-E Abandonment, Removal and Relocation and Section 311000 Site Clearing Paragraph 3.2 Utilities.
- Q10. The Legend with Addendum not #2 calls for Silt fence at the limit of disturbance on SE-1 & SE-2? Is it all along the limit of disturbance or only at the silt fence shown on (Dark line with x) at stockpile and on bottom right hand side corner on SE-1?
- R10. Refer to the bid documents and specifically, Specification Section 311000 Site Clearing, 312000 Earthwork, 312319 Dewatering, 315000 Excavation Support and Protection and 329600 Soil Erosion and Sediment Control. Provide silt fencing as required for the project including the stock pile area and the camp sites.
- Q11. CE-1 Site # 106 RV electrical power pedestal is not shown, please confirm if it is required?
- R11. Refer to the bid documents and specifically, Specification Section 260050 and Drawing CE-1 Plan 11CE-1 CCC Camp New Work Plan. Provide RV electrical pedestal at site 106.
- Q12. New maintenance area detail 2/CE-1, what is the scope of work? There is nothing mentioned anywhere?
- R12. Delete Maintenance Area Electrical New Work Plan 2/CE-1 on Drawing CE-1.
- Q13. The detail # 1 on CW2.2 and detail #8 on CE-1, are these electrical conduits and water pipe for hydrant in the same trench? as per the detail we have no include additional 25 ft to both the quantities?
- R13. Refer to the bid documents and specifically, Drawing CW2.2 Sheet Note 1 and Drawing CE-1 Sheet Note 8.
- Q14. Please share the list of contractors who attended the mandatory pre bid meeting.
- **R14.** Refer to the attached Mandatory Pre-Bid Meeting Attendance Sheet.
- Q15. Hand hole detail as shown on 6/CE-0, Where is it shown on the plan? We could not find any on the plan. It is listed in the Legend on the same sheet.
- **R15.** Refer to the bid documents. Provide handholes based upon construction methods and means required to complete the project.
- Q16. We could not find this on the plan as listed on CE-1 Sheet Note #5.
- R16. Delete Sheet Note No. 5 on Drawing CE-1.
- Q17. There is note under Legend on SE 1 & SE-2 which refers to 10 ft x 10ft directional bore pit, can you clarify what is this for?
- **R17.** Refer to the bid documents. Information pertaining to earthwork to be performed by the Utility Company is provided for the purposes of coordination.
- Q18. SE-1 & SE-2 shows #1 through #9 with in the limit of disturbance all over the plan, Is it for information only?
- **R18.** Refer to the bid documents. The project as approved by the New Jersey Pinelands Commission is predicated upon the limits of disturbance depicted in the bid documents.
- Q19. We need a model # for the RV Power pedestal as shown on CE-0. We could not find any model # in the specification section 260010.

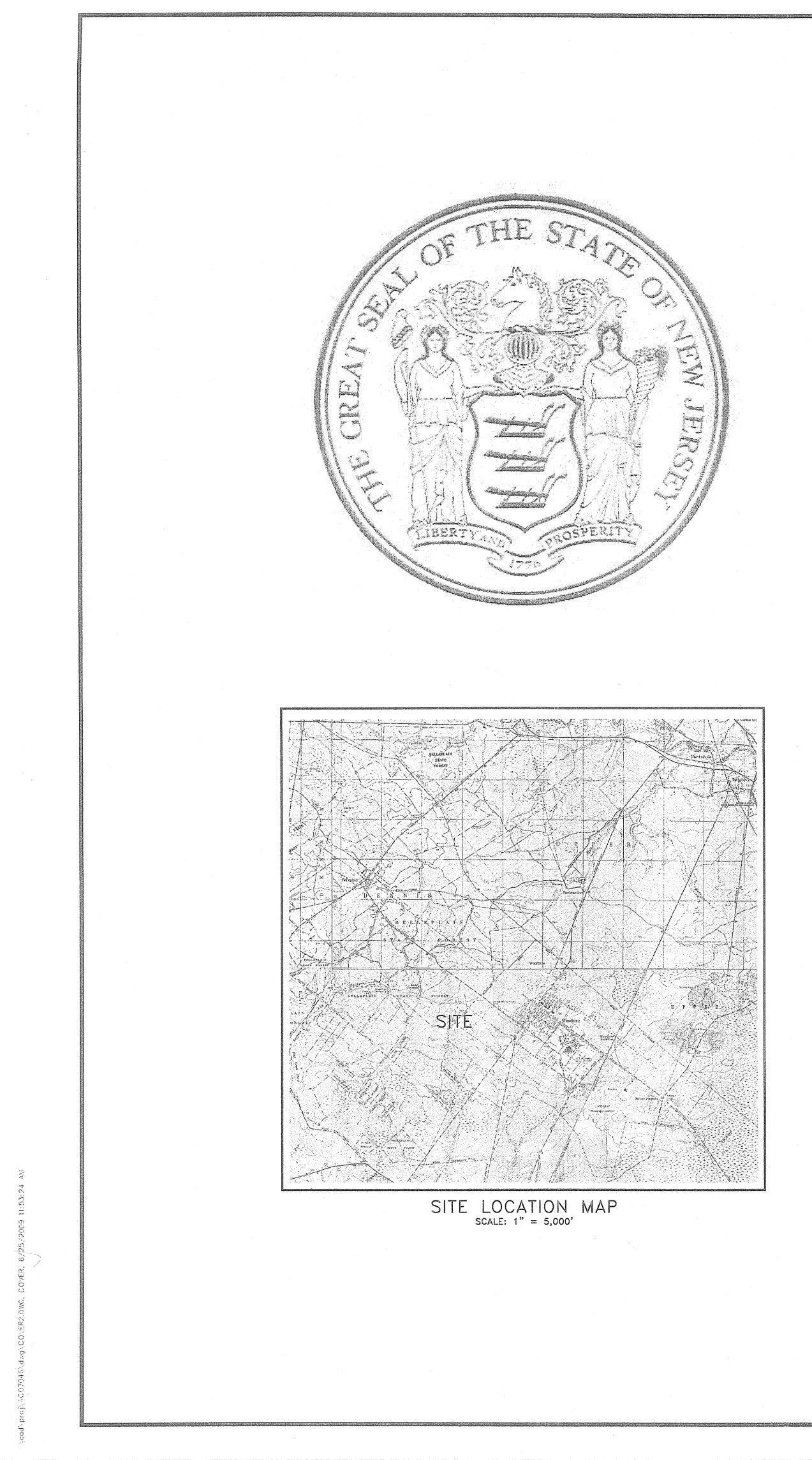
- R19. Refer to the bid documents. Pedestal performance requirements and 4 manufacturers are specified. Specifically, Specification Section 260050 Summary of Work, Paragraphs 2.1-A-D, Drawing CE-0 Details 1/CE-0, 2/CE-0, and 4/CE-0.
- Q20. Please provide Transformer Pad dimensions as shown on 3/CE-0.
- **R20.** Refer to the bid documents. Coordinate all requirements with the Utility Company. Specifically, Specification Section 260050 Summary of Work, Paragraphs 3.1-A-G. Refer to Detail 3/CE-0 on Drawing CE-0.
- Q21. Are there any bollards required around the transformers as specified under SEC-260050-3.1-C. We could not find any information on the drawings.
- R21. Refer to the bid documents and specifically, Specification Section 260050 Summary of Work.
- Q22. Our understanding is ACA is responsible for Underground Primary Normal electric power including directional drilling and transformers from point #6 to the locations shown on #3 on CE-1 including cables. (Under Allowance \$100,000). General Contractor will provide Concrete pad for the transformers.
- R22. Refer to the bid documents and specifically, Specification Section 260050 Summary of Work.
- Q23. We did not find any duct banks details, Sections or locations on the drawings, We have section 337150 for Underground ducts and utility structures? There is no concrete encased duct bank shown anywhere in the plans. Please confirm
- **R23.** Concrete encasement is not required.
- Q24. Underground power cable is it copper or aluminum? The specifications and plans contradict each other
- **R24.** Refer to the bid documents and specifically, Specification Section 260519 Conductors and Cables, Paragraphs 2.2-A-D for conductors, Paragraphs 3.1-A-G for feeders.
- Q25. What is the size of the Conduit as shown in Detail # 2 & #3 on CW-0 for electric and WIFI?
- **R25.** Refer to the bid documents and specifically, Drawing CE-0 Panel Schedule Wiring Data for specific electrical power circuit conductor sizes. WIFI conduit is not required.
- Q26. Note #7 on CE-1 calls for direct burial of the normal secondary power circuit whereas the typical detail on CW-0 call for conduit.
- R26. Refer to the bid documents and specifically, Specification Sections 260010, 260050, 260150, 260519, 260526, and 260533. Provide conductors, feeder and conduit as specified.
- Q27. Where is the starting and termination point for WFI conduit as shown on typical detail #2 &3 on CW-0?
- **R27.** WIFI conduit is not required.
- Q28. The existing water main as shown in the CW-1.2 is it abandoned in place?
- R28. Refer to the bid documents and specifically, Specification Sections 220010 General Requirements Plumbing, Paragraph 1.23-A Connections to Existing Systems, Paragraph 3.5-A-E Abandonment, Removal and Relocation and Section 311000 Site Clearing Paragraph 3.2 Utilities.
- Q29. Since we are digging in the same location for new water main are we responsible for protecting the existing water main in the street?
- R29. Refer to the bid documents and specifically, Specification Sections 220010 General Requirements Plumbing, Paragraph 1.23-A Connections to Existing Systems, Paragraph 3.5-A-E Abandonment, Removal and Relocation and Section 311000 Site Clearing Paragraph 3.2 Utilities.

- Q30. Since we don't have as built drawings it is not possible to estimate the pipe quantities that we have to protect during excavation and to layout the new water main.
- R30. Refer to the bid documents and specifically, Specification Sections 220010 General Requirements Plumbing, Paragraph 1.23-A Connections to Existing Systems, Paragraph 3.5-A-E Abandonment, Removal and Relocation and Section 311000 Site Clearing Paragraph 3.2 Utilities. Refer to Bulletin "B" Attachment No. 1 – available asbuilt documentation of the existing water service.
- Q31. The note #4 as shown at site # 133 on CW-2.2 calls for installation of pipe under existing road, as far as the site condition there is no existing road other than the existing road connecting all the camp sites. Our understanding is it is a dirt area.
- R31. Refer to the bid documents and specifically, Specification Sections 220010 General Requirements Plumbing, 220113 Facility Distribution Piping, 260010 General Requirements Electrical, 311000 Site Clearing and 312000 Earthwork.
- Q32. Please provide the thickness of existing asphalt road in the CCC camp area and Meisle field camp area for saw cutting the existing roads.
- R32. Refer to Bulletin B, Attachment No. 3 Sketch SK-1, As-Built Roadway Pavement Section.
- Q33. The drawing #2 for test pit location in the FPA associates report is blank, we don't see any boring pit location (issued under Bulletin A)?
- R33. Refer to Bulletin B, Attachment No. 4 Sketch SK-2 for the location of test pit No. 1 through No. 4.

ATTACHMENTS:

- 1. Available As-Built Documentation of the Existing Water Service prepared by Churchill Consulting Engineers dated January 2008.
- 2. Sketch SK-1 dated December 9, 2020.
- 3. Sketch SK-2 dated December 9, 2020.
- 4. Mandatory Pre-Bid Meeting Minutes and Mandatory Pre-Bid Meeting Attendance Sheet dated December 2, 2020.

END OF BULLETIN B



STATE OF NEW JERSEY

HONORABLE JON S. CORZINE, GOVERNOR BELLEPLAIN STATE FOREST MUNICIPAL WATER CONNECTION DENNIS TOWNSHIP, CAPE MAY COUNTY DPMC No. P1008-00 JANUARY 2008

DEPARTMENT OF THE TREASURY DAVID ROUSSEAU, STATE TREASURER

DIVISION OF PROPERTY MANAGEMENT & CONSTRUCTION STEVEN SUTKIN, DIRECTOR RAYMOND ARCARIO, DEPUTY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL PROTECTION

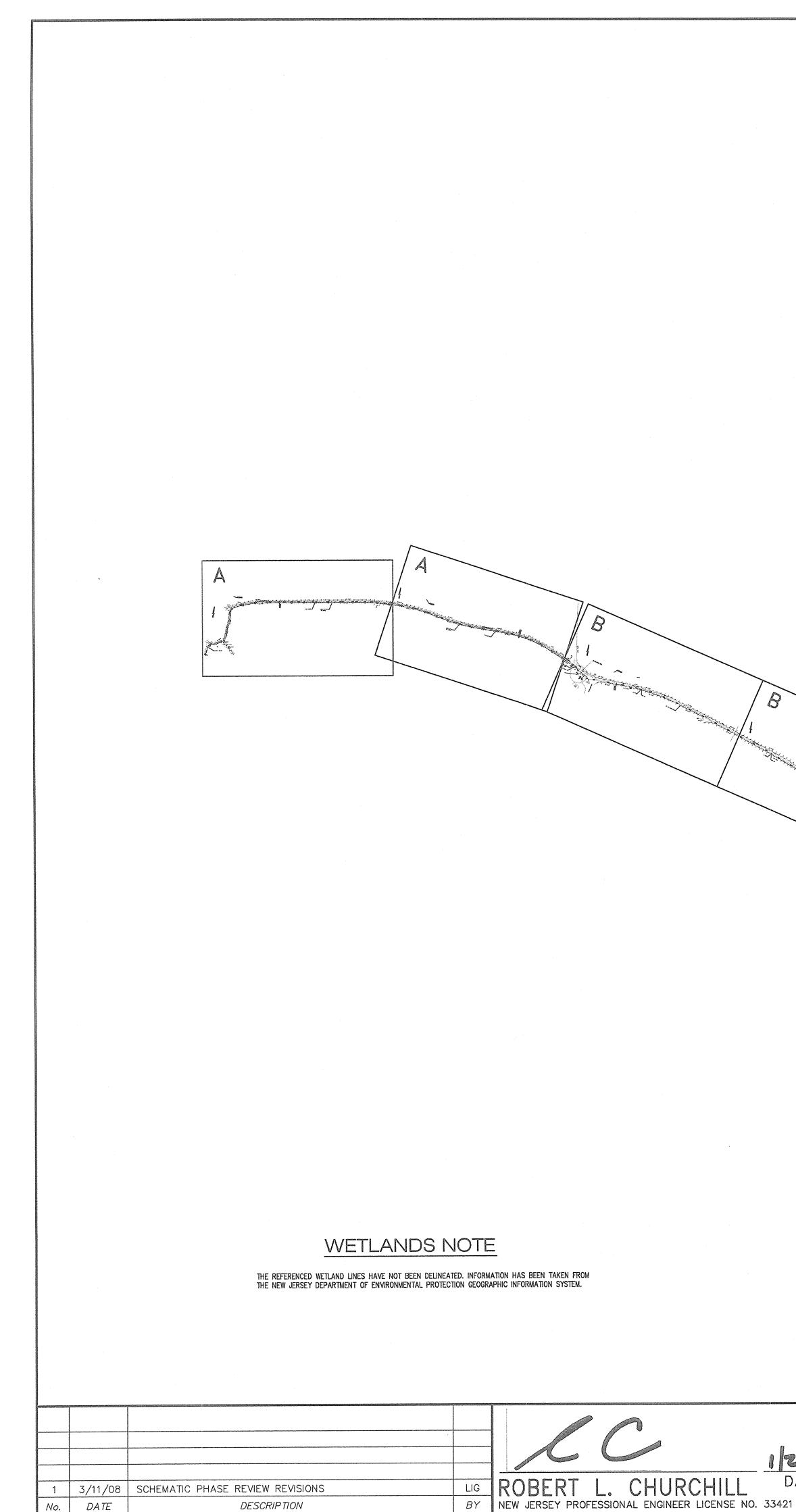
DIVISION OF PARKS AND FORESTRY

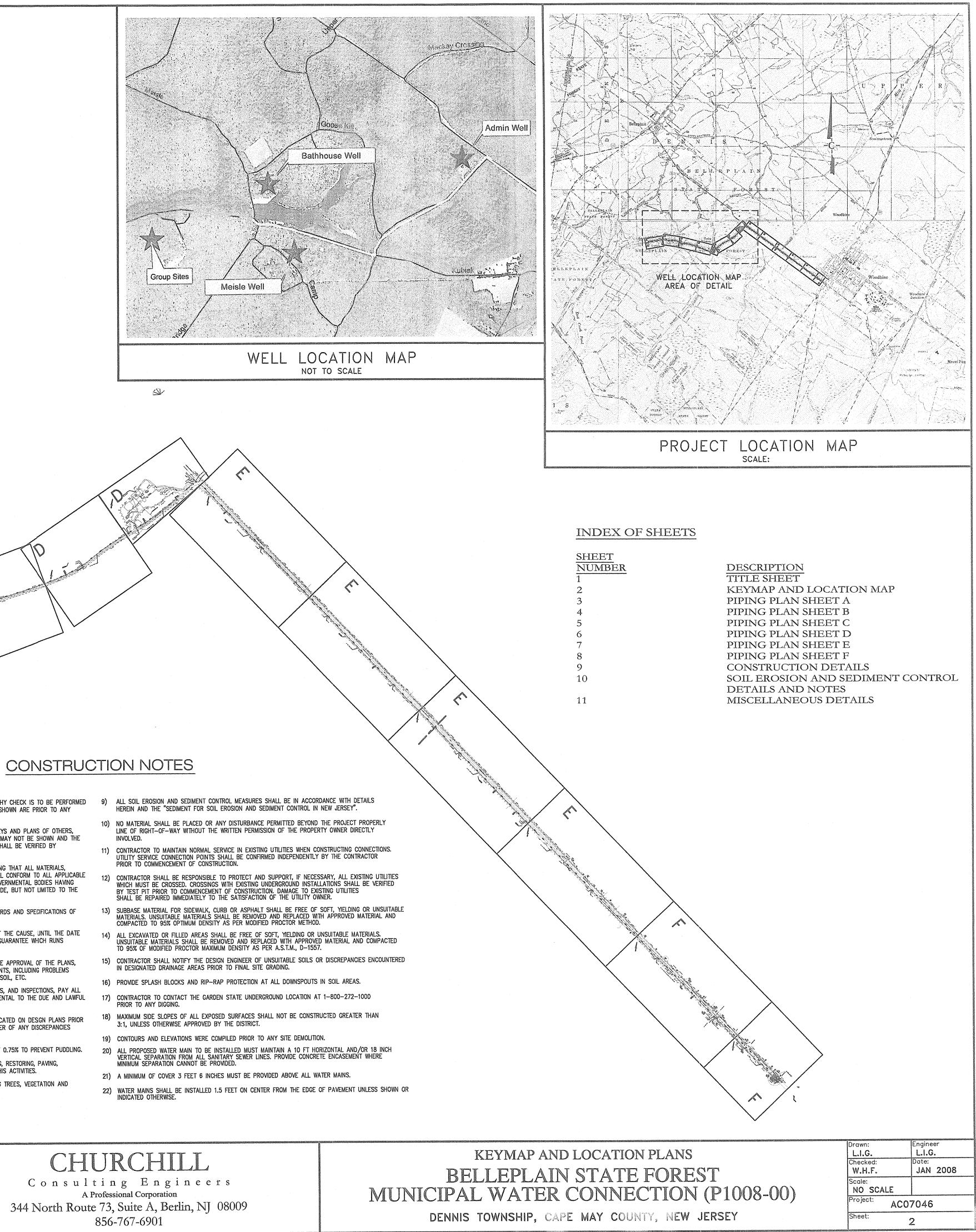
CHURCHILL

Consulting Engineers 344 North Route 73, Berlin, NJ 08009 856-767-6901



AS-BUILT DRAWINGS





- AND VERIFIED BY THE INDEPENDENT CONTRACTORS. ALL CONTOURS SHOWN ARE PRIOR TO ANY SITE CLEARING, DEMOLITION OR DISTURBANCE.
- 2) SUBSURFACE UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND PLANS OF OTHERS, THEREFORE, THE LOCATION OF ALL EXISTING SUBSURFACE UTILITIES MAY NOT BE SHOWN AND THE EXISTENCE, EXACT LOCATION AND ELEVATIONS OF SAID FACILITIES SHALL BE VERIFIED BY THE VARIOUS CONTRACTORS IN THE FIELD.
- 3) THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR ENSURING THAT ALL MATERIALS, METHODS AND DETAILS FOR CONSTRUCTION OF IMPROVEMENTS SHALL CONFORM TO ALL APPLICABLE STATUTES, REGULATIONS, ORDINANCES AND STANDARDS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION OVER SUCH WORK. THIS RESPONSIBILITY SHALL INCLUDE, BUT NOT LIMITED TO THE FOLLOWING:
- A. CONFORMITY WITH THE APPROVED PLANS AS WELL AS STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY.
- B. CORRECTION OF ALL DEFECTS IN THE WORK, NO MATTER WHAT THE CAUSE, UNTIL THE DATE OF ACCEPTANCE AND THEREAFTER FOR THE PERIOD OF ANY GUARANTEE WHICH RUNS BEYOND THE DATE OF ACCEPTANCE.
- C. SOLUTION OF ANY PROBLEM, UNFORESEEN AT THE TIME OF THE APPROVAL OF THE PLANS, WHICH MAY OR DO IMPAIR THE INTEGRITY OF ANY IMPROVEMENTS, INCLUDING PROBLEMS SUCH AS HIGH GROUNDWATER, UNSUITABLE SOILS, UNSTABLE SOIL, ETC.
- 4) THE CONTRACTOR SHALL PROCURE ALL REQUIRED PERMITS, LICENSES, AND INSPECTIONS, PAY ALL CHANGES AND FEES AND GIVE NOTICES NECESSARY FOR AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE PROJECT.
- 5) THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES INDICATED ON DESGN PLANS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES TO CORRECT THE DESIGN PLANS PRIOR TO CONSTRUCTION.
- 6) THE CONTRACTOR SHALL MAINTAIN A MINIMUM PAVEMENT SLOPE OF 0.75% TO PREVENT PUDDLING.
- 7) THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING, GRUBBING, RESTORING, PAVING, TOP SOILING, FERTILIZING AND SEEDING ALL AREAS DISTURBED BY HIS ACTIVITIES.
- 8) EFFORTS SHALL BE MADE BY THE CONTRACTOR TO RETAIN EXISTING TREES, VEGETATION AND NATURAL CHARACTERISTICS OF THE SITE.

- 1) PRIOR TO ANY CONSTRUCTION, OTHER THAN CLEARING, A TOPOGRAPHY CHECK IS TO BE PERFORMED 9) ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH DETAILS HEREIN AND THE "SEDIMENT FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY".
 - 10) NO MATERIAL SHALL BE PLACED OR ANY DISTURBANCE PERMITTED BEYOND THE PROJECT PROPERLY LINE OF RIGHT-OF-WAY WITHOUT THE WRITTEN PERMISSION OF THE PROPERTY OWNER DIRECTLY

 - IN DESIGNATED DRAINAGE AREAS PRIOR TO FINAL SITE GRADING.
 - 16) PROVIDE SPLASH BLOCKS AND RIP-RAP PROTECTION AT ALL DOWNSPOUTS IN SOIL AREAS.

 - 18) MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT BE CONSTRUCTED GREATER THAN 3:1, UNLESS OTHERWISE APPROVED BY THE DISTRICT.
 - 19) CONTOURS AND ELEVATIONS WERE COMPILED PRIOR TO ANY SITE DEMOLITION.

CHURCHILL Consulting Engineers

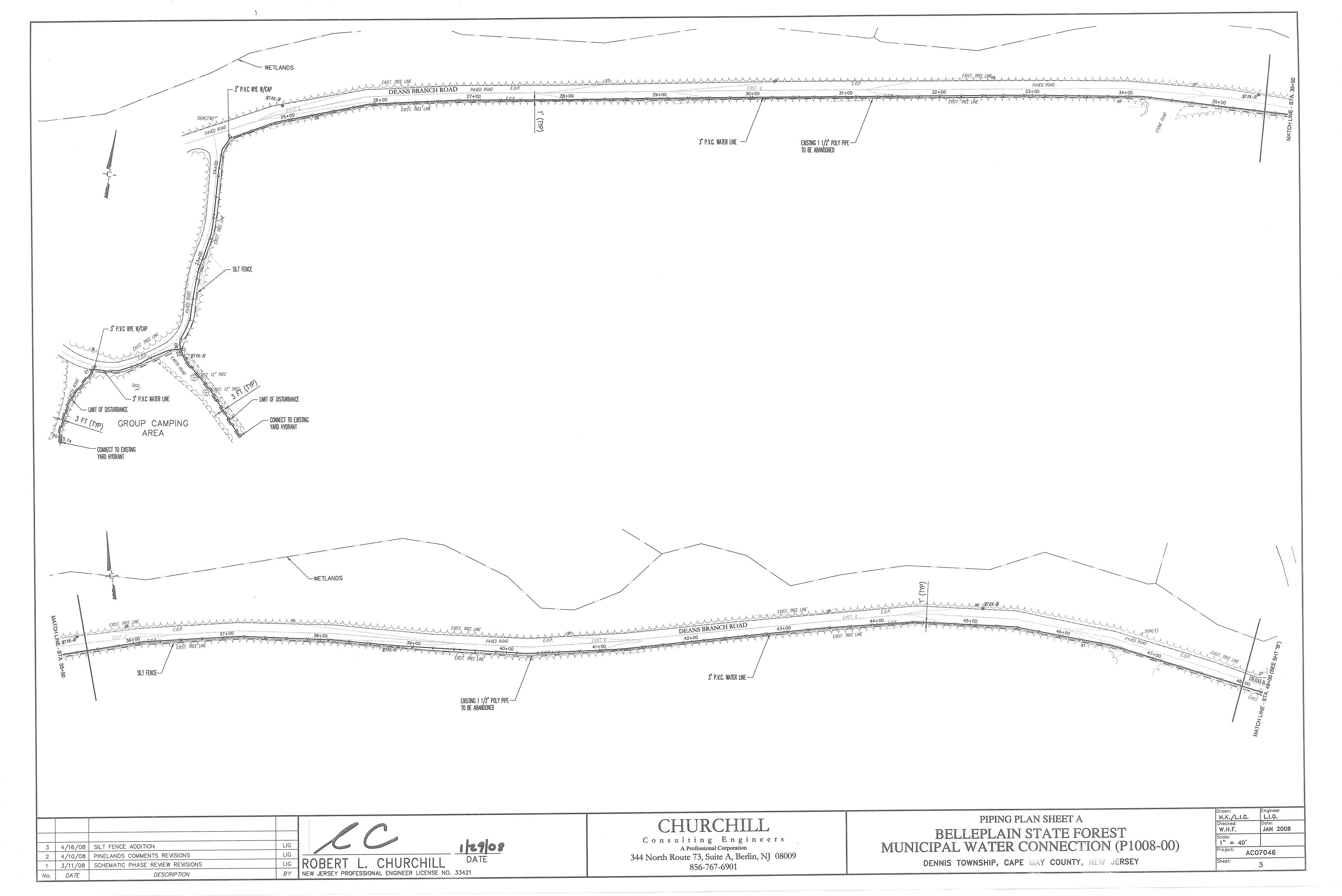
A Professional Corporation 344 North Route 73, Suite A, Berlin, NJ 08009

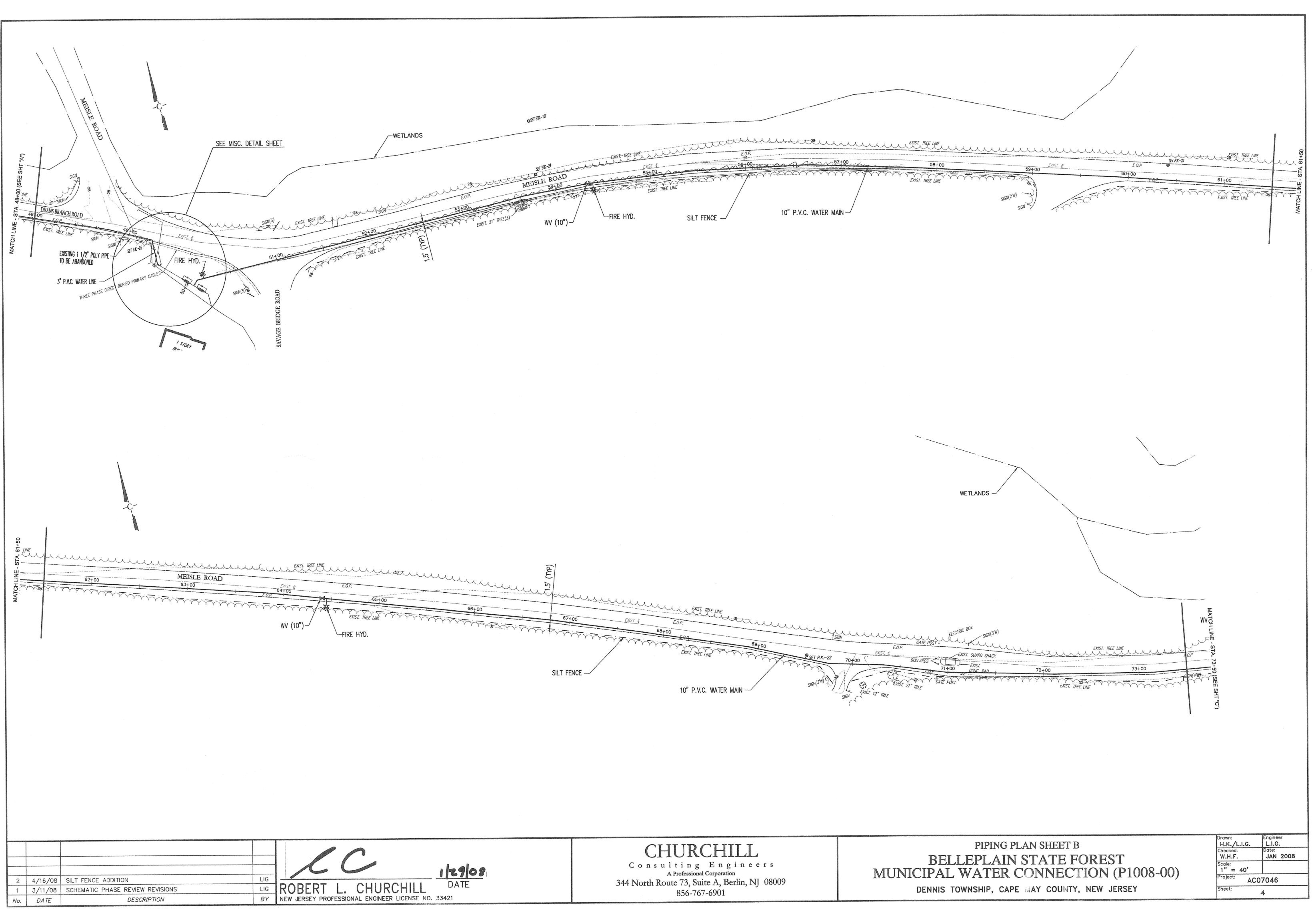
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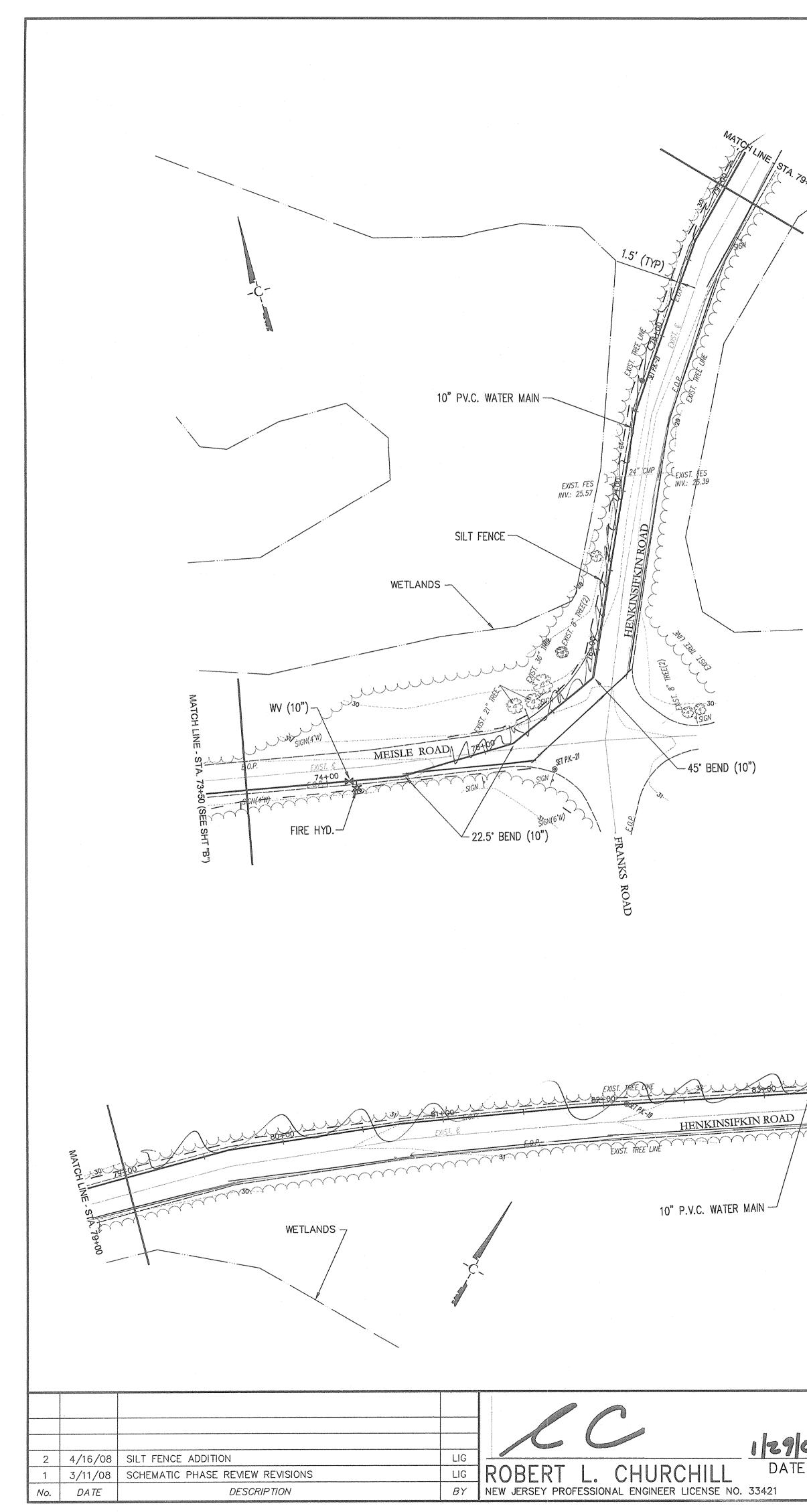
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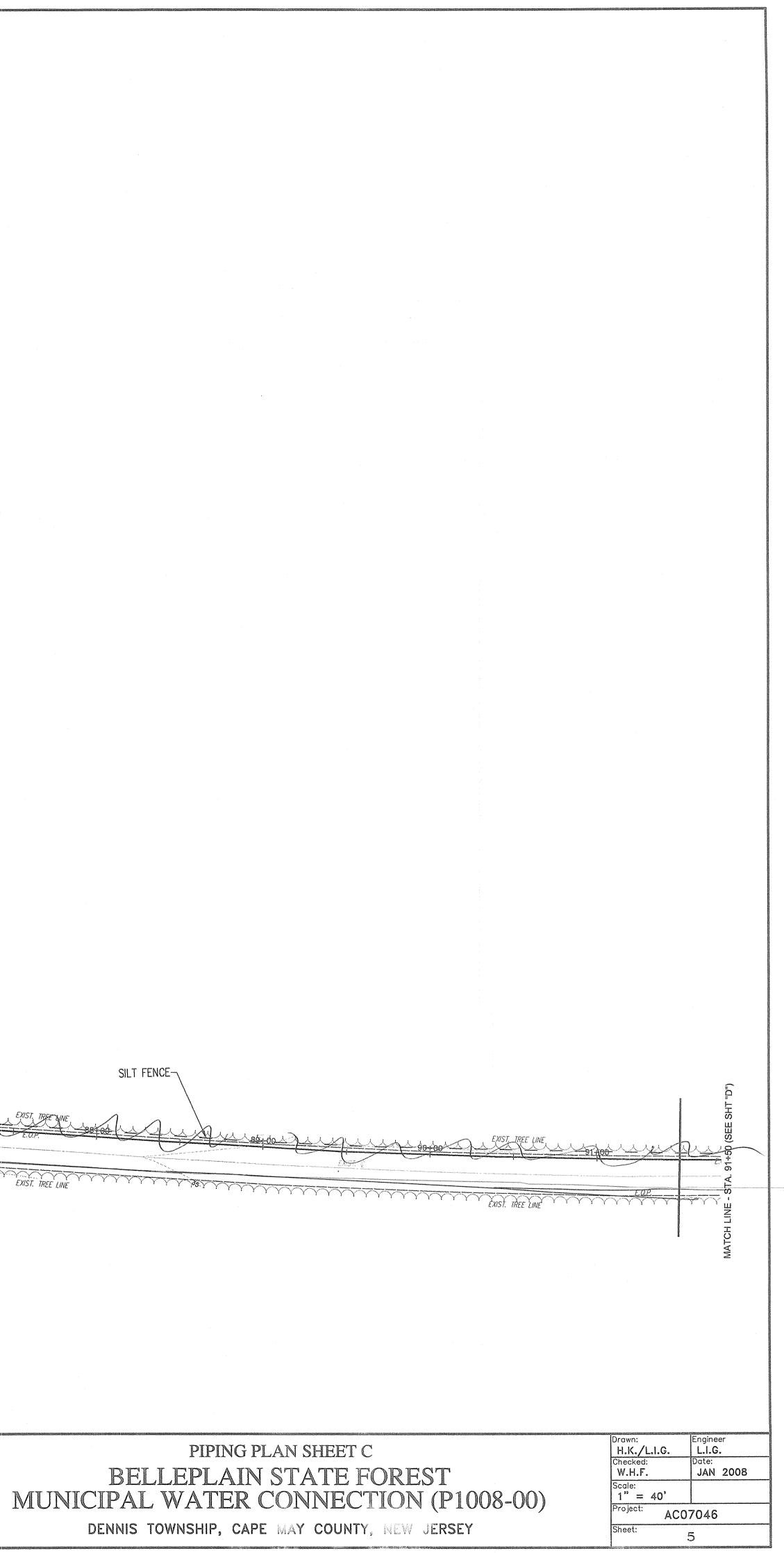


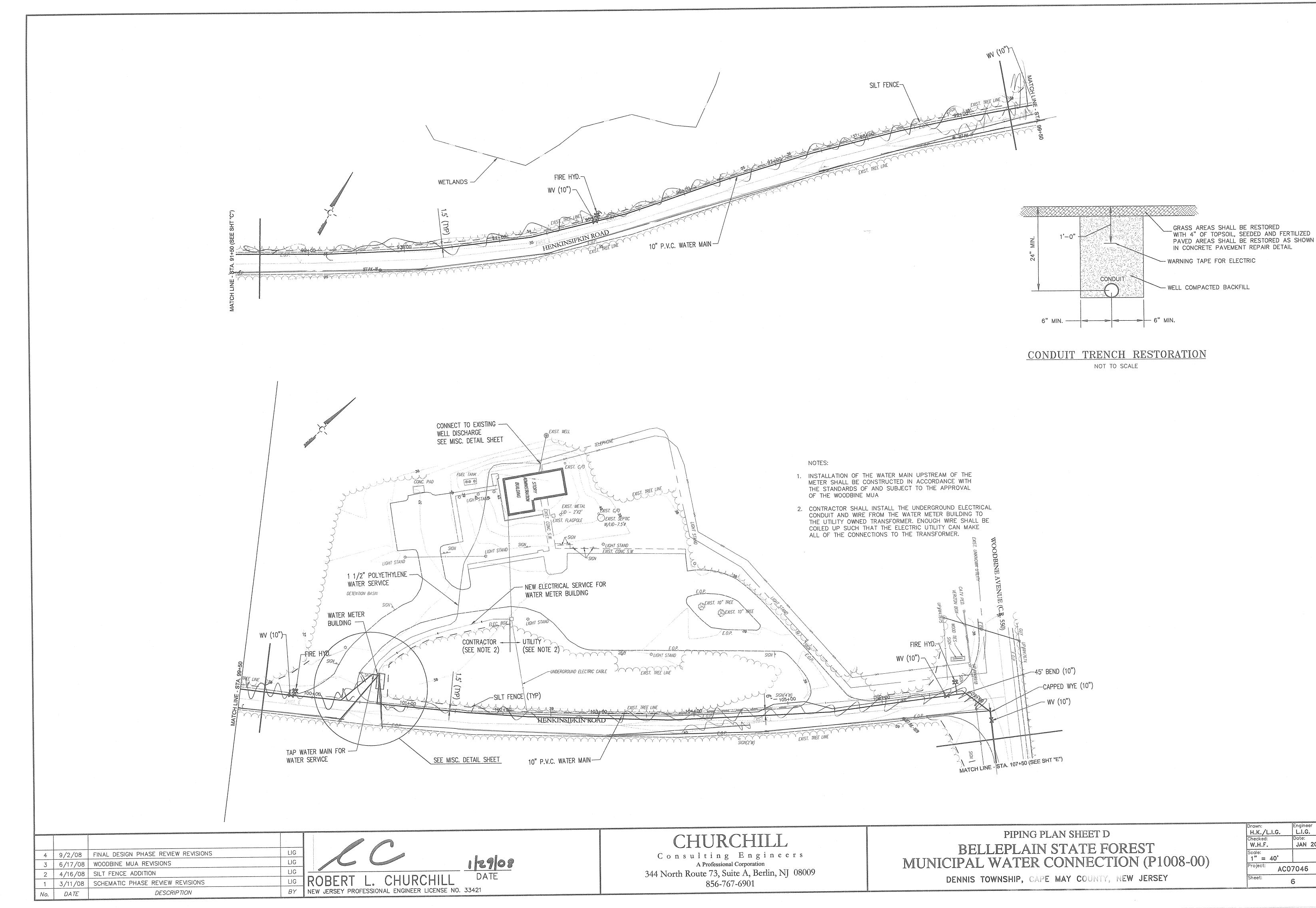


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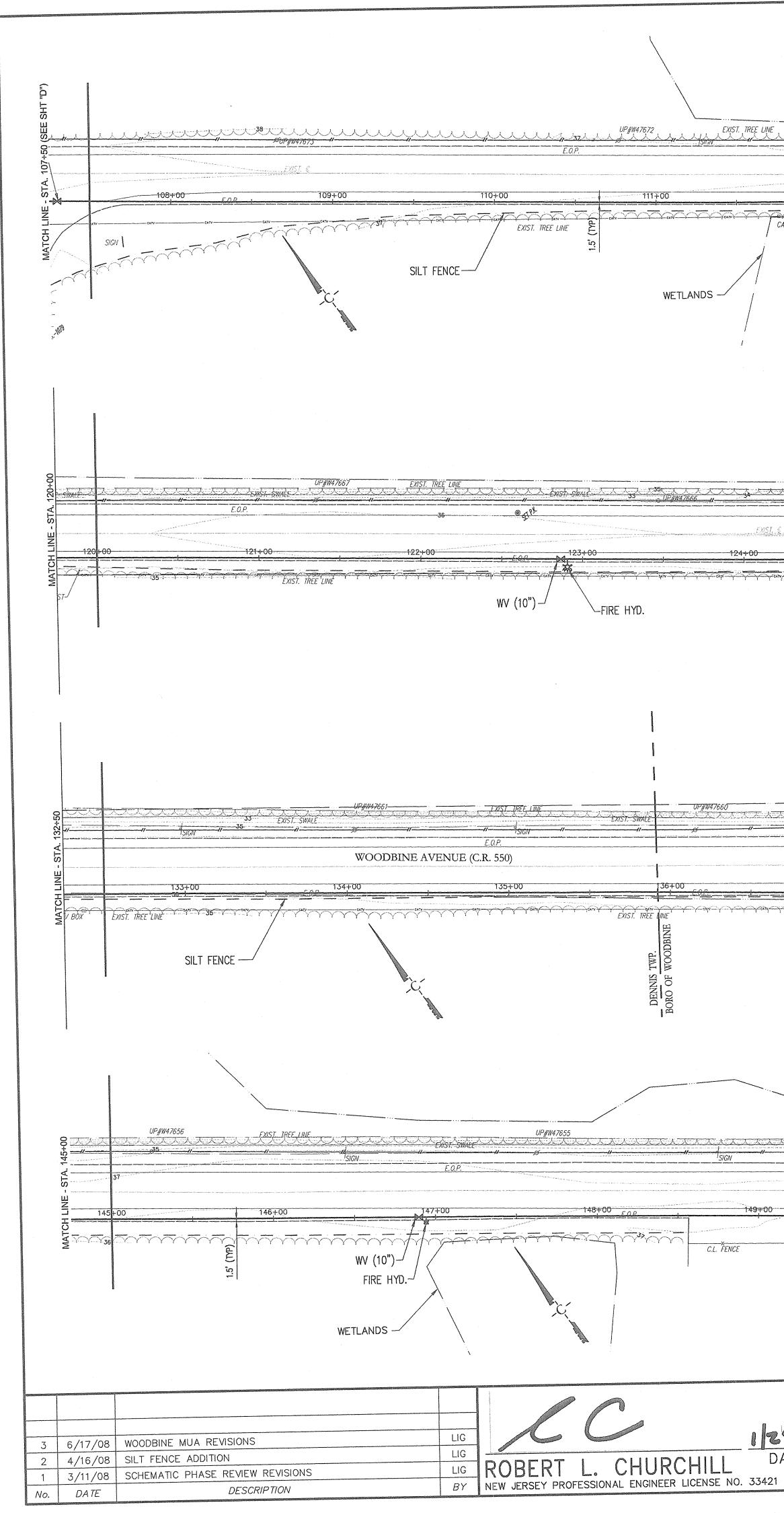


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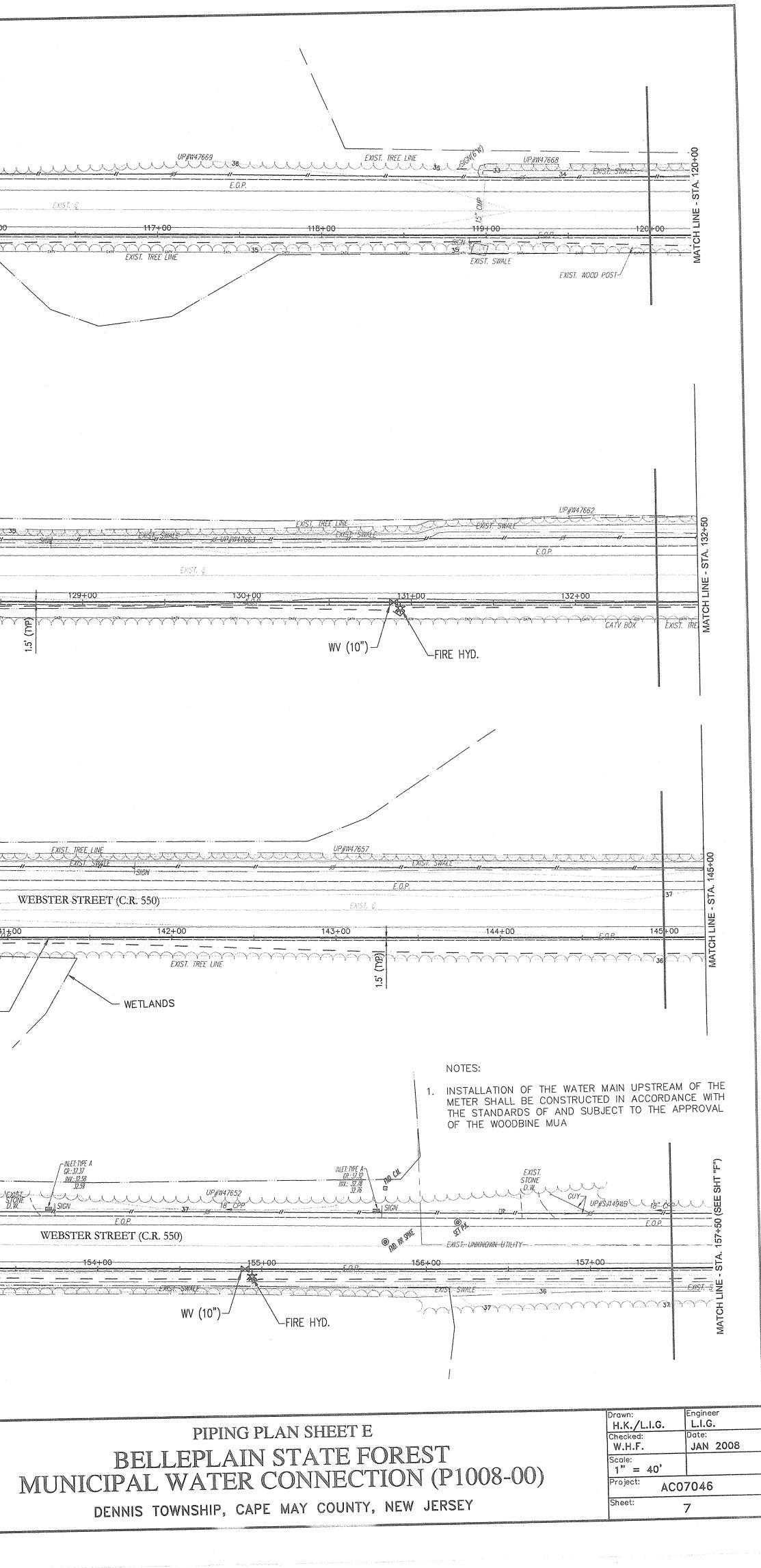


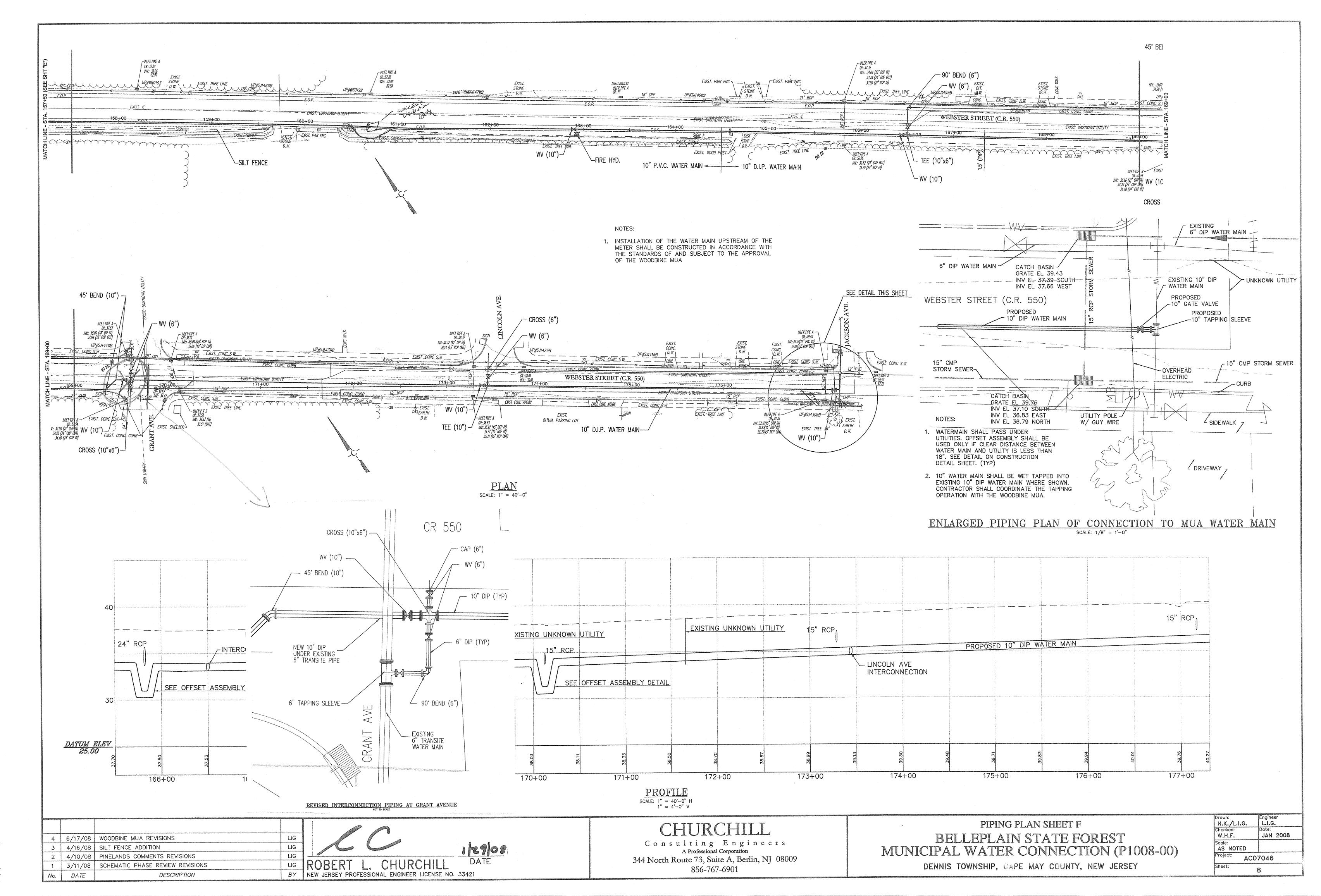


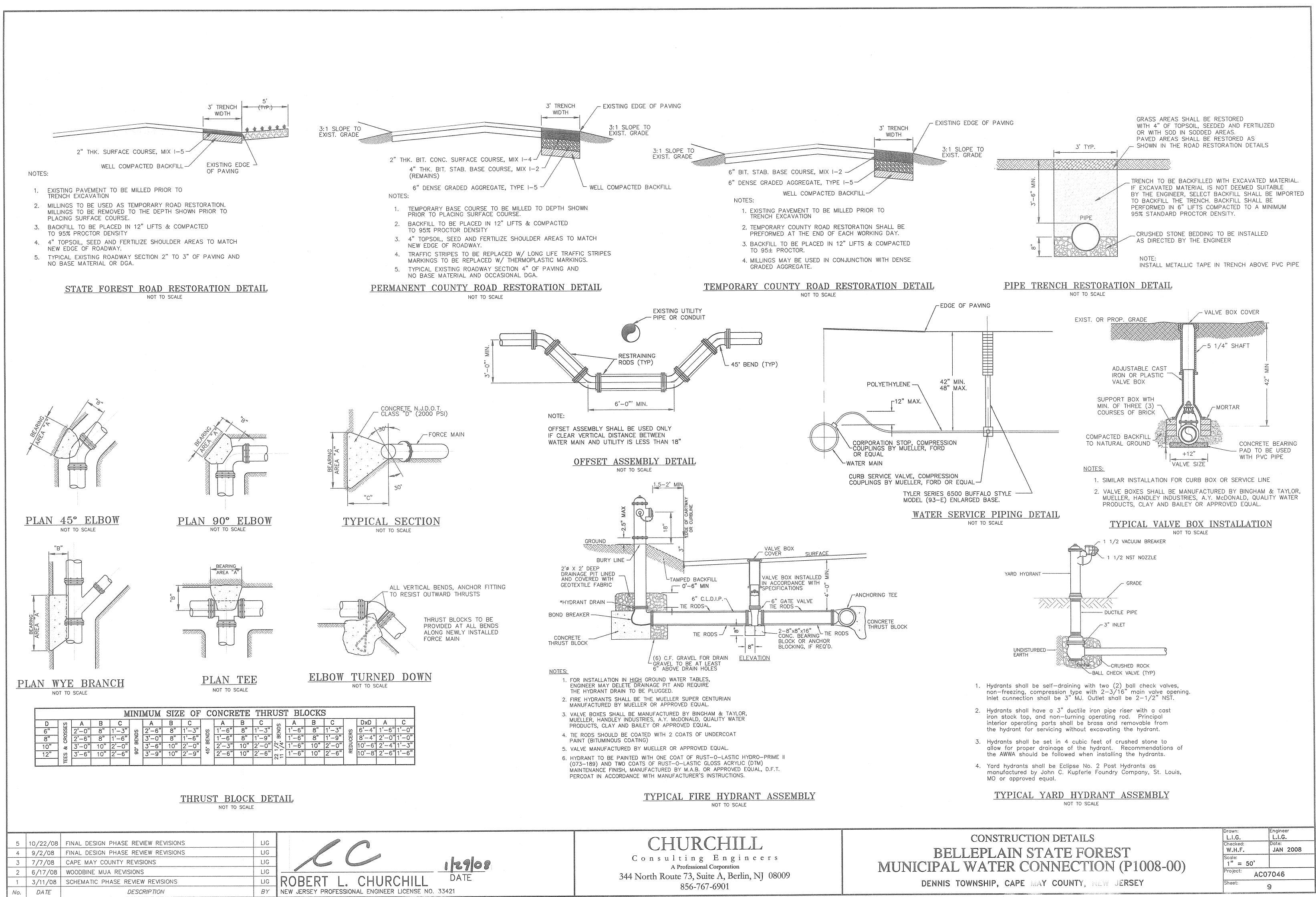
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| H.K./L.I.G. | L.I.G. |
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| W.H.F. | JAN 2008 |
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| Sheet: | 3 |



F.O.P. WOODBINE AVENUE (C.R. 550) 113+00 14 ± 00 EXIST. TREE LINE CATV PED. WV (10")--FIRE HYD. 10" P.V.C. WATER MAIN -大大 太 大 大 大 大 大 大 大 大 大 大 大 大 大 大 WOODBINE AVENUE (C.R. 550) -197 ± 00 128+00 36-EXIST. TREE LINE WETLANDS -SILT FENCE -10" P.V.C. WATER MAIN -UP#B182V 138+00 39 + 0137 + 00SIGN & UP#BT235WQ FND. C.M. WV (10")-FIRE HYD. 10" P.V.C. WATER MAIN-W: 32.37 (18" CPP INV .: 35.24 (15" PVC)~ UP#W47653 D.W. 18" CPR FXIST SWI F.O.P. EXIST. GUIDERAIL- -149 ± 00 CONC. PAD C.L. FENCE C.L. FENCE UP#BT88WC INV.: 34.19 (18" RCP)-SILT FENCE · 10" P.V.C. WATER MAIN CHURCHILL Consulting Engineers A Professional Corporation 12908 344 North Route 73, Suite A, Berlin, NJ 08009 DATE 856-767-6901







| 5 | 10/22/08 | FINAL DESIGN PHASE REVIEW REVISIONS | LIG | | |
|-----|----------|-------------------------------------|-----|--|------|
| 4 | 9/2/08 | FINAL DESIGN PHASE REVIEW REVISIONS | LIG | | |
| 3 | 7/7/08 | CAPE MAY COUNTY REVISIONS | LIG | | ۱a |
| 2 | 6/17/08 | WOODBINE MUA REVISIONS | LIG | | |
| 1 | 3/11/08 | SCHEMATIC PHASE REVIEW REVISIONS | LIG | IROBERT L. CHURCHILL | L |
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| WINTER BARLEY WINTER CEREAL RYE | 96 112 | 2.2 2.8 | 08/01-09/15 08/01-11/01 | 08/15~10/01 08/01-11/15 | 08/15-10/15 08/01-12/15 | 1.0 1.0 | OF FLATPEA DEETONGUE OR SMITCHGRASS REDTOP PLUS BIRDSFOOT TREFOIL | 15 20 1 10 | .35 .45 .10 .23 | 0 | | - |
| WARM SEASON GRASSE | S 20 | 0.5 | 66/10-08/01 | 05/15-08/15 | 05/01-09/01 | 1.0 | WEEPING LOVEGRASS FLATPEA OR SERCIA LESPEDEZA | 3 25 25 | .10 .60 .60 | 0 | | |
| MILLET (CERMAN OR HUNGARIAN) WEEPING LOVEGRASS | 30 5 | 0.7 0.2 | 06/01-08/01 06/01-08/01 | 05/15-08/15 05/15-08/15 | 05/01-09/01 05/01-09/01 | 1.0 0.25 | 3 SERECIA LESPEDEZA SEED MIXTURE *2 | 15-10 | .3525 | | | |
| AS DETERMINED BY A G | ERMINATION TEST RESU | ULT. NO ADJUSTMEN | ADJUSTED TO REFLECT THE A TI IS REQUIRED FOR COOL SEAS TATE OR SEEDED AREA CAN BE | SON GRASSES. | | | SWITCHGRASS, DEERTONQUE UTTLE BLUESTEM SAND LOVEGRASS PLUS PARTRIDGE PEA | 20 | .45 .45 .25 | 0 | | • |
| B/PLANT HARDINESS ZONE (S I/TWCE THE DEPTH FOR SAN | EE FIGURE 7-1, PG 7- | -4) | | | | APPLICABLE | 5 SMICHGRASS BIG BLUESTEM LITTLE BLUESTEM SAND LOVEGRASS COASTAL PRINCESS | 10 5 5 4 10 | .25 .10 .10 .25 | 0 | | |
| ONE 6B - INCLUDES | PORTIONS OF BERGAN | , PASSAIC, MORRIS, | MORRIS, SOMERSET, AND HUN ESSEX, HUDSON, UNION, SOME ATLANTIC, CUMBERLAND, AND | RSET, MIDDLESEX, MERCER, HI | Interton, monmouth, | | BERNUDAGRASS ZOYSIAGRASS (SEED) 6 ZOYSIAGRASS (SPRICS) | 15 30 | .35 .70 | 0 | | |
| | | | EM, CUMBERLAND, CAPE MAY, . AN AND MONMOUTH COUNTIES. | ATLANTIC, BURLINGTON, OCEA | I AND MONMOUTH COUNTIES. | | DEETONGUE WEEPING LOVECRASS 7 SERECIA LESPEDEZA | 20 3 25 | .45 .10 .60 | 0 | | 4 |
| MATERIALS: A. TOPSOL SHOULD BE FRIA | BLE, LOAMY, FREE OF | DEBRIS, OBJECTION | FOR TOPSO | CONTAIN NO TOXIC SUBSTANCE | OR ADVERSE CHEMICAL OR | | COOL SEASON SEED MIXTURES | | | | | |
| CENTIMETER, MORE THAN O MINIMUM ORGANIC MATTER B. TOPSOIL SUBSTITUTE IS A | D.5 MILLIMHOS MAY DES CONTENT OF 2.75% O SOIL MATERIAL WHICH | SICCATE SEEDLINGS / IRGANIC MATTER COM H MAY HAVE BEEN / | LUBLE SALTS SHOULD NOT BE E AND ADVERSELY IMPACT GROWTH NTENT MAY BE RAISED BY ADDIT AMENDED WITH SAND, SILT CLA | i), TOPSOL HAULED IN FROM (IVES. Y, ORGANIC MATTER, FERTILIZ | EF SITE SHOULD HAVE A | | FINE FESCUE (BLEND) HARD FESCUE STRONG CREEPING RED FESCUE | 75 | 2.10 | 0 | | ł |
| APPEARANCE OF TOPSOIL TOPSOIL SUBSTITUTE MATE OF SAND, SILT CLAY, ORG STRIPPING AN | RIALS SHALL MEET THE ANIC MATTER, SOLUBLE | E REQUIREMENTS OF SALTS AND PH LEV | n sites with insufficient tops topsoil note above. Soil tes /el. | SOL FOR ESTABLISHING FERMAN ITS SHALL BE PERFORMED TO I | DETERMINE THE COMPONENTS | | 8 UTILE BLUESTEM SAND LOVECRASS COASTAL PRINCESS | 10 10 5 | .25 .25 .10 | | | - |
| B. STRIPPING SHOULD BE CO C. WHERE FEASIBLE, LIME M | NFINED TO THE IMMED | DIATE CONSTRUCTION | ANTITY AND OR QUALITY OF SU A AREA. RATE DETERMINED BY SOIL TES R PERMANENT VEGETATIVE COVED | ts to bring ph to approxi | | | 9 REDTOP WHITE CLOVER | 50 40 10 3 | 1.40 .92 .25 .10 .10 | 0 | ļ | 1 |
| D. A 4-6 INCH STRIPPING D E. STOCKPILE OF TOPSOIL SI | epth is common, bu' Hould be situated s | T MAY VARY DEPEN SO AS NOT TO OBST | | CAUSE OFF-SITE ENVIRONMEN | | | TALL FESCUE (TURF TYPE) STRONG CREEPING RED FESCUE PERENNIAL RYEGRASS CROWNVECH FLATPEA | 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 | .45 .45 .45 .60 | 0 | (|) |
| SITE PREPARA | SOIL STABILIZATION. WI | EEDS SHOULD NOT I | BE ALLOWED TO GROW ON STO | CKPILES. | n sou to frosion | | DEERTONCUE REDTOP 11 WILD RYE (ELYMUS) SWITCHORASS | 20 2 15 25 | .45 .06 .35 .60 | 0 | | |
| B. GRADE AS NEEDED AND I AND ANCHORING, AND MA | FEASIBLE TO PERMIT T AINTENANCE, SEE THE | THE USE OF CONVEN STANDARD FOR LAN | NUMLE WITH THE SPECIFIED SE REDARCE WITH THE SPECIFIED SE IND GRADING. D FOR LIME REQUIREMENT. LIME: THE SOIL AS NEARLY AS PRACT | ED PREPARATION, SEEDING, M | ULCH APPLICATION | | TALL FESCUE (TURF TYPE) REDTOP PERENNIAL RYEGRASS BIRDSFOOT TREFOIL | 50 5 5 10 | 1.10 .10 .10 .25 | 0 | | 4 |
| D. IMMEDIATELY PRIOR TO TO INSURE A GOOD BOND BE | OPSOLING, THE SURFA | ACE SHOULD BE SCA AND SUBSOIL | THE SOIL AS NEARLY AS PRACT ARIFIED 6° TO 12° WHERE THER O UNDERGROUND UTILITIES (CAB | e has been soil compaction | N. THIS WILL HELP INSURE | | RED CANARYGRASS KENTUCKY BLUEGRASS | 25 | .10 | 0 | | - |
| E. INSTALL NEEDED EROSION SEDIVENT BASINS, AND WA | TERWAYS. SEE STANDA | OR FACILITIES SUCH ARDS 11 THROUGH 43 | H AS DIVERSIONS, GRADE STAB 2. | ILIZATION STRUCTURES, CHANI | VEL STABILIZATION MEASURES, | | 13 TALL FESCUE (TURF TYPE) TALL FESCUE (TURF TYPE) | 150 | 3.5 | 0 | | |
| B. A UNIFORM APPLICATION | TO A DEPTH OF 5 IN A MINIMUM DEPTH OF | CHES (UNSETTLED) I F 12 INCHES OF SO | WORK WITHOUT DAMAGING SOIL IS RECOMMENDED, SOILS WITH A IL HAVING A PH OF 5.0 OR MO | PH OF 4.0 OR LESS OR CONT. | aining iron sulfide | | 14 (BLEND OF 3 CULTIVARS) HARD FESCUE | 120 | 2.70 | | | - |
| SEEDBED PRE | PARATION: | CORDING TO SOIL T | EST RECOMMENDATIONS SUCH J | | | | 15 PERENNIAL RYEGRASS KENTUCKY BLUEGRASS (BLEN TALL FESCUE | D) 40 | .70 .90 | 0 | | 4 |
| 500 POUNDS PER ACRE (INDICATES OTHERWISE, AP EQUIVALENT AND STANDA | or 11 pounds per 10 Pply linestone in AC RD for measuring t | 000 SQUARE FEET O COORDANCE WITH TA HE ABILITY OF LIMIN | WERS COOPERATIVE EXTENSION # 10-20-10 OR EQUIVALENT V BLE 4-1, PG. 4-2 AND THE R IG MATERIALS TO NEUTRALIZE 1 LIMESTONE APPLICATION RATE | MTH 50% WATER INSOLUBLE N ESULTS OF SOIL TESTING. CAL SOIL ACIDITY AND SUPPLY CA | ITROGEN UNLESS A SOIL TEST CIUM CARBONATE IS THE | | 16 PERENNIAL RYEGRASS KENTUCKY BLUEGRASS (BLEN | | 50 50 50 | 0 | | 4 |
| TANDARDS F | OR PERM | | | | SOIL STABILIZAT | TION | 17 HARD FESCUE CREEPING FESCUE PERENNIAL RYEGRASS | 120 30 10 | 2,70 .70 .25 | 0 | | 4 |
| MULCH ANCHORING. ALL O B. IMMEDIATELY PRIOR TO S | FEASIBLLE TO PERMIT RADING SHOULD BE DO | ONE IN ACCORDANCE APPLICATION. THE S | ÆNTIONAL EQUIPMENT FOR SEE WITH STANDARDS FOR LAND G BURFACE SHOULD BE SCARIFIED | RADING, PG. 19–1 6° TO 12° WHERE THERE HA | s been soil compaction. | | ROUGH BLUEGRASS STRONG CREEPING RED FESCUE | 90 50 | 20 1.2 | 0 | | 4 |
| THIS PRACTICE IS PERMISS | SABLE ONLY WHERE TH CONTROL PRACTICES | IERE IS NO DANGER S OR FACILITIES SUC | TO UNDERGROUND UTILITIES (CA H AS DIVERSIONS, GRADE STAE | BLES, IRRIGATION SYSTEMS, ET | <u>C.)</u> | | 19 CREEPING BENTGRASS CREEPING RED FESCUE ALKALI SALTGRASS | 25 40 40 | 0.50 0.92 0.92 | 0 | | 4 |
| | NE AND FERTILIZER AC | CORDING TO SOIL T | IEST RECOMMENDATIONS SUCH | | | | HARD OR SHEEPS FESCUE 20 N.E. WILDFLOWER MIXTURE | 25 12 | 0.55 | 0 | | A |
| 500 POUNDS PER ACRE INDICATES OTHERWISE. AI EQUIVALENT AND STAND/ | or 11 pounds per 1 pply umestone in An ard for measuring 1 | 1000 SQUARE FEET (CCORDANCE WITH T/ THE ABILITY OF LIMIT | UTGERS COOPERATIVE EXTENSIL OF 10-20-10 OR EQUIVALENT ABLE 4-1, PG 4-2 AND THE R NG MATERIALS TO NEUTRAUZE R UMESTONE APPLICATION RATE | WITH 50% WATER INSOLUBLE I ESULTS OF SOIL TESTING, CAL SOIL ACIDITY AND SUPPLY CA | NITROGEN UNLESS A SOIL TEST CIUM CARBONATE IS THE | | SMOOTH CORDCRASS 21 SALTMEADOW CORDCRASS | VEC VEC | Q.45 Q.45 | | | |
| undula Anti LLUUMED. | | TABLE | | | | | AMERICAN BEACHGRASS | VES | a45 | | | |
| SOIL TEX | CTURE | | TONS/ACRE | LIMESTONE LBS./1,000 SO.FT. | | | 22 COASTAL PANICGRASS PURPLEOSIER WILLOW DWARF WILLOW | 22 VEG VEG | 0.45 | Betreen | - | ~ |
| CLAY, CLAY LOAM, AND HIL SANDY LOAN, LOAM, SILT I | | | 3 | 135 90 45 | | | 23 REDOSER DOGWOOD SILKY DOGWOOD | NEG VEG | | BEFORE 05/10 BEFORE | - | • |
| LOAMY SAND, SAND PULVERIZED DOLO | er into the soil as | NEARLY AS PRACTI | t soils south of the New Br Ical to a depth of 4 inches | RUNSWICK- TRENTON LINE. | harrow, or other suitable | | | | C8455 100 | BEFORE 05/10 | | |
| 8. WORK LIVE AND EEDIN | ARROWING OR DISCING EEDING, THE SURFACE | S OPERATION SHOULD | d be on the general contoi | JR. CONTINUE TILLAGE UNTIL . HAS BEEN SOIL COMPACTION, " | A REASONABLE UNIFORM | | SEE APPENDIX B FOR DESCRI (SEED MIX 1–7) SHALL BE AD NO ADJUSTMENT IS REQUIRED | FOR COOL SEAS | ECT THE A ON GRASSE D ABOVE A | NOUNT OF S (SEED M NAY BE US | pure Ixtur Ed If | E { |
| EQUIPMENT. THE FINAL H. SEEDBED IS PREPARED. C. IMMEDIATELY PRIOR TO S | | | | | | | SEEDING MIXTURES AND /OR | | | CONDEDAT | IVE E | X |
| EQUIPMENT. THE FINAL H SEEDBED IS PREPARED. C. IMMEDIATELY PRIOR TO S PERMISSABLE ONLY WHERI D. HIGH ACID PRODUCING SO SOLS HAMING A PH OF | DIL. 4 OR LESS OR CONTAI | INING IRON SULFIDE | UTILITIES (CABLES, IRRIGATION SHALL BE COVERED WITH A M | NIMUM OF 12 INCHES OF SOIL | | | SEEDING MIXTURES AND /OR CONSERVATION SERVICE: REC LEGUMES (FLATPEA, CROWNVE SEEDING RATES SHOWN ARE F | OMMENDATIONS OF TTCH, TREFOIL, LEI REQUIRED WHEN A | SPEDEZA) | should be of complia | WCE | |
| EQUIPMENT. THE FINAL H. SEEDBED IS PREPARED. C. IMMEDIATELY PRIOR TO S PERMISSABLE ONLY WHERI D. HIGH ACID PRODUCING SO SO'LS HAMING A PH OF | DIL. 4 OR LESS OR CONTAI | INING IRON SULFIDE | UTILITIES (CABLES, IRRIGATION : | NIMUM OF 12 INCHES OF SOIL | | | CONSERVATION SERVICE: RECO LEGUMES (FLATPEA, CROWNVE | OMMENDATIONS OF TCH, TREFOIL, LEI REQUIRED WHEN A TES MAY BE USEI METHODS OF SEE IXTURE CHECKED | SPEDEZA) A REPORT (D WHEN PH DING. EST/ BY THE S | SHOULD BE OF COMPLIA (RMANENT ' BLISHING P (ATE SEED | NCE VEGET PERMA ANAL | Y |

| | | | in second s | |
|-----|------|-------------|--|--|
| | | | | |
| | | | | |
| | | | | ROBERT I CHURCHILI |
| No. | DATE | DESCRIPTION | BY | NEW JERSEY PROFESSIONAL ENGINEER LICENSE |

ABLE 4-2 XTURES FOR VARIOUS USES

| SEE TABLE 4-3 | CLASS/*1 |
|------------------------------------|--------------------------------------|
| WELL TO MODERATELY WELL DRAINED | SOMEWHAT POORLY TO POORLY DRAINED |
| 12, 14, 15, 16, 17 | 18 |
| 7, 8, 9, 10, 11, 17 | 2, 10, 18, 19 |
| 2, 9, 11, 13, 14, 19 | 2, 10, 18, 19 |
| 13, 14 | 13, 14 |
| 8, 9, 11, 12, 13, 14 | 2, 11, 13, 14 |
| 14, 15, 16, 17, 20 | 18 |
| 2, 3, 7, 9, 10, 11, 12, 17, 20 | 2, 11, 12, 13, 14 |
| 1, 2, 3, 4, 5, 6, 10, 17, 20 | 2, 10 |
| 2, 3, 6, 11 | 2, 10 |
| 2, 10, 218, 22, 23A, 23B | 2, 10, 21A, 23A, B,C,D |
| 3, 9 | 10, 11, 19 |

APPLICABL

3LE 4-3 PLANTING RATES AND PLANTING DATES *1

| IMAL I | T G PLANTING E PLANTIN | | | | ш | | | | | |
|-----------------|-------------------------------------|-----------------|-----------------|-------------------------|-----------------|-------------------------|--|--|--|--|
| ESS | | IES (| SEE FIGURE 4-1) | | | MAINTENANCE LEVEL •4 | REMARKS | | | |
| | ONE 6B | | 1 | 1/-/ | | MAINT | | | | |
| 11- 30 | 05/01- 08/14 | 08/15 11/15 | 02/01- 04/30 | 05/01- 03/14 | 08/15- 11/30 | | | | | |
|) | | | 0 | | | C~D | SERECIA LESPEDEZA NOT ADAPTED TO ZONE 5. | | | |
|) | | | 0 | | | Ç-D | USE DEERTONGE F PHAAO SMICHGANST S SHERKOR NUCLEE PLANT. USE TOP HONGES GUCK COVER REDSTOOL KOLL ANAPED TO 20053 68, 74, 78 | | | |
|) | A | | 0 | Å | | C-D | FLATPEA SUPPRESSES INVADING WOODY VEGETATION | | | |
|) | | | 0 | | | CD | PINELANDS MIXTURE | | | |
|) | | | 0 | | | C-D | NATIVE WARM SEASON MIXTURE | | | |
|) | | | 0 | | | A-D | BERNUDAGRASS HAS SUPERIOR SALT TOLERANCE ZONSA HAS GREATOR WEAR TOLERANCE | | | |
| 5 | A | BEFORE 09/15 | 0 | A | BEFORE 09/30 | C-D | use this mix f ph <4.5 and toxic metals present | | | |
| D | A | 0 | 0 | A | 0 | ₿∸D | GENERAL LOW MAINTENANCE MIXTURE | | | |
| 0 | A | 0 | 0 | A | 0 | B-D | Suatable Waterway MX. Canada Bluecrass More Drought Tolerant. USE Rediop for Increased Drought Tolerance. | | | |
| 0 | A | 0 | 0 | A | 0 | 8-D | TALL FESCUE BEST FOR DROUGHTY CONDITIONS. USE OREFNING RED FESCUE IN HEAVY SHADE. USE RATHERA TRO SUPRESS WOODY VECETATION. | | | |
| 0 | | | 0 | | | C~D | native wet mix. | | | |
| 0 | A | 0 | 0 | A | 0 | C-D | BROSFOOT THEFOIL IS BEST ADAPTED TO ZONE 5 | | | |
| 0 | A | 0 | 0 | A | 0 | C-D | FILTER STRIP USE FOR NUTRENT UPTAKE | | | |
| 0 | A | 0 | 0 | A | 0 | C-D | use in vanaged filter strip for nutrient uptake. | | | |
| 0 | A | 0 | 0 | A | 0 | A-D | GENERAL LAWN CREATION | | | |
| 0 | A | 0 | 0 | A | 0 | A-8 | ATHLETIC FIELD MIX 3 CULTIVARS OF KENTUCKY BLUEGRASS. | | | |
| 0 | A | 0 | 0 | A | 0 | C-D | LOW MAINTENANCE FINE FESCUE | | | |
| 0 | A | 0 | 0 | K | 0 | C-D | NCKST SHADE | | | |
| 0 | A | 0 | 0 | A | 0 | C-D | USE BENTGRASS UNDER WEITER CONDITIONS. SALTGRASS MILL OKLY PERSISTENT UNDER SAUNE CONDITIONS. | | | |
| 0 | Å | 0 | 0 | A | 0 | C-D | RECIONAL MILDFLOWER VIX. Hydroseeding not recommended | | | |
| 0 | BEFORE 07/01 | ļ | 0 | BEFORE 07/01 | | D | PLANTED IN THE INTERTIDAL ZONE. PLANTED ABOVE WEAN HIGH TIDE. | | | |
| ORE /01 | | | .0 | | | D | COSTAL PANECORASS MAY BE INTERSEEDED BETWEEN ROWS OF BEACHGRASS. | | | |
| forret //tD | | | 8EF084 05/01 | | | D | ALSO REFER TO CHAPTERS 16 AN 18 OF ENGNEERING FIELD HANDBOOK. USDA-NRCS | | | |
| KOBARE //(OD | | | BEFORE 05/01 | $\overline{\mathbb{Z}}$ | \mathbb{Z} | D | ALSO REFER TO CHAPTERS 16 AN 18 OF ENSINEERING FIELD HANDBOOK. USDA-NRCS | | | |

AMOUNT OF WARM SEASON GRASS MIXTURE USED IN TABLE 3 AS DETERMINED BY GERMINATION TESTING RESULTS.

BY THE SOL CONSERVATION DISTRICT, NATURAL RESOURCE E USED IF APPROVED BY THE SOL CONSERVATION DISTRICT INNOCULANT PRIOR TO PLANTING. IOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. HED PRIOR TO A REPORT OF COMPLIANCE INSPECTION.

MEANS BOZ VEGETATIVE COVERAGE OF THE SEEDED AREA DEPARTMENT OF AGRICULTURE, TRENTON NEW JERSEY, RSUANT TO THE NEW JERSEY STATE SEED LAW, N.J.S.A.

- HIGH MAINTENANCE LAWNS, COMMERCIAL AND RECREATION MPLES - HOME LAWNS, COMMERCIAL SITES, SCHOOL SITES).

WNS, PARKS) XAMPLES - ROADSIDES, RECREATION AREAS, PUBLIC OPEN SPACES). SEEDING:

MIXTURE FOR THE SEEDED AREA AND MOWED ONCE.

- A. SELECT A MIXTURE FROM TABLE 4-3 OR USE MIXTURE RECOMMENDED BY RUTGERS COOPERATIVE EXTENSION OR NATURAL RESOURCES CONSERVATION SERVICE, WHICH IS APPROVED BY THE SOLL CONSERVATION DISTRICT. SEED GERMINATION SHALL HAVE BEEN TESTED WITHIN 12 MONTHS OF THE PLANTING DATE, NO SEED SHALL BE ACCEPTED WITH A GERMINATION TEST DATE MORE THAN 12 MONTHS OLD UNLESS RETESTED 1. SEEDING RATES SPECIFIED ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION UP TO 50% REDUCTION IN RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO A REPORT OF COMPULANCE INSPECTION. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETIVE COVERAGE WITH THE SPECIFIED SEED
- 2. WARM SEASON MIXTURES ARE GRASSES AND LECUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 85' F AND ABOVE. SEE TABLE 4-3, MIXTURES 1 TO 7. PLANTING RATES FOR WARM SEASON GRASSES SHALL BE THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY GERMINATION TESTING RESULTS.
- 3. COOL SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 85' F. MANY GRASSES BECOME ACTIVE AT 65' F SEE TABLE 3, MIXTURES 8-20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PURE LIVE SEED IS NOT REQUIRED FOR COOL SEASON GRASSES.
- B. CONVENTIONAL SEEDING: IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOL WITHIN 24 HOURS OF SEEDED PREPARATION TO A DEPTH 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING, DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COURSE TEXTURED SOL.
- C. HYDROSEDDING: IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAUUC PUMP FOR MIXING SEED, WAITE AND FERTILIZER AND SPRANNE THE MIX ONTO THE PREPARED SEEDISED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. HYDROSEEDING IS NOT PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOL. POOR SEED TO SOLI CONTACT OCCURS REDUCING SEED GERMINATION AND CROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC. D. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED TO SOIL CONTACT, RESTORE CAPILLARY, AND IMPROVE SEEDING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE
- WILL BE MAXIMIZED. **MULCHING:** MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER
- ESTABLISHMENT. (THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED IN COMPLIANCE WITH MULHING REQUIREMENT.) A. STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, OR SALT HAY TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 SINCH OF ALL ON AND ALL STREAM AND AND ALL OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.
- APPLICATION. SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIMDE AREA INTO APPROXIMATELY 1000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.
- 1. PEG AND TWINE DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
- 2. MULCH NETTINGS STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED. 3. CRIMPER (MULCH ANCHORING COULTER TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC-HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.
- 4. LIQUID MULCH BINDERS MAY BE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCH. A. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.
- B. USE ONE OF THE FOLLOWING:
- 1. EMULSIFIED ASPHALT: AS PER MANUFACTURES RECOMMENDATIONS. 2. ORGANIC AND VEGETABLE BASED RINDERS: AS PER MANUFACTURES RECOMMENDATIONS. 3. SYNTHETIC BINDERS: AS PER MANUFACTURES RECOMMENDATIONS.
- B. WOOD-FIBER OR PAPER-FIBER MULCH SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. THIS MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FURTHER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

C. PELLETIZED MULCH - COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH NAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO A SEDDED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS, MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT A RATE OF 60-70 LBS./1000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS WHERE WEED-SEED FREE MULCH IS DESIRED OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE. APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE 5. IRRIGATION (WHERE FEASIBLE)

- IF SOL MOISTURE IS DEFICIENT, AND MULCH IS NOT USED, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUCHTY SITES.
- 6. TOPDRESSING SINCE SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) IS PRESCRIBED IN SECTION II. A. SEEDBED PREPARATION IN THIS STANDARD, NO FOLLOW-UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 CR EQUIVALENT AT 400 POUNDS PER ACRE OR 10 POUNDS PER 1000 SQUARE FEET.
- 7. ESTABLISHING PERMANENT VEGETATION STABILIZATION THE QUALITY OF PERMANENT VEGETAION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING NUTRIENTS, MULCH THE GUALIT OF PERMARKENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMENE OF SECTION, THE PARAMENT THE SECTION AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEED APPLICATION RATES IN TABLE 4-3 (PG. 4-7) ARE REQURED WHEN A <u>BEPORT OF COMPLIANCE</u> IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUESTING A <u>REPORT OF COMPLIANCE</u> RROM THE DISTRICT. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATION COVER (OR THE SEEDED SPECIES) AND MOWED ONCE.

STANDARD FOR MAINTAINING VEGETATION METHODS AND MATERIALS

A PREVENTATIVE MAINTENANCE PROGRAM ANTICIPATES REQUIREMENTS AND ACCOMPLISHES WORK WHEN IT CAN BE DONE WITH LEAST EFFORT AND EXPENSE TO INSURE ADEQUATE VEGETATIVE COVER. MAINTENANCE SHOULD OCCUR ON A REGULAR BASIS, CONSISTENT WITH FAVORABLE PLANT GROWTH, SOL, AND CUMACTIC CONDITIONS, THIS INVOLVES REGULAR SEASONAL WORK FOR MOWING, FERTILIZING, LIMING, WATERING, PRUNING, FIRE CONTROL, WEED AND PEST CONTROL, RESEEDING

- AND TIMELY REPAIRS. THE DEGREE OF PREVENTATIVE MAINTENANCE NEEDED DEPENDS UPON THE TYPE OF VEGETATION AND ITS PROPOSED FUNCTION OR USE. 1. MOWING IS A RECURRING PRACTICE AND ITS INTENSITY DEPENDS UPON THE FUNCTION OF THE GROUND COVER. ON HIGH TO MODERATE (A TO B) MAINTENANCE AREAS, SUCH AS LAWNS, CERTAIN RECREATION FIELDS, AND PICNIC AREAS, MOWING WILL BE FREQUENT.
- (2 TO 7 DAY INTERVALS). LOW MAINTENANCE (D) AREAS MAY BE LEFT UNMOVED TO PERMIT NATURAL SUCCESSION. SEE PAGE 4-13 FOOTNOTE #4, MAINTENANCE LEVELS A, B, C AND D IN THE STANDARD FOR PERMANENT VEGETATION COVER, TABLE 4-3. FERTILIZER AND LINE SHOULD BE APPLIED AS NEEDED TO MAINTAIN A DENSE STAND OF DESIRABLE SPECIES. FREQUENTLY MOWED AREAS AND THOSE ON SANDY SOLS WILL REQUIRE MORE FERTILIZATION.
- 3. LIME REQUIREMENT SHOULD BE DETERMINED BY SOIL TESTING EVERY TWO (2) OR THREE (3) YEARS. FERTILIZATION INCREASES THE NEED 4. WEED INVASION MAY RESULT FROM ABUSIVE MOWING AND INADEQUATE FERTILIZATION AND LIMING. BRUSH INVASION IS A COMMON
- WEED INVASION MAT RESULT FROM ADDIVIE MOTING AND INACEDUATE FRUIDZATION FOR DIATION DIATIONAL AND AND AREA CONSEQUENCE OF LACK OF MOVINO. THE ANOUNT OF WEEDS OR BRUSH THAT CAN BE TOLERATED IN ANY VAECH ANY AREA DIATION DIATIONAL DIATION DIATIONAL DIATION DIATIONAL DIATION DIATIONAL DIATI THESE SHOULD BE CONTROLLED, SINCE THEY OFTEN REDUCE DRAINAGE WAY EFFICIENCY. CONTROL OF WEEDS OR BRUSH IS ACCOMPLISED BY USING HERBICIDES OR MECHANICAL METHODS.
- 5. PEST AND DISEASE CONTROLS ARE MORE NECCESSARY ON HIGH MAINTENANCE AREAS THAN ON LOW MAINTENANCE AREAS. RECOMMENDATIONS FOR RESOLVING FERTILIZER, LIME, PEST AND OTHER MAINTENANCE PROBLEMS MAY BE OBTAINED FRO=M RUTGERS CO-OPERATIVE EXTENSION 6. FIRE HAZARD IS GREATER WHERE DRY VEGETATION HAS ACCUMULATED. THE TALLER THE VEGETATION, THE GREATER THE HAZARD.
- 7. PRUNE TREES & SHRUBS TO REMOVE DEAD OR DAMAGED BRANCHES, REMOVE UNDESIRABLE OR INVASIVE PLANTS TO MAINTAIN INTEGRITY OF THE LANDSCAPE AND ENHANCE QUALITY OF PERMANENT VEGETATIVE COVER.

STANDARD FOR DUST CONTROL

TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE, WHICH SHOULD BE USED USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF OF SITE. CHISEL TYPE PLOWS, SPACED ABOUT 12 INCHES APART, AND SPRING TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT, WHICH MAY PRODUCE THE DESIRED EFFECT.

SPRINKLING - SITE IS SPRINKLED UNTIL THE SURFACE IS WET. BARRIERS - SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.

STONES - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL. IN ACCORDANCE WITH "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY".

MAINTENANCE OF STRUCTURAL MEASURES

MAINTENANCE IS THE WORK REQUIRED TO KEEP PRACTICES IN, OR RESTORE THEM TO, THEIR ORIGINAL PHYSICAL AND FUNCTIONAL CONDITION. MAINTENANCE, AS IT APPLIES TO THIS SECTION, IS DIVIDED INTO TWO PERIODS: THAT WHICH IS NECESSARY TO ALLOW FOR CONTINUING PERFORMANCE OF EROSION CONTROLS DURING THE CONSTRUCTION PERIOD AND LONG TERM MAINTENANCE, FOLLOWING COMPLETION OF CONSTRUCTION, FOR THE LIFE OF STRUCTURAL MEASURES. MAINTENANCE DURING CONSTRUCTION PHASE:

ALL STRUCTURAL MEASURES FOR CONTROL OF SOIL EROSION AND SEDIMENTATION MUST HAVE TIMELY MAINTENANCE IF THE MEASURES ARE TO ENDURE AND EFFICIENTLY PERFORM THEIR DESIGN FUNCTION, PARTICULAR ATTENTION SHOULD BE GIVEN TO TEMPORARY STRUCTURES. MAINTENANCE FOLLOWING COMPLETION OF CONSTRUCTION:

AT THE COMPLETION OF CONSTRUCTION AND FINAL STABILIZATION, RESPONSIBILITY FOR LIFETIME MAINTENANCE OF STRUCTURAL MEASURES IS USUALLY TRANSFERRED TO A SUBSEQUENT OWNER, SUCH AS THE HOMEOWNER, MUNICIPALITY, HOMEOWNER ASSOCIATION, ETC. A COMPREHENSIVE MAINTENANCE PROGRAM SHOULD BE PRESCRIBED FOR USE OF THOSE WHO WILL ACCEPT SUCH RESPONSIBILITY. ALL STRUCTURES SHOULD BE PROGRAM SHOULD BE PRESCRIBED FOR USE OF THOSE WHO WILL ACCEPT SUCH RESPONSIBILITY. ALL STRUCTURES SHOULD BE INSPECTED AT LEAST SEMIANNUALLY, AND FOLLOWING INTENSIVE RAINFALLS.

MAINTENANCE ITEMS SHOULD INCLUDE, BUT NOT BE LIMITED TO, THOSE SHOWN FOR EACH OF THE FOLLOWING EXAMPLES. SEDIMENT BARRIERS, CONSTRUCTION ENTRANCES, CHANNEL LININGS, EARTH CHANNELS, DAMS AND SPILLWAYS, WATER QUALITY PRACTICES AND VEGETATIVE MAINTENANCE.

MAINTENANCE AND INSPECTION OF DAM AND OUTLET STRUCTURES MAY BE SUBJECT TO THE REQUIEREMENTS OF THE NEW JERSEY STATE DAM SAFETY STANDARDS, NJAC 7:20.

GUIDE FOR CONSTRUCTION SPECIFICATIONS

THE FOLLOWING ARE EXAMPLES OF REQUIREMENTS THAT MAY BE USED FOR PREPARING CONSTRUCTION SPECIFICATIONS, INCORPORATION OF SUCH REQUIREMENTS, WILL HELP ASSURE PROTECTION OF DISTURBED AREAS, ESPECIALLY WHERE CRITICAL SOIL EROSION AREAS, ESPECIALLY WHERE CRITICAL SOIL EROSION PROBLEMS MAY EXIST. THE CONTRACTOR SHALL PERFORM ALL WORK, FURNISH ALL MATERIALS, AND INSTALL ALL MEASURES REQUIRED TO REASONABLY CONTROL SOL EROSION, RESULTING FROM CONSTRUCTION OPERATIONS AND MINIMIZE LOSS OF SEDIMENT FROM THE CONSTRUCTION OPERATIONS AND MINIMIZE LOSS OF SEDIMENT FROM THE CONSTRUCTION SITE. THE CONTRACTOR SHALL ADHERE TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, HOWING THE METHODS TO BE USED FOR CONTROLLING EROSION DURING CONSTRUCTION, WHICH INCLUDES SEQUENCE OF CONSTRUCTION OPERATIONS. WHEN NO WORK WILL BE PERFORMED ON CRITICAL AREAS FOR MORE THAN 60 DAYS, THEY SHALL BE PROTECTED BY TEMPORARY SEEDING, SEEDING, MULCHING, OR SODDING, OR THE SLOPE LENGTHS SHALL BE REDUCED BY THE INSTALLATION OF DEVERSIONS OR OTHER MEANS. THE CONTRACTOR SHALL INSTALL EROSION CONTROLS ON ALL DISTURBED CRITICAL AREAS OR DISTURBANCES ADJACENT TO CRITICAL AREAS, CRITICAL AREAS ARE ANY AREAS SUBJECT TO EXCESSIVE EROSION DUE TO HIGHLY ERODIBLE SOLS, SLOPE LENGTH, STEEPNESS, WATER CONCENTRATION OR OTHER FACTORS. AREAS MAY BECOME CRITICAL WHEN THE VEGETATION OR OTHER SURFACE PROTECTION IS REMOVED. THE PERMANENT VEGETATIVE COVER, SUCH AS SEEDING OR SODDING, ON ALL AREAS SHALL BE ACCOMPLISHED WITHIN 10 DAYS AFTER FINAL GRADING OPERATIONS HAVE BEEN COMPLETED. TIME EXTENSIONS BEYOND THE 10 DAY EXTENSIONS BEYOND THE 10 DAY REQUIREMENT MAY BE REQUESTED IN WRITING AND ARE SUBJECT TO WRITTEN APPROVAL. EXPOSED SOIL HAVING A PH VALUE OF LESS THAN 4 SHALL BE TREATED IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGHLY ACID SOIL, PG.1-1.COVERED WITH A MINIMUM OF 12 INCHES OF SOIL MATERIIAL NO COARSER EXCAVATED SOIL MATERIAL SHALL NOT BE PLACED ADJACENT TO RIVERS, STREAMS, OR BODIES OF WATER, IN A MANNER THAT WILL CAUSE IT TO BE WASHED AWAY BY HIGH WATER OR RUNOFF. EXCESS BORROW MATERIAL REMOVED FROM THE CONSTRUCTION SITE SHALL BE STABILIZED AT THE POINT OF PLACEMENT. THE CONTRACTOR SHALL COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS FOR PREVENTION AND ABATEMENT OF POLLUTION.

CAPE MAY COUNTY SOIL CONSERVATION DISTRICT SOIL EROSION AND SEDIMENT CONTROL NOTES 1. ALL APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATION AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.

2. SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION <u>AND</u> <u>SEDIMENT CONTROL IN NEW J</u>ERSEY.

3. APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND/OR THE AREA IS STABILIZED. 4. THE CONTRACTOR SHALL PERFORM ALL WORK, FURNISH ALL MATERIALS AND INSTALL ALL MEASURES REQUIRED TO REASONABLY CONTROL SOL EROSION RESULTING FROM CONSTRUCTION OPERATIONS AND PREVENT EXCESSIVE FLOW OF

SEDIMENT FROM THE CONSTRUCTION SITE. 5. ANY DISTURBED AREA THAT IS TO BE LEFT EXPOSED FOR MORE THAN THIRTY (30) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND FERTILIZATION IN ACCORDANCE WITH THE <u>NEW JERSEY</u> STANDARDS AND THEIR RATES SHOULD BE INCLUDED IN THE NARRATIVE. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).

6. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PROVIDE CONFIRMATION OF LIME, FERTILIZER AND SEED APPLICATION AND RATES OF APPLICATION AT THE REQUEST OF THE GLOUCESTER SOIL CONSERVATION

SEEDING IN COMBINATION WITH STRAW MULCH AT A RATE OF 2 TONS PER ACRE, ACCORDING TO THE NEW JERSEY STANDARDS IMMEDIATELY FOLLOWING ROUGH GRADING

STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES. 9. ALL SEDIMENTATION STRUCTURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.

10. A CRUSHED STONE, TIRE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ACCESS EXISTS. THE STABILIZED PAD WILL BE INSTALLED ACCORDING TO THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS. 11. ALL DRIVEWAYS MUST BE STABILIZED WITH 2 ½" CRUSHED STONE OR SUBBASE PRIOR TO INDIVIDUAL LOT CONSTRUCTION. 12. PAVED AREAS MUST BE KEPT CLEAN AT ALL TIMES. 13. ALL CATCH BASIN INLETS WILL BE PROTECTED ACCORDING TO THE CERTIFIED

14. ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL. 15. ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA. THE SEDIMENT FILTER SHOULD BE COMPOSED OF A SUITABLE SEDIMENT FILTER FABRIC. (SEE DETAIL). THE BASIN MUST BE DEWATERED TO NORMAL POOL WITHIN 10 DAYS OF THE DESIGN STORM.

16. NJSA 4:24-39, ET SEQ. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE ALL PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES. ALL SITE WORK FOR THE PROJECT MUST BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE AS A PREREQUISITE TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY. 17. MULCHING IS REQUIRED ON ALL SEEDED AREAS TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED TO PROMOTE EARLIER VEGETATION COVER.

18. OFFSITE SEDIMENT DISTURBANCE MAY REQUIRE ADDITIONAL CONTROL MEASURES TO BE DETERMINED BY THE EROSION CONTROL INSPECTOR. 19. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE MAINTAINED ON THE PROJECT SITE DURING CONSTRUCTION. 20. THE GLOUCESTER SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY LAND DISTURBANCE

21. ANY CONVEYANCE OF THIS PROJECT PRIOR TO ITS COMPLETION WILL TRANSFER FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CERTIFIED PLAN TO ANY SUBSEQUENT OWNERS. 22. IMMEDIATELY AFTER THE COMPLETION OF STRIPPING AND STOCKPILING OF TOPSOIL, THE STOCKPILE MUST BE STABILIZED ACCORDING TO THE STANDARD FOR TEMPORARY VEGETATIVE COVER, STABILIZE TOPSOIL STOCKPILE WITH STRAW

MULCH FOR PROTECTION IF THE SEASON DOES NOT PERMIT THE APPLICATION AND ESTABLISHMENT OF TEMPORARY SEEDING. ALL SOIL STOCKPILES ARE NOT TO BE LOCATED WITHIN FIFTY (50) FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY AND THE BASE MUST BE PROTECTED WITH A SEDIMENT

23. ANY CHANGES TO THE SITE PLAN WILL REQUIRE THE SUBMISSION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN TO THE GLOUCESTER SOIL CONSERVATION DISTRICT. THE REVISED PLAN MUST BE IN ACCORDANCE WITH THE CURRENT NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.

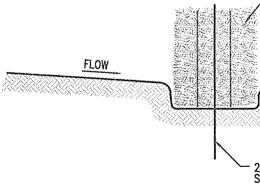
24. METHODS FOR THE MANAGEMENT OF HIGH ACID PRODUCING SOILS SHALL BE IN ACCORDANCE WITH THE STANDARDS. HIGH ACID PRODUCING SOILS ARE THOSE FOUND TO CONTAIN IRON SULFIDES OR HAVE A pH OF 4 OR LESS. 25. TEMPORARY AND PERMANENT SEEDING MEASURES MUST BE APPLIED ACCORDING TO THE NEW JERSEY STANDARDS, AND MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE NEW JERSEY <u>STANDARDS</u>

(I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER). 26. MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT BE STRUCTED STEEPER THAN 3:1 UNLESS OTHERWISE APPROVED BY THE

DISTRIC 7. DUST IS TO BE CONTROLLED BY AN APPROVED METHOD ACCORDING TO THE NEW JERSEY STANDARDS AND MAY INCLUDE WATERING WITH A SOLUTION OF CALCIUM CHLORIDE AND WATER.

28. ADJOINING PROPERTIES SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS ON THE PROPOSED SITE.

29. USE STAGED CONSTRUCTION METHODS TO MINIMIZE EXPOSED SURFACES, WHERE APPLICABLE. 30. ALL VEGETATIVE MATERIAL SHALL BE SELECTED IN ACCORDANCE WITH AMERICAN STANDARDS FOR NURSERY STOCK OF THE AMERICAN ASSOCIATION OF THE NURSERYMAN AND IN ACCORDANCE WITH THE NEW JERSEY STANDARDS. 31. NATURAL VEGETATION AND SPECIES SHALL BE RETAINED WHERE SPECIFIED ON THE LANDSCAPING PLAN. 32. THE SOIL EROSION INSPECTOR MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED, AS DIRECTED BY THE DISTRICT INSPECTOR.



HAY BALE EMBEDDING DETAIL NOT TO SCALE

FABRIC SECURED TO POST WITH METAL FASTENERS AND REINFORCEMENT -BETWEEN FASTENER AND FABRIC

SILT ACCUMULATION

DIG 6" MDE & DEEP TRENCH BURY BOTTOM OF FABRIC, TAMP

CHURCHILL Consulting Engineers A Professional Corporation 344 North Route 73, Suite A, Berlin, NJ 08009

856-767-6901

NO. 33421

DATE

7. ALL CRITICAL AREAS SUBJECT TO EROSION WILL RECEIVE A TEMPORARY

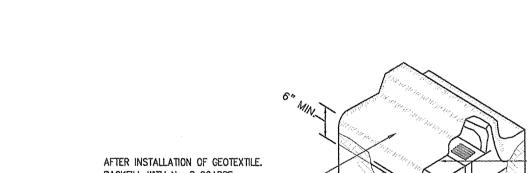
8. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL

VERTICAL FACE

2 REBARS, STEEL PICKETS, OR 2"x 2" STAKES 1 1/2' TO 2' IN GROUND

FENCE POST MAXIMUM

2' MIN



BACKFILL WITH No. 8 COARSE AGGREGATE TO SECURE GEOTEXTILE TO WELDED WIRE SUPPORT.

NOTE: PROVIDE APPROPRIATE

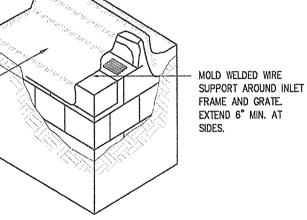
TRANSITION BETWEEN STABILIZED CONSTRUCTION

EXISTING GROUND

NOT TO SCALE

2622222

ENTRANCE AND PUBLIC

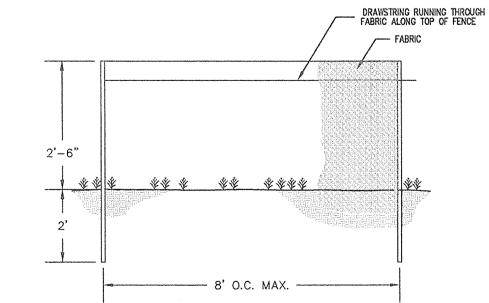


50' OR GREATER AS REQUIRED PUBLIC R.O.W.

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TEMPORARY CONSTRUCTION ENTRANCE

INLET FILTER

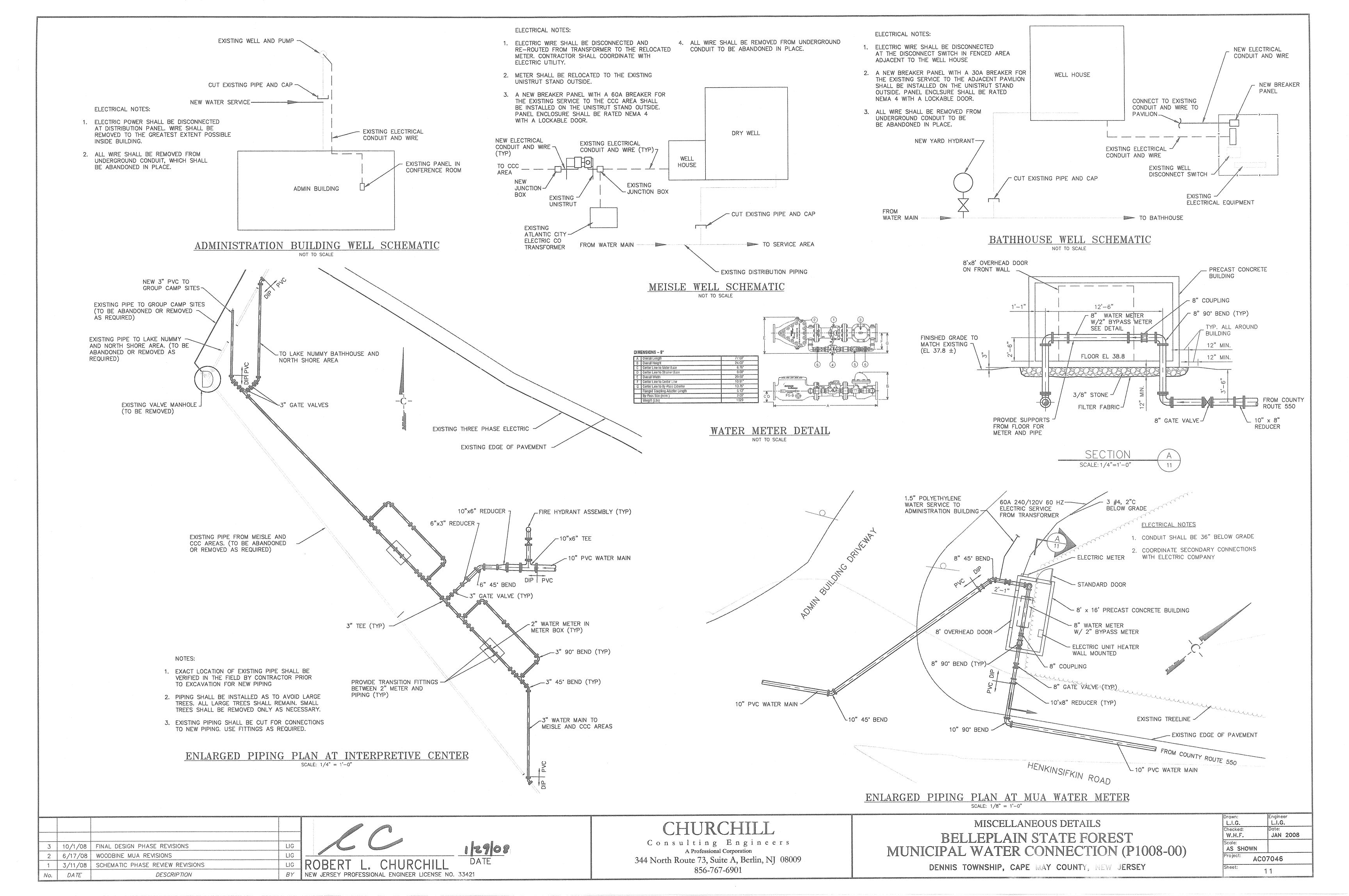


SILT FENCE CONSTRUCTION & INSTALLATION DETAIL NOT TO SCALE

SOIL EROSION AND SEDIMENT CONTROL DETAILS AND NOTES **BELLEPLAIN STATE FOREST** MUNICIPAL WATER CONNECTION (P1008-00) DENNIS TOWNSHIP, CAPE MAY COUNTY, NEW JERSEY

| Drawn: | Engineer | | | | | |
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- CONSTRUCTION SEQUENCE AND SITE DEVELOPMENT
- TO CONTROL EROSION AND SEDIMENTATION DURING CONSTRUCTION, THE DEVELOPER AGREES TO: 1. DISTURB ONLY THOSE AREAS WITHIN THE PROPOSED LIMIT OF DISTURBED AREAS, AS SHOWN ON THE
- SOIL EROSION PLAN 2. INSTALL STABILIZED CONSTRUCTION ENTRANCE, AS PER SOIL EROSION PLAN. DEVELOPER AGREES TO UPKEEP THE ENTRANCE THROUGHOUT THE ENTIRE DURATION OF THE PROJECT. STONE WILL BE
- ADDED PERIODICALLY, AS TO ACCOMMODATE FOR THE SINKING OF THE STONE BED (TWO (2) DAY OURATION).
- INSTALL SILTATION FENCE, AS PER SOIL EROSION PLAN. THIS WILL PREVENT SOIL LOSS SUCH AS DUST AND SOIL EROSION. <u>5</u> DAY DURATION.
- 3. STOCKPILE TOPSOL FOR FINAL GRADING ON THE PROJECT SITE, IN A WAY AS TO PREVENT SEDIMENTATION AND NOT TO CAUSE BLOCKADE OF NATURAL DRAINAGE.N $_$ ADAY DURATION.
- CONSTRUCT TEMPORARY SEDWENT BASIN, ROUGH GRADE SITE AND PROVIDE TEMPORARY STABILIZATION. GRADE AND INSTALL SEDWENTATION PROTECTION AT ALL INLETS AND CONDUIT OUTLETS, AS PER SOIL EROSION PLANS.NZADAY DURATION.
- EXCAVATE AND INSTALL ON-SITE IMPROVEMENTS INCLUDING BUILDING, CURBING AND UTILITIES, PERFORM FINAL SITE GRADING. <u>90</u> DAY DURATION.
- INSTALL STONE BASE COURSE. CONVERT TEMPORARY SEDIMENT BASIN TO PERMANENT STORNIWATER MANAGEMENT FACILITY. INSTALL DRAINAGE SYSTEM. <u>N/A</u> DAY DURATION.
- 8. INSTALL BITUMINUOUS PAYING AND CONCRETE. 5 DAY DURATION.
- 9. NO AREAS ARE TO BE LEFT EXPOSED FOR MORE THAN 14 DAYS. DISTURBED AREAS LEFT FOR A PERIOD OF GREATER THAN 14 DAYS, SHALL BE SEEDED AND MULCHED. IF SEEDING DATES ARE MISSED, TEMPORARY EROSION PROTECTION WILL BE PROVIDED IN ACCORDANCE WITH THE STANDARDS FOR TEMPORARY VEGETATIVE COVER FOR SOLL STABILIZATION, P. 7-1, (IN STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY), OR STANDARDS FOR STABILIZATION WITH MULCH ONLY, P. 5-1.
- 10. WHEN GRADING HAS BEEN COMPLETED, A PERMANENT VEGETATIVE COVER IS TO BE INSTALLED, IN ACCORDANCE W/TABLE 3.2-1 A. THESE AREAS WILL BE LIMED AND FERTILIZED WITH COMPOSTED SLUDGE, ACCORDING TO SOIL
- TEST, BEFORE SEEDING. B. THE AREA WILL BE SEEDED ACCORDING TO THE N.J. STANDARDS, OR WITH 60 LB. KY-31 (TALL FESCUE) PER ACRE, OR WITH 10 LB. OF REEDS CANARY GRASS PER ARE, IN POORLY
- DRAINED AREAS. C. IF SEEDING DATES ARE MISSED, THE AREA WILL BE MULCHED WITH 1 1/2 TO 2 TONS OF SALT
- HAY, OR UNROTTED SMALL GRAIN STRAW PER ACRE, WITH APPROPRIATE ANCHORING, AS PER NEW JERSEY STANDARDS. D. ALSO, AS SHOWN ON THE LANDSCAPING PLAN.
- ALL LAND DISTURBANCE AND SOLL CONSERVATION MEASURES SHALL BE IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY."



DPMC Project No.: P1008-00 Municipal Water Connection Belleplain State Forest A/E: Churchill Consulting Engineers

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Sheet 6 of 11 Piping Plan Sheet D

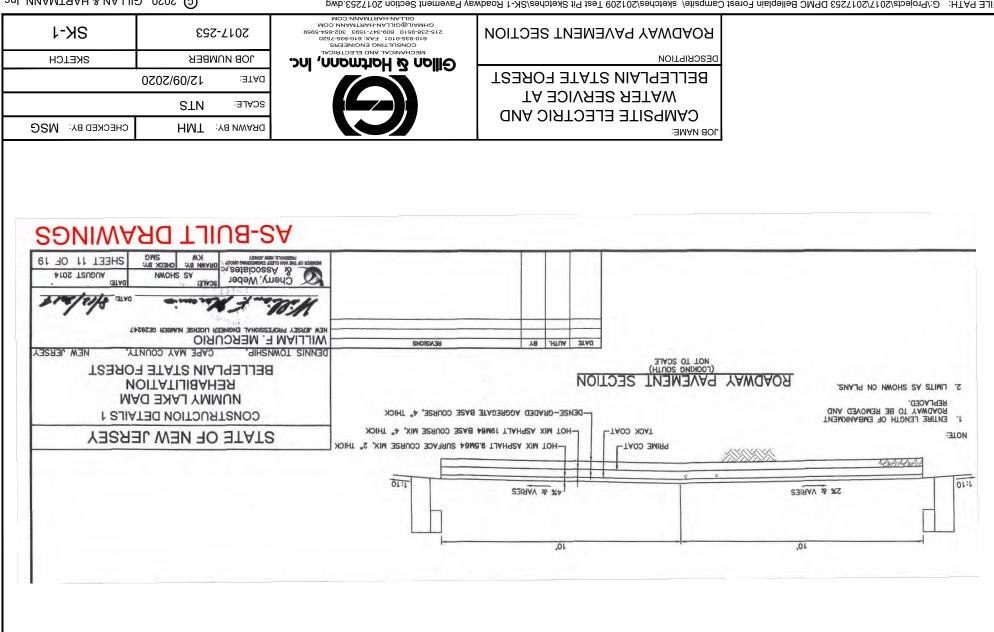
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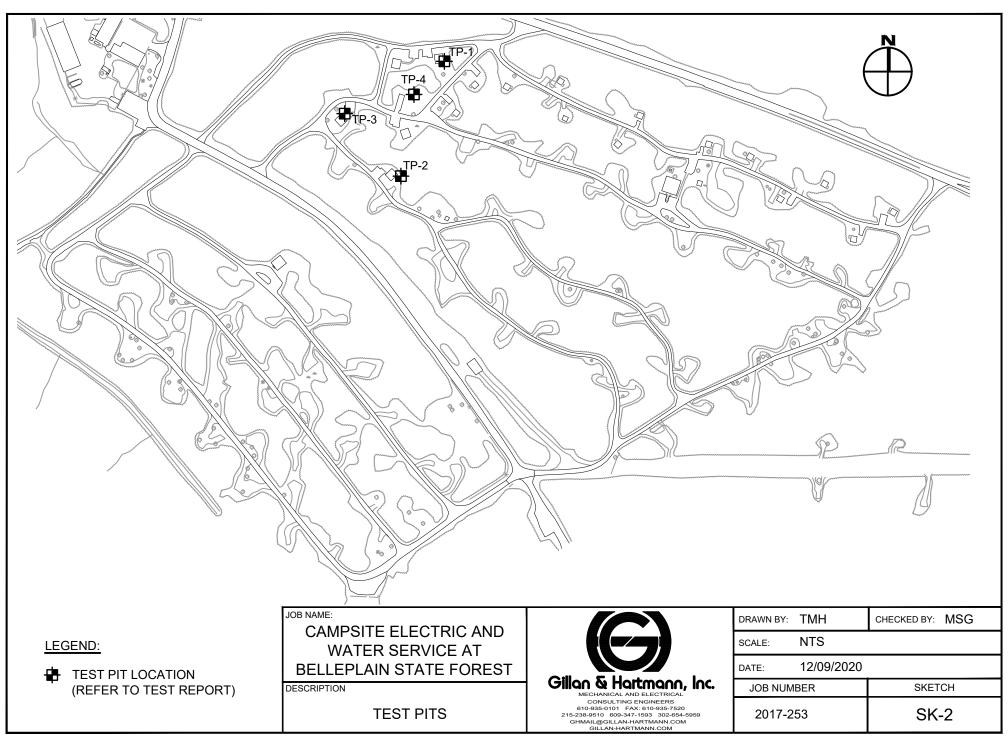
Sheet 10 of 11 Soil Erosion and Sediment Control

Sheet 11 of 11 Miscellaneous Details



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"Tradition: Preparation, Planning, Purpose, Perseverance"

Main Office: PO Box 345, Valley Forge, PA 19481-0345 140 Whitaker Avenue, Mont Clare, PA 19453-5036

PROJECT # P1173-00 Re-Bid (NJDPMC) Campsite Electric and Water Service CCC Camp, Belleplain State Forest Woodbine, Cape May, New Jersey

MANDATORY PRE-BID MEETING MINUTES

Wednesday, 12/2/2020, at 10:00 am

- 1) At 10:15 am, all Mandatory Pre-Bid attendees were escorted from the Visitors Center to the meeting location at the Park Maintenance Shop. All Bidders were requested to confirm that they had signed-in. The mandatory pre-bid meeting started at 10:15 am.
- 2) Introductions:
 - Cristina Zozzaro– DPMC Design Manager
 - Mark Risden DPMC Procurement Representative
 - William Hamilton DPMC Construction Manager
 - William White DEP Agency Representative
 - M. Steven Gillan, P.E. Gillan & Hartmann Project Engineer
 - Bidders were requested to submit all questions in writing.

4) The project is to be bid by DPMC Classified Contractors as Single Bid (Lump Sum All Trades) General Construction (C008) or General Construction/Alterations and Additions (C009). There are unit prices and there is an allowance for this project.

5) Prime Contractor must also identify a DPMC classified subcontractor in **Plumbing** (C030) and Electrical (C047) on the bid proposal form. If the bidder is self-performing the required sub trades and is classified with the DPMC in those sub trades they must list their name as the subcontractor on the bid proposal form. Do not leave it blank

6) Any questions regarding contractor classification or questions regarding the bid documents, contact Katie Karr at <u>Katie.karr@treas.nj.gov</u>

7) Any questions regarding how to obtain the bid documents, contact Mr. Anthony Mangine at <u>Anthony.mangine@treas.nj.gov</u>.

- 8) Bids are due **Thursday**, **12/17/2020** by 2:00 pm, unless modified in a future Bulletin:
- a) If mailed through US Postal Service: Division of Property Management Construction PO Box 034

John P. Gillan, P.E. Thomas L. Tate, P.E. M. Steven Gillan, P.E.

Jack P. Hartmann, P.E., 1914-1982

Professional Registrations:

Delaware Maryland New Jersey New York Pennsylvania Virginia

Phone: 610-935-0101 215-238-9510 302-654-5959 - DE 609-347-1593 - NJ

Fax: 610-935-7520

Web: www.gillan-hartmann.com 3)

E-Mail Address: ghmail@gillan-hartmann.com Trenton, NJ 08625-0034

- b) If mailed by UPS, FEDEX, etc: Division of Property Management Construction 33 West State Street 9th Floor Trenton, NJ 08608
- 9) It was strongly suggested to walk-in the bids on the before or on the due date, with the due date being December 17, 2020 by 2:00pm.
- 10) Bids must be good for 60 days.
- 11) The contract performance period for this project is 180 days.
- 12) There is a 50% bid bond required for this project.
- 13) Bulletin "A" is included in the bid package. Contractor questions will be answered via bulletin "B".
- 14) Deadline for questions is Monday, 12/7/2020 at 12:00 pm. Email all questions to Mark Risden at <u>mark.risden@treas.nj.gov</u>, Steven Gillan at <u>msgillan@gillan-hartmann.com</u>, and Cristina Zozzaro at <u>cristina.zozzaro@treas.nj.gov</u>. Please assist by providing all questions in a format that can be copied (Word document, email text, etc.).
- 15) The A/E provided a General Overview of the SOW.
- 16) The meeting concluded and a walkthrough of the worksite followed.

Msfull

M. Steven Gillan, P.E. Vice President Gillan & Hartmann, Inc.

| | General Construction (C008) or General Construction / Alterations & Additions (C009) | December 2, 2020 at 10:00am | Email Address | <u>Mark.risden@treas.nj.gov</u> | Cristina.zozzaro@treas.nj.gov | Vijay.gandhi@treas.nj.gov | William.hamilton@treas.nj.gov | William.white@dep.nj.gov | <u>msgillan@gillan-hartmann.com</u> | Page of |
|-------------------------------|--|---|---------------------------|---------------------------------|-------------------------------|---------------------------|-------------------------------|--------------------------|-------------------------------------|--------------|
| -IN SHEET | TRADES: | DATE & TIME: | TELEPHONE NUMBER | 609 292 8460 | 609 433 9027 | 856 690 5360 | 856 690 5360 | 609 802 5886 | 610 935 0101 | |
| PRE-BID MEETING SIGN-IN SHEET | | 1 | SIGNATURE | H | "ap | | (When I | 3 Var | mill | |
| MANDATORY P | P1173-00 | Campsite Electric and Water Service – CCC Camp, Belleplain State Forest – Woodbine, Cape May County, NJ | REPRESENTATIVE (PRINT) | Mark Risden | Cristina Zozzaro | Vijay Gandhi | Bill Hamilton | Bill White | Steven Gillan | |
| | PROJECT #: P1 | PROJECT TITLE: Campsite | COMPANY NAME (PRINT) | DPMC | DPMC | DPMC | DPMC | DEP | Gillan & Hartmann, Inc | Revised 9/99 |

| General Construction (C008) or General Construction / Alterations & Additions (C009) | December 2, 2020 at 10:00am | Email Address | TFLEXING C Schenry. COM | KAUWArter C KAVICONSTRUCTION. COM | petes Cocentenstim | anthony concelliere @ jpcgr | 619-203-7538 Up @ Easternce. COm | MJJ CONSTRUCTION P. CONCAST. NET | Page of |
|--|---|---------------------------|----------------------------|--------------------------------------|--------------------|------------------------------|---------------------------------------|-------------------------------------|--------------|
| TRADES: | DATE & TIME: | TELEPHONE NUMBER | 609 927-6660 | 856 767 2499 | 609.652- 0133 | 315-539-36 | 614-203-753 | 896.768 | |
| |] | SIGNATURE | 1 Davine | | A | anthony amedian 215-539-3690 | Jayth | f Ref | |
| P1173-00 | Campsite Electric and Water Service – CCC Camp, Belleplain State Forest – Woodbine, Cape May County, NJ | REPRESENTATIVE (PRINT) | Tom Devine | Lace RUNARTRE | Pete Sultry | Inthony Cancelliere | sp Gurda | Jen RokApus | |
| PROJECT #: F | PROJECT TITLE: Campsi | COMPANY NAME (PRINT) | Grahm R. Henry | KAVI CONSTRUCTION 1 | Occan Construction | JPC Group Inc Anthony (| EASTERN LUNISTRI CON REJECTRON DNC | MJJ CONSTRUCTION | Revised 9/99 |
| | E . | | <u> </u> | 2 | 2 | d | S ZZ | 0 | |

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| General Construction (C008) or General Construction / Alterations & Additions (C009) | December 2, 2020 at 10:00am | Email Address GANY Con RAY Con Mazameckan allo Bymerican | Pageof |
|--|---|---|--------------|
| TRADES: | DATE & TIME: | TELEPHONE NUMBER 856-753 9057 9057 | |
| | 1 | SIGNATURE CC-2 CC-2 | |
| P1173-00 | Campsite Electric and Water Service – CCC Camp, Belleplain State Forest – Woodbine, Cape May County, NJ | REPRESENTATIVE (PRINT) DEALA JIVES AL MJ ZZA | |
| PROJECT #: P1 | PROJECT TITLE: Campsite | COMPANY NAME (PRINT) Joues MADOURY MARZA MECUMICAHIC F | Revised 9/99 |
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