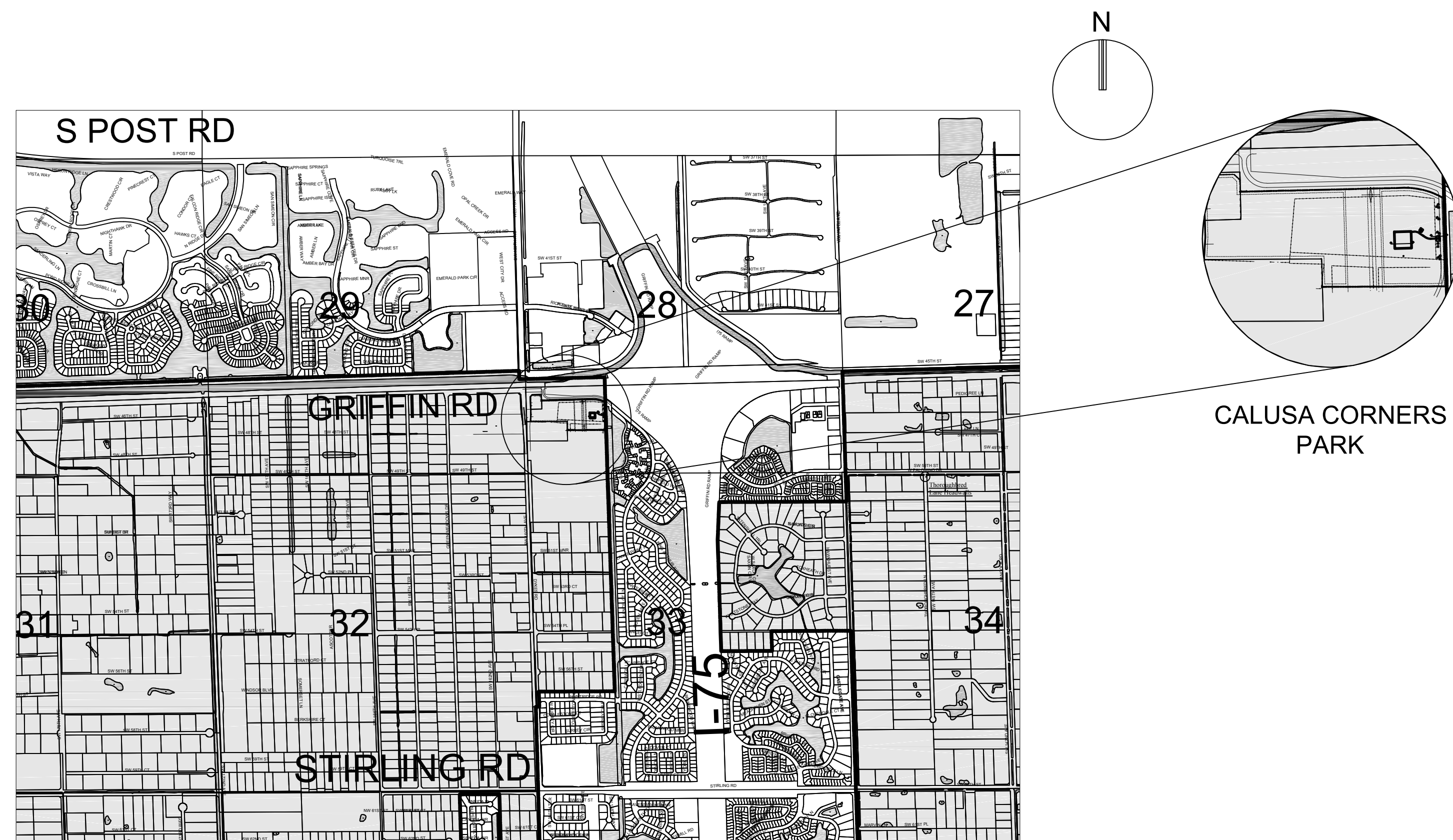
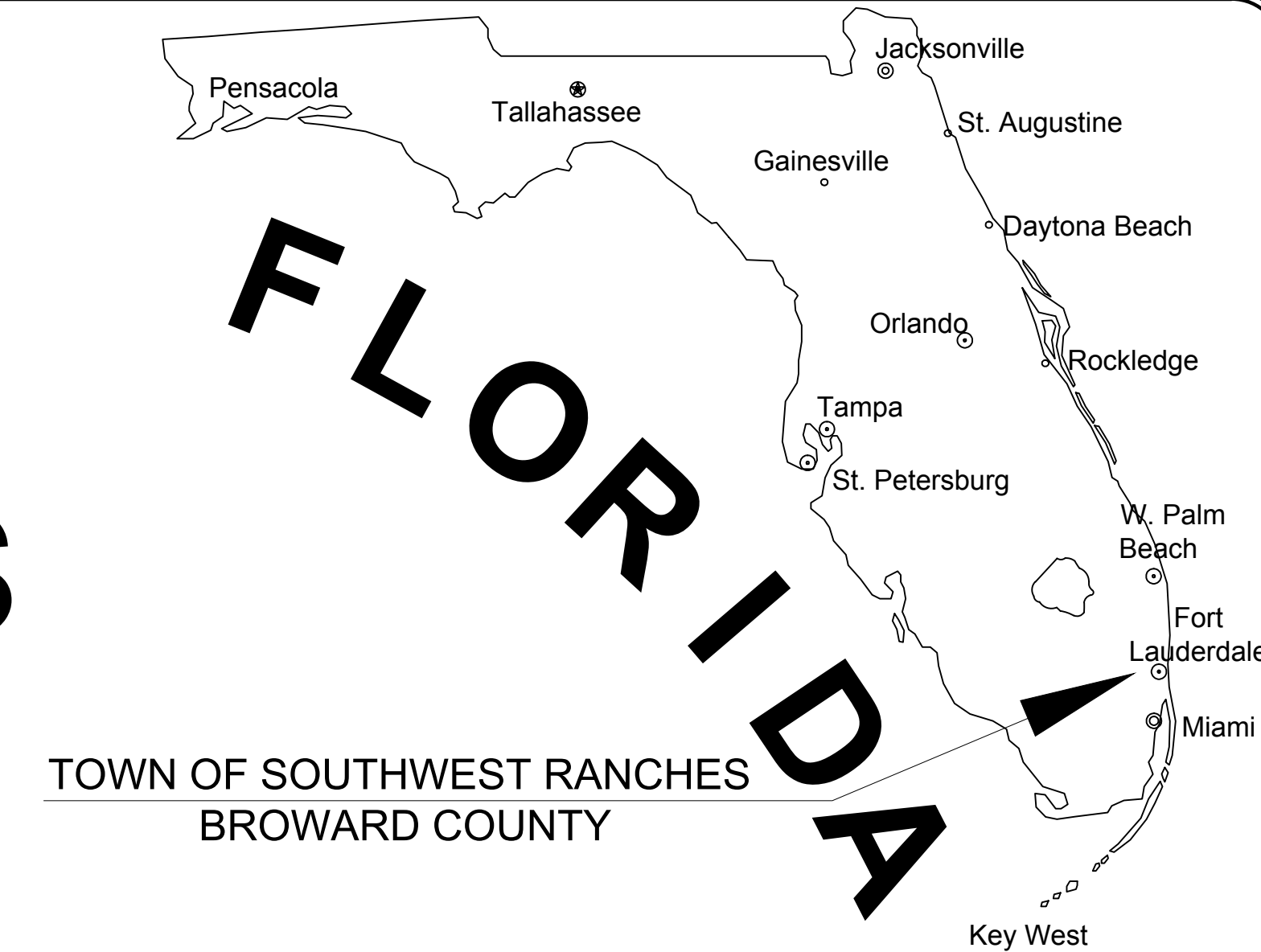


# FINAL CONSTRUCTION PLANS

FOR

## CALUSA CORNERS PARK IMPROVEMENTS

### TOWN OF SOUTHWEST RANCHES, BROWARD COUNTY, FLORIDA



VICINITY MAP  
S 33, T 50S, R 40E

INDEX OF SHEETS		
SHEET SEQUENCE No.	SHEET IDENTIFICATION	SHEET TITLE
1	GI-000	COVER
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3	GI-002	CONSTRUCTION SPECIFICATIONS
4	GI-003	GENERAL NOTES
5	CP-101	EROSION CONTROL, PAVING, GRADING, DRAINAGE AND PAVEMTN MARKING PLAN
6 - 8	CP-501 - CP-503	CONSTRUCTION DETAILS

ALL ELEVATIONS SHOWN ON THESE PLANS  
ARE BASED ON NAVD 1988 DATUM

ELEV.	DIFFERENCE	DATUM
1.64'	+1.64 FEET	NGVD 1929
0.00'		NAVD 1988

FEMA EL. - ZONE AH (EL. 6) AND  
ZONE AH (EL. 5)

THESE PLANS MAY HAVE BEEN  
REDUCED IN SIZE BY REPRODUCTION.  
THIS MUST BE CONSIDERED WHEN  
OBTAINING SCALED DATA.



PREPARED FOR:  
TOWN OF SOUTHWEST RANCHES  
13400 GRIFFIN ROAD  
SOUTHWEST RANCHES, FL 33330



PROJECT No. 08711.07 09/10/15

General Symbols

Table with 3 columns: Existing, Proposed, Description. Includes symbols for Centerline & Baseline of Survey or Construction, Building Access (ADA), Driveway Turnout Identification, Sidewalk Curb Ramp, Proposed Section Marker, Flag Pole, GPS Point, Hay Bales, Mail Box, Major/Minor Contour Elevation, Parking Meter, Property Line, Grade Elevation, Top Of Curb Elevation/Pavement Elevation, Soil Test Boring Hole, Survey Bench Mark.

Line Types

Table with 3 columns: Existing, Proposed, Description. Lists various line types such as County Bound, Demolition Line, Easement Line, Property Line, Limited Access Line, Railroad, Right Of Way, Canal Or Drainage Ditch, Shore Line, Tree Line, Aerial Communication Line, Underground Communication Line, Underground Storm Drain Line, Underground Sanitary Line, Aerial Electric Line, Underground Electric, Underground Water Line, Underground Force Main, Gate, Chain Link Fence, Wood Fence, Metal Rail Fence, Silt Fence, Staked Turbidity Barrier, Turbidity Barrier, Guard Rail, Roadway Centerline, 2-4 Skip, 3-9 Skip, 6-10 Skip, 10-30 Skip, 10-10-20 Skip, Curb, Curb And Gutter.

Landscaping

Table with 3 columns: Existing, Proposed, Description. Includes symbols for Bush, Tree, Palm Tree.

Paving and Grading

Table with 3 columns: Existing, Proposed, Description. Includes symbols for Flow Directional Arrow, Pavement Marking Arrows, Stop Bar, Concrete Sidewalk, Jogging Path, Pavement Area, Existing Pavement/Concrete/ Landscape Removal Area, Milling And Resurfacing, Detectable Warning (Truncated Domes) Per Florida Accessibility Code, Soil Tracking Prevention Device.

Drainage / Utilities

Table with 3 columns: Existing, Proposed, Description. Includes symbols for Catch Basin, Yard Drain, Exfiltration Trench, Catch Basin With Filter Fabric Insert, Curb Type 5, Curb Type 6, Pipe Culvert - Mitered End Section, Pipe Culvert - Straight Endwall, Pipe Culvert - U - Type Endwall, Manhole - Communication, Electric, Gas, Dm, San Sew, Valve Box - Gas, San. Sew, Water, Non-Potable Water, 22.5 degree Bend, 45 degree Bend, 90 degree Bend, Utility Crossing, Fire Hydrant, Proposed Bacteriological Sampling Point, Pump Station, Grease Trap, Septic Tank, Drainage Well, Monitoring Well, Water Well, Sanitary Sewer Cleanout, Back Flow Preventor, Junction Box, Electric Handhole, Electric Meter, Water Meter, Gate Valve, Guy wire, Light Pole, Relocated Or Adjusted Light Pole, Wood Power Pole, Concrete Utility Pole, Traffic Signal Pole (Concrete, Wood, Metal), Pedestrian Signal Head (Pole Or Pedestal Mounted), Post Mounted Sign, Street Sign, High Mast Lighting Tower, Controller Cabinet (Base Mounted), Controller Cabinet (Pole Mounted), Traffic Signal Head (Span Wire Mounted), Traffic Signal Head (Pedestal Mounted), Traffic Signal Head (Mast Arm Mounted).

N: 623025.4322  
E: 850262.1786  
Coordinate values shown on proposed improvements are relative to the coordinate values indicated on the Right-of-Way, property corners or reference monument

Abbreviations

Table with 2 columns: Abbreviations, Description. Lists abbreviations for General (AADT, ABAN, ADJ, APPROX., A.C., ACCM PIPE, BIT., BC, BD., BL, BLDG, BM, BO, BOS, BR., CAP, CB, CBCI, CC, CCM, CEM, CI, CIP, CLF, CL, CMP, CO., CONC, CONT, CONST, CR GR, DHV, DI, DIA, DIP, DWY, ELEV (OR EL.), EMB, EOP, EXIST (OR EX), EXC, F&C, F&G, FDN., FLDSTN, GAR, GD, GI, GIP, GRAN, GRAV, GRD, GV, HDW, HMA, HOR, HYD, INV, JCT, L, LB, LP, LT, MAX, MB, MH, MIN, NIC, NO., PC, PCC, P.G.L.) and Abbreviations Continued (PI, POC, POT, PRC, PROJ, PROP, PT, PVC, PVI, PVT, PVMT, PWW, R, R&D, RCP, RD, RDWY, REM, RET, RET WALL, ROW, RR, R&R, RT, SHLD, SMH, ST, STA, SSD, SW, T, TAN, TEMP, TC, TOS, TYP, UP, VAR, VERT, VC, WCR, WIP, WM, X-SECT, Traffic Signal).

Abbreviations Continued

Table with 2 columns: Abbreviations, Description. Lists abbreviations for Traffic Signal (CAB., CCVE, DW, FDW, FR, FRL, FRR, FY, FYL, FYR, G, GL, GR, GSL, GSR, GV, OL, PED, PTZ, R, RL, RR, TR SIG, TSC, W, Y, YL).

DATE: 05/01/15  
SCALE: NTS  
DRAWN BY: MG  
DESIGN BY: MG  
CHECKED BY: SW

Table with 2 columns: REVISION, DATE. Includes a grid for tracking revisions.

STERNEID, WILLIAMS, P.E.  
FLORIDA REG. NO. 22095  
(FOR THE FIRM)

**KEITH ASSOCIATES INC.**  
CONSULTING ENGINEERS  
301 East Atlantic Boulevard  
Pompano Beach, Florida 33060-6643  
(954) 788-3400; FAX (954) 788-3500  
State of Florida Certificate of  
Authorization Number - 7928

**CALUSA CORNERS  
PARK IMPROVEMENTS**  
LEGEND  
TOWN of SOUTHWEST RANCHES BROWARD COUNTY

SHEET IDENTIFICATION  
**GI-001**  
SHEET 02

PROJECT NO. 08711.07

D

C

B

A

Drawing name: N:\08711.07 Calusa Corners Park - SW Ranches\Engineering\Construction Drawings\08711.07 GI-001.dwg Layout Name: GI-001 Plotted by: mgibank Plot Date: Dec 14, 2015 10:38am

# CONSTRUCTION SPECIFICATIONS

## Section 20 - Paving Grading Drainage and Earthwork

### 20. General

20.1. It is the intent of these specifications to describe the minimum acceptable technical requirements for the materials and workmanship for construction of site improvements for this project. Such improvements shall generally include, but not to be limited to, clearing, grading, paving, removal of existing pavement storm drainage, water lines and sanitary sewers.

20.2. It is the intent that the Florida Department of Transportation (FDOT) "Standard Specifications for Road and Bridge Construction: (current edition) together with "Supplemental Specifications to the Standard Specifications for Road and Bridge Construction" (current edition), and the FDOT Roadway and Traffic Design Standards (current edition) be used where applicable for the various work, and that where such wording therein refers to the State of Florida and its Department of Transportation and personnel, such wording is intended to be replaced with the wording which would provide proper terminology; thereby making such "Standard Specifications for Road and Bridge Construction" together with the "FDOT Roadway and Traffic Design Standards" as the "Standard Specifications" for this project. If within a particular section, another section, article or paragraph is referred to, it shall be part of the Standard Specifications also. The Contractor shall abide by all local and State laws, regulations and building codes which have jurisdiction in the area.

20.3. The Contractor shall furnish all labor, materials and equipment and perform all operations required to complete the construction of a paving and drainage system as shown on the plans, specified herein, or both. It is the intent to provide a complete and operating facility in accordance with these specifications and the construction drawings. The material and equipment shown or specified shall not be taken to exclude any other incidentals necessary to complete the work.

20.4. All labor, materials, and methods of construction shall be in strict accordance with the plans and construction specifications and the minimum engineering and construction standards adopted by the unit of government which has jurisdiction and responsibility for the construction. Where conflicts or omissions exist, the jurisdictional government Engineering Department's standards shall govern. Substitutions and deviations from plans and specifications shall be permitted only when written approval has been issued by the Engineer.

20.5. Guarantee - all materials and equipment to be furnished and/or installed by the Contractor under this contract, shall be guaranteed for a period of (1) one year from the date of final acceptance thereof, against defective materials, design and workmanship. Upon receipt of notice from the owner of failure of any part of the guaranteed equipment or materials, during the guarantee period, the affected part or materials shall be replaced promptly with new parts or materials by the contractor, at no expense to the owner. In the event the Contractor fails to make necessary replacement or repairs within (7) seven days after notification by the owner, the owner may accomplish the work at the expense of the contractor.

### 21. Earthwork

21.1. All areas within the right-of-way shall be cleared and grubbed prior to construction. This shall consist of the complete removal and disposal of all trees, brush, stumps, roots, grass, weeds, rubbish and all other obstructions resting on or protruding through the surface of the existing ground to a depth of 1'. Items designated to remain or to be relocated or to be adjusted shall be so designated on the drawings. All work shall be in accordance with section 110 of the Standard Specifications.

21.2. Fill material shall be classified as A-I, A-3, or A-2-4 in accordance with AASHTO N-145 and shall be free from vegetation and organic material. Not more than 12% by weight of fill material shall pass the no. 200 sieve.

21.3. All fill material in areas not to be paved shall be compacted to 95% of the maximum density as determined by AASHTO T-99.

21.4. All material of construction shall be subject to inspection and testing to establish conformance with the specifications and suitably for the uses intended. The Contractor shall notify the Engineer at least 24 hours prior to the time he will be ready for an inspection or test. The Contractor shall follow Town and County inspection procedures. The Contractor shall not proceed with any phase of work dependent on an inspection or test of an earlier phase of work, prior to that test or inspection passing. The Contractor shall be responsible for providing certified material test results to the Engineer of record prior to the release of final certification by the Engineer. Test results must include, but may not be limited to, densities for subgrade and limerock, utilities, excavation, asphalt gradation reports, concrete cylinders, etc.

21.5. When encountered within drainage swales, hardpan shall be removed for a width of (5) five feet at the invert and replaced with granular materials.

21.6. All underground utilities and drainage installations shall be in place prior to subgrade compaction and pavement construction.

21.7. Ground adjacent to roadway/pavement having runoff shall be graded (2) two inches lower than the edge of pavement to allow for the placement of sod.

21.8. Site grading elevations shall be within 0.1' of the required elevation and all areas shall be graded to drain without ponding.

21.9. The Contractor shall perform all excavation, fill, embankment and grading to achieve the proposed plan grades including typical road sections, side slopes and canal sections. All work shall be in accordance with section 120 of the Standard Specifications. If fill material is required in excess of that generated by the excavation, the Contractor shall supply this material as required from off-site.

21.10. A 2" blanket of top soil shall be placed over all areas to be sodded or seeded and mulched within the right-of-way and drainage easements. Unless otherwise indicated on the plans.

21.11. Sod shall be Bahia, unless otherwise indicated on the plans, and shall be placed on the graded top soil and watered to insure satisfactory condition upon final acceptance of the project.

21.12. All solid sod shall be placed over weed free fine-graded and hand-raked areas. Ground shall be free of all debris, visible rocks, and low or high spots. Lay sod with tight joints, then tamp or roll or top dress with lawn sand. All sod to be bahia or as otherwise noted, free of pest, disease, weed, infestation or stress. On slopes exceeding 3:1, place length of sod perpendicular to slope direction. Peg sod or otherwise ensure its establishment on slopes. Where sod meets a mulched bed, the cut edge shall be even and sharp. Sod level shall not impede water flow from adjacent surfaces. In areas where paved surfaces abut sod or mulch, the final grade level of both surfaces shall be level.

### 22. Drainage

22.1. Inlets - all inlets shall be the type designated on the plans, and shall be constructed in accordance with section 425 of the Standard Specifications. All inlets and pipe shall be protected during construction to prevent siltation in the drainage systems by way of temporary plugs and plywood or plastic covers over the inlets. The entire drainage system shall be cleaned of all debris prior to final acceptance.

22.2. Pipe specifications: the material type is shown on the drawings by one of the following designations:

- RCP = reinforced concrete pipe, ASTM designation C-76, section 941 of the Standard Specifications.
- CMP = corrugated metal (aluminum) pipe, ASTM designation M-196.
- CMP (smooth lined) = corrugated metal aluminum pipe, (smooth lined) ASTM designation M-196.
- SCP = slotted concrete pipe, sections 941 and 942, of the Standard Specifications.
- PVC = polyvinyl chloride pipe.
- PCMP = perforated cmp, section 945, of the Standard Specifications
- Corrugated High Density Polyethylene Pipe (HDPE) (12 Inches to 60 Inches), shall meet the requirements of FDOT Specification section 948-2.3.

22.1. Pipe backfill - requirements for pipe backfill crossing roads or parking areas shall be as defined in the section 125-8, of the Standard Specifications. Pipeline backfill shall be placed in 6 inch lifts and compacted to 100% of the standard proctor (AASHTO T-99 specifications)

22.2. Location of drainage structures shall govern, and pipe length may have to be adjusted to accomplish construction as shown on these plans.

22.3. Distance and lengths shown on plans and profile drawings are referenced to the center of structures.

22.4. Filter fabric shall be Mirafi, Typar or equal conforming to section 985 of the Standard Specifications.

### 23. Asphalt Paving

23.1. Where new asphalt meets existing asphalt, the existing asphalt shall be saw cut to provide a straight even line. Prior to removing curb or gutter, the adjacent asphalt shall be saw cut to provide a straight even line.

23.2. Internal asphalt paving constructed on existing sandy soils shall be constructed with a 12" subgrade, compacted to a minimum density of 100% maximum density as determined by AASHTO T-99. The compacted subgrade shall be constructed in the limits shown on the plans. All subgrade shall have an LBR of 40 unless otherwise noted.

23.3. Asphaltic concrete surface course shall be constructed to the limits shown on the plans. The surface course shall consist of the thickness and type asphaltic concrete as specified in the plans. All asphaltic concrete shall be in accordance with sections 320, 327, 330, 334, 336, 337, 337, 338, 339 and 341 of the Standard Specifications.

23.4. Limerock base shall be prepared, compacted and graded and shall be in accordance with section 200 of the Standard Specifications. All limerock shall be compacted to 98% per AASHTO T-180 and have not less than 70% of carbonates of calcium and magnesium unless otherwise designated. All limerock shall be primed. The Engineer shall inspect the completed base course and the Contractor shall correct any deficiencies and clean the base course prior to the placement of the prime coat. A tack coat will also be required if the Engineer finds that the primed base has become excessively dirty or the prime coat has cured to the extent of losing bounding effect prior

to placement of the asphaltic concrete surface course. The prime and tack coats shall be in accordance with section 300 of the Standard Specifications.

23.5. Limerock base material shall be placed in maximum 6" lifts. Bases greater than 6" shall be placed in two equal lifts. If, through field tests, the Contractor can demonstrate that the compaction equipment can achieve density for the full depth of a thicker lift, and if approved by the engineer, the base may be constructed in successive courses of not more than 8 inches (200 mm) compacted thickness.

23.6. Asphalt edges that are not curbed shall be saw cut to provide a straight even line to the dimensions shown on the horizontal control plan.

DATE: 05/01/15	NTS
SCALE: _____	MG
DRAWN BY: _____	MG
DESIGN BY: _____	MG
CHECKED BY: _____	SW

DATE	REVISION

STEPHEN D. WILLIAMS, P.E.  
FLORIDA REG. NO. 22090  
(FOR THE FIRM)

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State of Florida Certificate of  
Authorization Number - 7928

**CALUSA CORNERS  
PARK IMPROVEMENTS**  
CONSTRUCTION SPECIFICATIONS

TOWN OF SOUTHWEST RANCHES      BROWARD COUNTY

SHEET IDENTIFICATION  
**GI-002**  
SHEET 03

PROJECT NO. 08711.07

General Notes

This construction project may or may not include all items covered by these notes and specifications, i.e. paving, grading, drainage lines, water lines, or sanitary sewer lines. See plans for detailed project scope. Notes and specifications on this sheet refer to paving, grading, drainage, water, and sanitary sewer, and are intended for this projects scope of work and for reference purposes for other work items that may be required due to unforeseen existing conditions or required remedial work.

1. Specific Site Notes

- 1.1. County and "Town" in these notes refers to County and Town in which project resides.
1.2. State in these notes refers to the State of Florida.
1.3. Existing topographic information in the plans is based on survey data and best available information. See project survey and notes on plan sheets regarding the source of the topographic information.

2. Applicable Codes

- 2.1. All construction and materials shall conform to the standards and specifications of the Town, county, and all other jurisdictional, State and national codes where applicable.
2.2. In the event of a conflict between the general notes and construction specifications in these plans, and the contract documents and specifications in the specification booklet, the contractor shall submit written request for clarification.
2.3. All construction shall be done in a safe manner and in strict compliance with all the requirements of the Federal occupational safety and health act of 1970, and all State and jurisdictional safety and health regulations.
2.4. The contractor shall be required to comply with Federal, State, County, and Town laws, codes, and regulations.
2.5. All handicap accessible areas to conform to the requirements of the Americans with Disabilities Act (ADA), State ADA codes, and Florida Building Code ADA codes latest edition.
2.6. Trench safety act
2.6.1. All trench excavation shall be performed in accordance with chapter 90-96 of the laws of Florida (the trench safety act).
2.6.2. All trench excavation in excess of 5 feet in depth shall be undertaken in accordance with O.S.H.A. standard 29 cfr. Section 1926.650 subpart p.
2.6.3. The contractor shall submit with his contract a completed, signed, and notarized copy of the trench safety act compliance statement. The contractor shall also submit a separate cost item identifying the cost of compliance with the applicable trench safety codes.
2.6.4. A trench safety system, if required, shall be designed by the excavation contractor utilizing a specialty engineer as required.

3. Construction Notes:

- 3.1. Contractor shall tie to existing grade by evenly sloping from closest proposed grade provided to existing grade at limits of work, unless otherwise noted on the plans. If no limit of work line is indicated, slope to adjacent property line or right-of-way line, as applicable.
3.2. The contractor shall use care when cutting the existing asphalt pavement and during excavations, so that the existing catch basins and grates that are to remain will not be damaged.
3.3. The contractor shall maintain the roadway slope when resurfacing the roadway. The edge of pavement shall match the new gutter lip per FDOT index 300.
3.4. The new sidewalk shall be constructed in accordance with the given elevations and at the proper slopes depicted in the specifications, details and standards. Existing driveways and other features shall be matched when possible as directed by the engineer.
3.5. Radii shown are to the edge of pavement.
3.6. All bench mark monuments within the limits of construction shall be protected and referenced by the contractor in the same way as public land corners.
3.7. All excess material is to be disposed by the contractor within 72 hours.
3.8. In areas where the base is exposed by the milling operation, the contractor shall restore the base to its original thickness and structural capaTown before paving over such areas. This includes but is not limited to restoring original degree of compaction, moisture content, composition, stability, and intended slope. If paving will not take place the same day the base is exposed and reworked, the base shall be sealed according to the governing standards and specifications. Any additional work resulting from the contractor's failure to protect the exposed base as stated above in order to restore the original structural capaTown shall be the contractor's cost.

- 3.9. The contractor is to maintain existing signage during construction operations, in order to facilitate emergency vehicle traffic.
3.10. The topographic survey included with this set of plans reflects pre-demolition conditions and does not reflect the site conditions after demolition. The contractor is fully and solely responsible in determining the required earthwork for the proposed development of the site. This includes, but is not limited to, any excavation/dredge and fill activities required at any phase of the project. The contractor shall use the final approved (released for construction) plans, surveys, geotechnical reports, and any other available information for determining the amount of excavation/dredging and filling required. Any quantities included in the approved permits were estimated by the engineer for purposes of obtaining the permit and under no circumstances shall be used by the contractor in lieu of performing their own earthwork calculations required for cost estimating and bidding the project.
3.11. The contractor shall be responsible for reading and familiarizing themselves with any and all available geotechnical reports prepared by others and/or any recommendations written or implied by the geotechnical engineer for this project. The geotechnical conditions and recommendations outlined in these reports are in force and in full effect as part of the proposed improvements. The contractor is responsible for ensuring that all the work associated with this project is in compliance with the geotechnical engineer's recommendations. Keith and associates, Inc. is not responsible for the suitability or unsuitability of the soils encountered. It is the contractor's responsibility to ensure that the means and methods of construction used can and will allow for the successful completion of the required site improvements.
3.12. The contractor shall ensure that the available geotechnical information is sufficient for his complete understanding of the soil conditions for the site. If additional geotechnical investigation is required by the contractor, this additional work shall be considered incidental to the contract and no additional compensation shall be allowed. However, if the contractor considers a change order is required it shall be submitted to the owner and/or engineer. The owner and/or engineer will at their own discretion review and approve the change order, unless the work is considered incidental to the successful completion of the project.
3.13. The contractor shall be responsible for the repair and restoration of existing pavement, pipes, conduits, sprinkler heads, cables, etc., and landscaped areas damaged as a result of the contractor's operations and/or those of his subcontractors and shall restore at no additional cost.
3.14. The contractor shall not bring any hazardous materials onto the project. Should the contractor require such for performing the contracted work, the contractor shall request, in writing, permission from the owner, Town and engineer with a copy of the material safety data sheet (MSDS) for each hazardous material proposed for use. The project engineer shall coordinate with the owner and Town prior to issuing written approval to the contractor. Because state law does not treat petroleum products that are properly containerized and intended for equipment use as a hazardous material, such products do not need a MSDS submittal.
3.15. Any known or suspected hazardous material found on the project by the contractor shall be immediately reported to the Town and/or engineer, who shall direct the contractor to protect the area of known or suspected contamination from further access. The Town and/or engineer are to notify the owner/engineer of the discovery. The owner/engineer will arrange for investigation, identification, and remediation of the hazardous material. The contractor shall not return to the area of contamination until approval is provided by the project engineer; the owner/engineer will advise the project engineer.

- 3.16. The contractor shall contact the appropriate Town engineering inspector between the hours of 8-8:30 a.m. and 3:30-4 p.m., and 48 hours in advance of the event to notify the Town of construction start up, or to schedule all required tests and inspections including final walk-throughs.

4. Preconstruction Responsibilities

- 4.1. All utility / access easements to be secured prior to construction.
4.2. No construction may commence until the appropriate permits have been obtained from all municipal, State, County, and Federal agencies.
4.3. All required governmental agency building permits to be obtained by the contractor prior to any construction activity. The contractor shall be responsible to pay all associated permit fees including but not limited to water

- connection, sewer connection and meter fees and request for reimbursement.
4.4. Contractor to coordinate construction scheduling for connection to the existing water and sewer lines with the utility department that owns and/or maintains the water and sewer lines.
4.5. Prior to the start of construction, the owner shall submit an NPDES construction general permit (CGP) "notice of intent (N.O.I.) to use Generic Permit for storm water discharge from construction activities form (DEP form 62-621.300(4)(b)) to FDEP notices center. The contractor will be responsible for (1) implementation of the storm water pollution prevention plan (SWPPP) that was required to be developed prior to NOI submittal, and (2) retention of records required by the permit, including retention of a copy of the SWPPP at the construction site from the date of project initiation to the date of final site stabilization. A "notice of termination (N.O.T.) of generic permit coverage" form (DEP form 62-621.300(6)) must be submitted to FDEP to discontinue permit coverage, subsequent to completion of construction. For additional information see FDEP website: http://www.dep.state.fl.us/water/ storm water/npdes.

- 4.6. Prior to construction or installation, 5 sets of shop drawings shall be submitted for review as required for the following items listed below, but not limited to:
• Drainage: Catch basins, manholes, headwalls, grates/tops, yard drains.
• Water: Fire hydrants, valves, backflow preventer, DDCV, meter box.
• Sewer: Manholes, lift stations (wetwell, hatches, valves, pump data, electrical panel)
4.6.1. Catalogue literature shall be submitted for drainage, water and sewer pipes, fittings, and appurtenances.
4.6.2. Prior to submitting shop drawings to the engineer, the contractor shall review and approve the drawings, and shall note in red any deviations from the engineer's plans or specifications.
4.6.3. Individual shop drawings for all precast structures are required. Catalogue literature will not be accepted for precast structures.

- 4.1. Contractor to submit maintenance of traffic plan(s) in accordance with FDOT and Broward county requirements, and submit for approval prior to beginning construction.

5. Inspections / Testing:

- 5.1. The contractor shall notify in writing the owner, the County, the engineer of record, & any other governmental agencies having jurisdiction at least 48 hours prior to beginning construction and prior to required inspections of the following items, where applicable:
• Clearing and earthwork
• Storm drainage systems
• Sanitary sewer systems
• Water distribution systems
• Subgrade
• Limerock base
• Asphalt or concrete pavement
• Sidewalks, concrete flatwork/curbing
• Landscaping
• Pavement marking and signage
• Signalization
• Site lighting
• Electrical and communication lines
• Utility conduits
• Irrigation
• Final

- 5.2. The owner, engineer, and jurisdictional permitting agencies may make inspections of the work at any time. The contractor shall cooperate fully with all inspections.
5.3. Testing - all testing required by the plans and specifications shall be performed by a licensed / FDOT qualified testing company. Required test for asphalt and limerock shall be taken at the direction of the engineer or the jurisdictional governmental agency in accordance with the plans and specifications.

6. Temporary Facilities

- 6.1. It shall be the contractor's responsibility to arrange for or supply temporary water service, sanitary facilities, communications, and electricity, for his operations and works, cost included under mobilization.
6.2. Contractor shall construct temporary fencing to secure construction areas at all times, cost included in mobilization.
6.3. Contractor to obtain a secure staging area and obtain all necessary approvals from the owner.

- 6.4. Contractor shall construct and maintain temporary street lighting as required to light the construction project limits at all times, to at least the same lighting intensity levels as the existing conditions, before the start of construction, cost included in maintenance of traffic.
6.5. The contractor shall maintain access to adjacent properties at all times.

7. Project Progress and Closeout

- 7.1. During construction, the project site and all adjacent areas shall be maintained in a neat and clean manner, and upon final clean-up, the project site shall be left clear of all surplus material or trash. The paved areas shall be broom swept clean.
7.2. The contractor shall restore or replace any public or private property (such as highway, driveway, walkway, and landscaping), damaged by his work, equipment, or employees, to a condition at least equal to that existing immediately prior to the beginning of construction. Suitable materials and methods shall be used for such restoration.
7.3. Material or debris shall be hauled in accordance with NPDES permit and jurisdictional laws.
7.4. All land survey property monuments or permanent reference markers, removed or destroyed by the contractor during construction shall be restored by a State of Florida registered land surveyor at the contractor's expense.
7.5. All unpaved surfaces disturbed as a result of construction activities shall be graded, sodded, & restored to a condition equal to or better than that which existed before the construction.

8. Project record documents:

- 8.1. During the daily progress of the job, the contractor shall record on his set of construction drawings the location, length, material and elevation of any facility not built according to plans. This copy of the "as-built" shall be submitted with the contractor's pay request and quantities.
8.2. Upon completion of drainage improvements and limerock base construction (at least 48 hours before placing asphalt pavement) the contractor shall furnish the engineer of record "as-built" plans for these improvements, showing the locations and pertinent grades of all drainage installations and the finished rock grades of the road crown and edges of pavement at 50 foot intervals, including locations and elevations of all high and low points.
8.3. Upon completion of construction, and prior to final payment, the contractor shall submit to the engineer of record one complete set of all "as-built" contract drawings. These drawings shall be marked to show "as-built" construction changes, dimensions, locations, and elevations of all improvements.
8.4. "As-built" drawings of water lines and force mains shall include the following information:
8.4.1. Top of pipe elevations every 100 LF.
8.4.2. Locations and elevations of all fittings including bonds, tees, gate valves, double detector check valves, fire hydrants, and appurtenances.
8.4.3. All connections to existing lines.
8.4.4. Ends of all water services at the buildings where the water service terminates.
8.5. "As-built" drawings of gravity sanitary sewer lines shall include the following information:
8.5.1. Rim elevations, invert elevations, length of piping between structures, and slopes.
8.5.2. The stub ends and cleanouts of all sewer laterals shall be located horizontally and vertically.
8.6. "As-built" drawings of all drainage lines shall include the following information:
8.6.1. Rim elevation, invert elevation, length of piping between structures, and control structure elevations if applicable.
8.6.2. The size of the lines.
8.6.3. Drainage well structure shall include, but not be limited to, top of casing elevation, top and bottom elevations of the baffle walls, rim elevations and pipe inverts.
8.7. "As-built" drawings of parking lot areas shall include the following:
8.7.1. Rock elevations at all high, and low points, and at enough intermediate points to confirm slope consistency.
8.7.2. Rock elevations and concrete base elevations shall be taken at all locations where there is a finish grade elevation shown on the design plans.
8.7.3. All catch basin and manhole rim elevations.
8.7.4. Finish grade elevations in island areas.
8.7.5. "As-built" elevations shall be taken on all paved and unpaved swales, prior to placement of asphalt or topsoil / sod, at enough intermediate points to

- confirm slope consistency and conformance to the plan details.
8.8. Lake and canal bank "as-built" drawings shall include a key sheet of the lake for the location of cross sections. Lake and canal bank cross sections shall be plotted at a minimum of every 100 lf, unless otherwise specified. "as-built" drawings shall consist of the location and elevation of the top of bank, edge of water, and the deep cut line, with the distance between each shown on the drawing.
8.9. Retention area "as-built" elevations shall be taken at the bottom of the retention area and at the top of bank. If there are contours indicated on the design plans, then they shall be included in "as-built" drawings as well.
8.10. Upon completion of the work, the contractor shall prepare "as-built" drawings on full size, 24" x 36" sheets. All "as-built" information shall be put on the latest engineering drawings. Eight (8) sets of blue or black line drawings shall be submitted. These drawings shall be signed and sealed by a Florida registered professional engineer or land surveyor.
8.11. An electronic copy of these "as-built" drawings shall be submitted to the engineer of record in AutoCAD, version 2008 or later.

9. Utility Notes

- 9.1. Contractor is responsible for utility verification prior to fabrication.
9.2. The contractor is advised that properties adjacent to the project have electric, telephone, gas, water and/or sewer service laterals which may not be shown in plans. The contractor must request the location of these lateral services from the utility companies. The additional cost of excavating, installing, back filling and compacting around these lateral services must be included in the bid related item for the work being done.
9.3. The contractor shall use hand digging when excavating near existing utilities. Extreme caution shall be exercised by the contractor while excavating, installing, backfilling or compacting around the utilities. The cost is to be included in related bid item for work being performed. The contractor shall be responsible for the damages to any utility without additional compensation.
9.4. The contractor shall notify and obtain an underground clearance from all utility companies and governmental agencies at least 48 hours prior to beginning any construction. The contractor shall obtain a Sunshine811.com Certification clearance number and field markings at least 48 hours prior to beginning any excavation.
• Prior to commencement of any excavation, the contractor shall comply with Florida statute 553.851 for the protection of underground gas pipelines.
• Town of Pompano Beach (954) 786-4060
• Florida Power and Light (800) 868-9554 / (305) 552-2931
• AT&T Distribution (954) 723-2540
• Comcast Cable (954) 447-8405
• FDOT (954) 847-2690
9.5. For street excavation or closing or for alteration of access to public or private property, the contractor shall notify:
• Roadway jurisdictional engineering / public works authority.
• County transit authority
• School board transportation authority
• Jurisdictional fire department dispatch
• Jurisdictional police department(s)
9.6. The contractor shall use extreme caution working under, over, and around existing electric lines. The contractor shall contact the electric provider company to verify locations, voltage, and required clearances, onsite, in right-of-ways, and in easements, prior to any construction in the vicinity of existing lines.
9.7. Location and size of all existing utilities and topography (facilities) as shown on construction drawings are drawn from available records. The engineer assumes no responsibility for the accuracy of the facilities shown or for any facility not shown. It is the contractor's responsibility to determine the exact location (vertical & horizontal) of any existing utilities and topography prior to construction. The contractor shall verify the elevations and locations of all existing facilities, in coordination with all utility companies, prior to beginning any construction operations. This work by the contractor shall be considered incidental to the contract and no additional compensation shall be allowed. If an existing facility is found to conflict with the proposed construction, the contractor shall immediately notify the owner so that appropriate measures can be taken to resolve the conflict.
9.8. The contractor shall coordinate the work with other contractors in the area and any other underground utility companies required. The contractor shall

- coordinate relocation of all existing utilities with applicable utility companies.
10. Signing and Pavement Markings
10.1. All signing and pavement markings installed as part of these plans shall conform to the Federal highway administration (FHWA) "manual on uniform traffic control devices" (MUTCD) and FDOT design standards as a minimum criteria.
10.2. All sign locations shall be field verified by the engineer, prior to sign post fabrication, to ensure proper location and spacing is achieved (i.e., offset from travel lines. The field verification shall ensure that there are no utility conflicts. Adjustments shall and can be made by the engineer if proper location and spacing is not met or if utility conflicts are incurred.
10.3. Match existing pavement markings at the limits of construction.
10.4. Removal of the existing pavement markings shall be accomplished by water blasting or other approved methods determined by the engineer.
10.5. Incorrectly placed paint or thermoplastic pavement markings over friction course will be removed by milling and replacing the friction course a minimum width of 18 in at the contractor's expense. The engineer may approve an alternative method if it can be demonstrated to completely remove the markings without damaging the asphalt.
10.6. Place all retro-reflective pavement markers in accordance with standard index 17352 and / or as shown in the plans.
10.7. Shop drawings are required for all sign panels shown in the guide sign work sheets and sign details sheets.
10.8. All sign panels, sign supports, and structures to be demolished shall become the property of the contractor.
10.9. W/r rpm denotes bi-directional white/red reflective pavement marker.
10.10. Caution should be exercised while relocating existing signs to prevent unnecessary damage to signs. If the sign is damaged beyond use, as determined by the engineer, signs shall be replaced by the contractor at his expense.
10.11. All existing signs that conflict with construction operations shall be removed, stockpiled, and relocated by the contractor. Sign removal shall be directed by the engineer.
10.12. Relocated sign support system must meet the current design standard.
10.13. The contractor shall provide an inventory of existing signs to remain or to be relocated prior to starting the job and forward this list to the engineer. Contractor shall notify if there are any missing or damage signs that the plans show to remain or to be relocated.
10.14. All roadway and parking lot pavement markings shall be thermoplastic in accordance with FDOT specifications section 711.
10.15. Hand dig the first four feet of sign foundation.
10.16. All signs shall meet all of the following:
• Meet the criteria outlined in Section 2A.08 of the 2009 MUTCD
• Meet the specifications outlined in Section 700 and 994 of the latest FDOT Standard Specifications.
• Consist of materials certified to meet the retroreflective sheeting requirements outlined in the current version of ASTM D4956 for type-XI retroreflective sheeting materials made with prisms, except for school zone and pedestrian signs which shall be comprised of retroreflective fluorescent yellow-green sheeting certified to meet ASTM D4956 Type IV retroreflective sheeting materials.
• Consist of retroreflective sheeting materials that have a valid FDOT Approved Product List (APL) certification for specification 700 Highway Signing for FDOT sheeting Type XI (or type IV for school and pedestrian signs).
10.1. Use countersunk screws when using mechanical fasteners to attach sign panels to wind beams, brackets and splice plates for single and multi-post signs.
10.2. Patch attachment hardware, such as countersunk screws or rivet heads, with retro reflective buttons that match the color and sheeting material of the finished sign panel including the background, legend or border.
10.3. Ensure the outside corner of sign is concentric with border. Ensure white borders are mounted parallel to the edge of the sign. Ensure black borders are recessed from the edge of the sign.
10.4. Lay out permanent final striping that leaves no visible marks at time of final acceptance.

Table with 2 columns: DATE (05/01/15), SCALE (NTS), DRAWN BY (MG), DESIGN BY (MG), CHECKED BY (SW)

Table with 2 columns: DATE, REVISION

STEPHEN D. WILLIAMS, P.E.
FLORIDA REG. NO. 22095
(FOR THE FIRM)

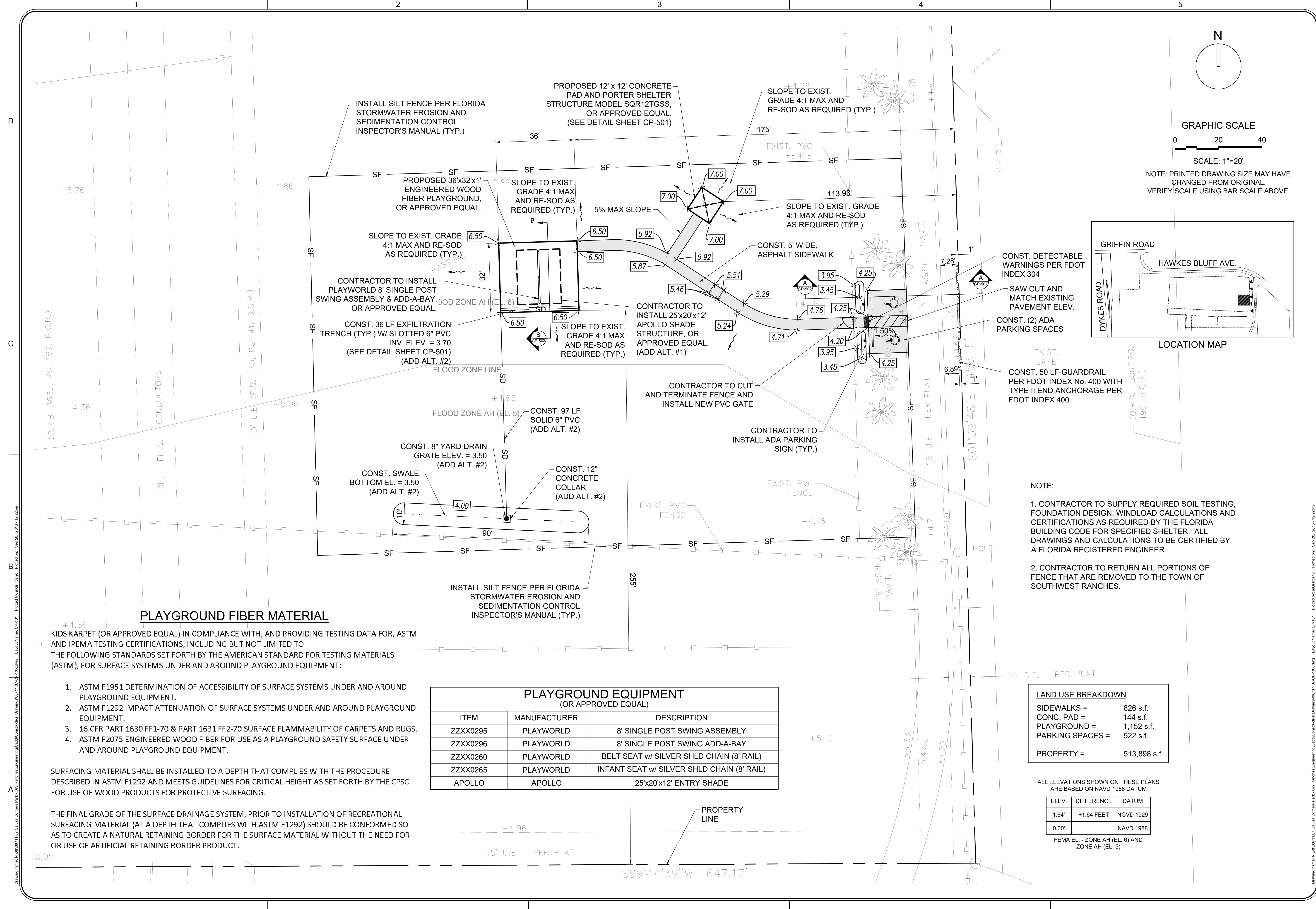
KEITH & ASSOCIATES INC.
CONSULTING ENGINEERS
301 East Atlantic Boulevard
Pompano Beach, Florida 33060-6643
(954) 788-3400; FAX (954) 788-3500
State of Florida Certificate of
Authorization Number - 7928

CALUSA CORNERS
PARK IMPROVEMENTS
GENERAL NOTES
TOWN of SOUTHWEST RANCHES BROWARD COUNTY

SHEET IDENTIFICATION
GI-003
SHEET 04

PROJECT NO. 08711.07

Vertical text on the left margin: Drawing name: N:\08711.07 Calusa Corners Park - SW Ranches\Engineering\Cad\Construction Drawings\08711.07-GI-003.dwg, Layout Name: GI-003, Plotted by: jzhang, Plot Date: Sep 15, 2016 - 4:20pm



DATE: 09/10/2015  
 SCALE: AS NOTED  
 DRAWN BY: MG  
 DESIGN BY: MG  
 CHECKED BY: SW

REVISION	DATE	REVISION PER SBDD COMMENTS
10/22/15		REVISED PER SBDD COMMENTS
11/30/15		REVISED PER SBDD COMMENTS
12/23/15		REVISED PER TOWN COMMENTS
06/13/16		REVISED PER BID ADDENDUM
09/06/16		REVISED PER TOWN COMMENTS

STEPHEN D. WILLIAMS, P.E.  
 FLORIDA REG. NO. 32095  
 (FOR THE FIRM)

**KEITH ASSOCIATES INC.**  
*consulting engineering*  
 301 East Atlantic Boulevard  
 Pompano Beach, Florida 33060-6643  
 (954) 788-3400; FAX (954) 788-3500

State of Florida Certificate of  
 Authorization Number - 7928

**CALUSA CORNERS  
 PARK IMPROVEMENTS**

EROSION CONTROL, PAVING, GRADING, DRAINAGE,  
 PAVEMENT MARKING AND SIGNAGE PLAN

TOWN OF SOUTHWEST RANCHES BROWARD COUNTY

SHEET IDENTIFICATION  
 CP-101  
 SHEET 06

PROJECT NO. 08711.07

Drawing name: N:\08711.07\Calusa\_Cornets\_Park\_SW\_StormwaterEngineering\CP-101.dwg  
 Layout Name: CP-101  
 Printed on: Sep 20, 2015 - 12:20pm  
 Plotter: mdtchubak

**PLAYGROUND FIBER MATERIAL**

KIDS KARPET (OR APPROVED EQUAL) IN COMPLIANCE WITH, AND PROVIDING TESTING DATA FOR, ASTM AND IPEMA TESTING CERTIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING STANDARDS SET FORTH BY THE AMERICAN STANDARD FOR TESTING MATERIALS (ASTM), FOR SURFACE SYSTEMS UNDER AND AROUND PLAYGROUND EQUIPMENT:

1. ASTM F1951 DETERMINATION OF ACCESSIBILITY OF SURFACE SYSTEMS UNDER AND AROUND PLAYGROUND EQUIPMENT.
2. ASTM F1292 IMPACT ATTENUATION OF SURFACE SYSTEMS UNDER AND AROUND PLAYGROUND EQUIPMENT.
3. 16 CFR PART 1630 FF1-70 & PART 1631 FF2-70 SURFACE FLAMMABILITY OF CARPETS AND RUGS.
4. ASTM F2075 ENGINEERED WOOD FIBER FOR USE AS A PLAYGROUND SAFETY SURFACE UNDER AND AROUND PLAYGROUND EQUIPMENT.

SURFACING MATERIAL SHALL BE INSTALLED TO A DEPTH THAT COMPLIES WITH THE PROCEDURE DESCRIBED IN ASTM F1292 AND MEETS GUIDELINES FOR CRITICAL HEIGHT AS SET FORTH BY THE CPSC FOR USE OF WOOD PRODUCTS FOR PROTECTIVE SURFACING.

THE FINAL GRADE OF THE SURFACE DRAINAGE SYSTEM, PRIOR TO INSTALLATION OF RECREATIONAL SURFACING MATERIAL (AT A DEPTH THAT COMPLIES WITH ASTM F1292) SHOULD BE CONFORMED SO AS TO CREATE A NATURAL RETAINING BORDER FOR THE SURFACE MATERIAL WITHOUT THE NEED FOR OR USE OF ARTIFICIAL RETAINING BORDER PRODUCT.

PLAYGROUND EQUIPMENT (OR APPROVED EQUAL)		
ITEM	MANUFACTURER	DESCRIPTION
ZZXX0295	PLAYWORLD	8' SINGLE POST SWING ASSEMBLY
ZZXX0296	PLAYWORLD	8' SINGLE POST SWING ADD-A-BAY
ZZXX0260	PLAYWORLD	BELT SEAT w/ SILVER SHLD CHAIN (8' RAIL)
ZZXX0265	PLAYWORLD	INFANT SEAT w/ SILVER SHLD CHAIN (8' RAIL)
APOLLO	APOLLO	25'x20'x12' ENTRY SHADE

LAND USE BREAKDOWN	
SIDEWALKS =	826 s.f.
CONC. PAD =	144 s.f.
PLAYGROUND =	1,152 s.f.
PARKING SPACES =	522 s.f.
PROPERTY =	513,898 s.f.

ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON NAVD 1988 DATUM

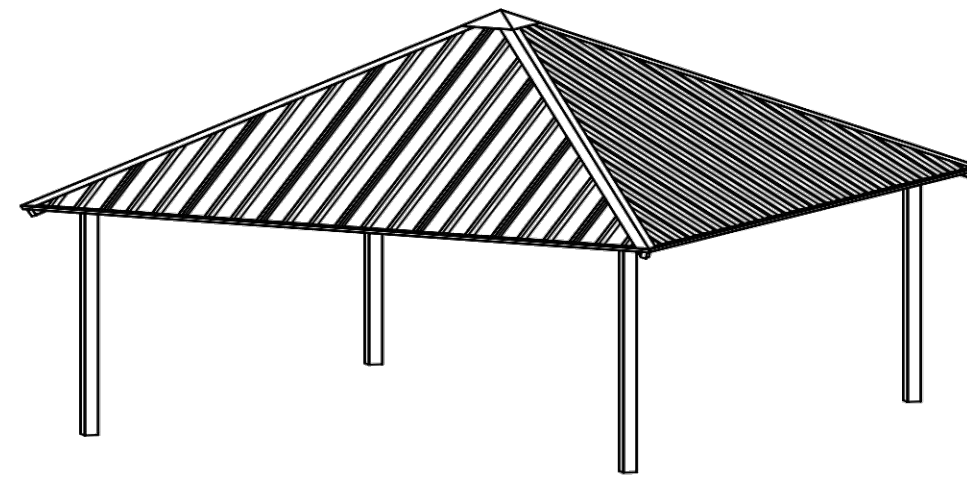
ELEV.	DIFFERENCE	DATUM
1.64'	+1.64 FEET	NGVD 1929
0.00'		NAVD 1988

FEMA EL. - ZONE AH (EL. 6) AND ZONE AH (EL. 5)

**Poligon Product Specification Form**

**PROJECT NAME:** Calusa Corners Park Improvements  
**PROJECT LOCATION:** Town of Southwest Ranches, Florida  
**CUSTOMER NAME:** Town of Southwest Ranches  
**E-MAIL:** \_\_\_\_\_  
**COMPANY:** \_\_\_\_\_  
**ADDRESS:** \_\_\_\_\_  
**ADDRESS 2:** \_\_\_\_\_  
**CITY:** \_\_\_\_\_  
**STATE:** \_\_\_\_\_ **ZIP:** \_\_\_\_\_  
**PHONE:** \_\_\_\_\_ **FAX:** \_\_\_\_\_  
**WIND LOAD:** \_\_\_\_\_ **SNOW LOAD:** \_\_\_\_\_  
**SEISMIC DESIGN:** \_\_\_\_\_ **BLDG CODE:** \_\_\_\_\_

by **PORTERCORP**  
 PORTERCORP, 4240 N. 136th AVE., HOLLAND, MI 49424  
 www.poligon.com 800-354-7721



**Square Standard Sizes**

BIN	SIZE	UPB	# OF COLUMNS
SQR	12	7'-6"	4
SQR	16	7'-6"	4
SQR	20	8'	4
SQR	24	8'	4
SQR	30	8'	4
SQR	36	8'	4
SQR	40	8'	8
SQR	50	8'	8

**Sheet Index**

COVER SHEET / ORDER FORM
ELEVATION VIEWS
STRUCTURAL FRAME
ANCHOR LAYOUT

**Shelter Options**

**SELECT APPLICABLE ROOF TYPE:**

- MR (Metal Roof)
- SPMR (Structural Panel under Metal Roof)
- TGMR (Tongue & Groove under Metal Roof)
- SS (Standing Seam Roof)
- SPSS (Structural Panel under Standing Seam)
- TGSS (Tongue & Groove under Standing Seam)
- SPAS (Structural Panel under Asphalt Shingles)
- SPCS (Structural Panel under Cedar Shingles)
- SPCH (Structural Panel under Milled Cedar Shingles)
- TGAS (Tongue & Groove under Asphalt Shingles)
- TGCS (Tongue & Groove under Cedar Shingles)
- TGCH (Tongue & Groove under Milled Cedar Shingles)
- LATIA (Santa Fe metal stick style)
- TRELIS

**SELECT MODIFICATIONS TO A STANDARD:**

- INCREASE UPB HEIGHT: \_\_\_\_\_
- ADD ELECTRICAL CUTOUTS: \_\_\_\_\_
- ADD CUPOLA: Non-vented \_\_\_\_\_
- ADD ORNAMENTATION: \_\_\_\_\_
- ADD BENCHES: \_\_\_\_\_
- ADD HANDRAILS: \_\_\_\_\_

**SELECT CUSTOMIZATION:**

- INCREASE UPB MORE THAN 2': \_\_\_\_\_
- CUSTOM COLUMNS: \_\_\_\_\_
- CUSTOM PITCH: \_\_\_\_\_
- ADD E-COATING FRAME: \_\_\_\_\_
- ADD GALVANIZING FRAME: \_\_\_\_\_

**FRAME COLOR:** PSM 403C Ash Grey  
**ROOF COLOR:** PMS 357 Hartford Green

**NOTE:**  
 CONTRACTOR TO SUPPLY REQUIRED SOIL TESTING, FOUNDATION DESIGN, WINDLOAD CALCULATIONS AND CERTIFICATIONS AS REQUIRED BY THE FLORIDA BUILDING CODE FOR SPECIFIED SHELTER. ALL DRAWINGS AND CALCULATIONS TO BE CERTIFIED BY A FLORIDA REGISTERED ENGINEER.

Refer to [www.poligon.com](http://www.poligon.com) download area for:

- FOOTING AND ANCHOR INFORMATION
- COLUMN STYLE OPTIONS
- CUPOLA OPTIONS
- ORNAMENTATION STYLE OPTIONS
- INTEGRATED BENCH OPTIONS
- MISCELLANEOUS OPTIONS
- COLOR CHARTS

PORTERCORP MANUFACTURES AND DELIVERS PRODUCT IN STRICT COMPLIANCE TO GOVERNING BUILDING CODES.

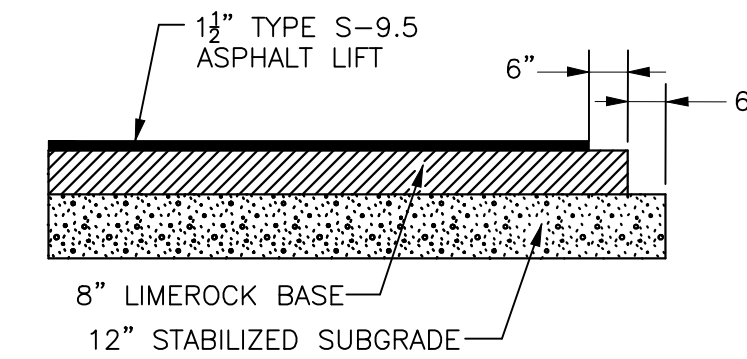
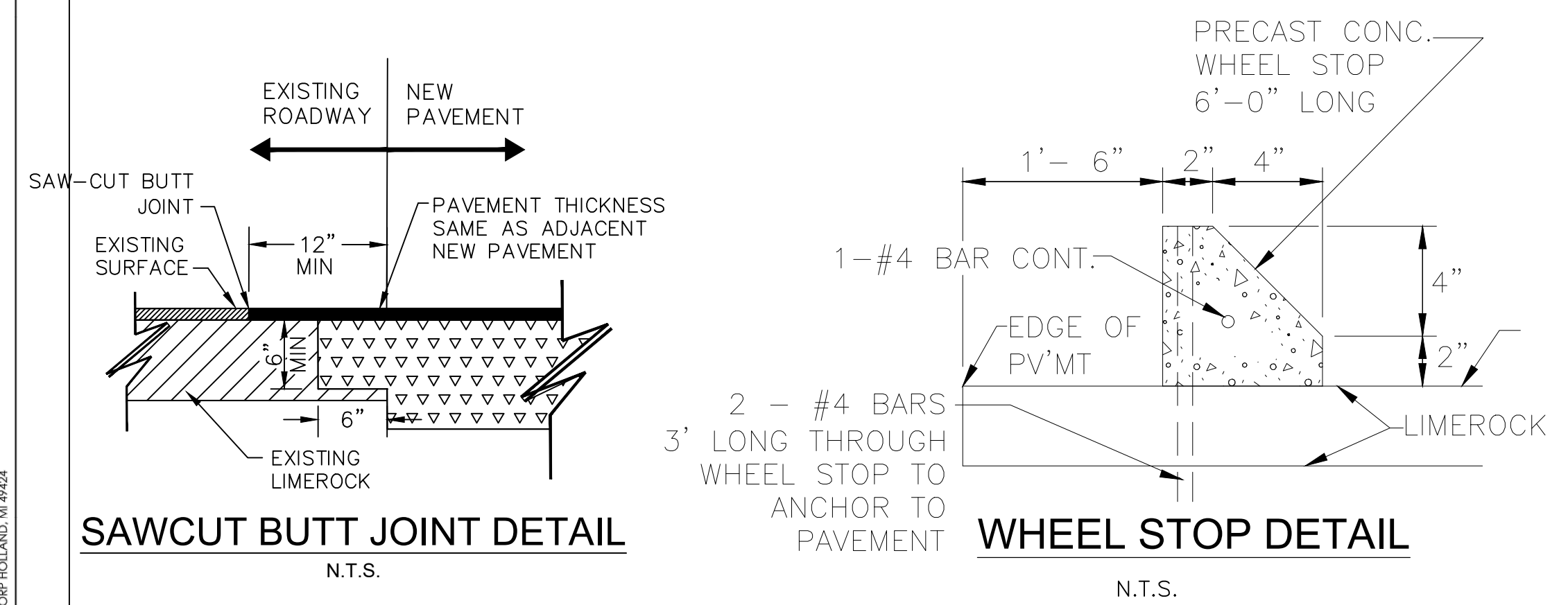
SHELTER MODEL:  
**SQUARE SQR**

SCALE: N/A REV LEVEL: A DATE: 1/19/2011

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by **PORTERCORP**  
 PORTERCORP, 4240 N. 136th AVE., HOLLAND, MI 49424  
 www.poligon.com 800-354-7721

SHEET **COVER SHEET**



**ASPHALTIC CONCRETE VEHICULAR:**  
 1 1/2" LIFT, FDOT TYPE S-9.5 ASPHALT SURFACE COURSE SHALL CONFORM TO THE REQUIREMENTS OF FDOT STANDARDS SPECIFICATIONS SECTIONS 320 AND 330.

**PRIME AND TACK COAT:**  
 LIMEROCK BASE COURSE SHALL CONFORM TO THE REQUIREMENTS OF FDOT STANDARDS SPECIFICATIONS SECTION 300.

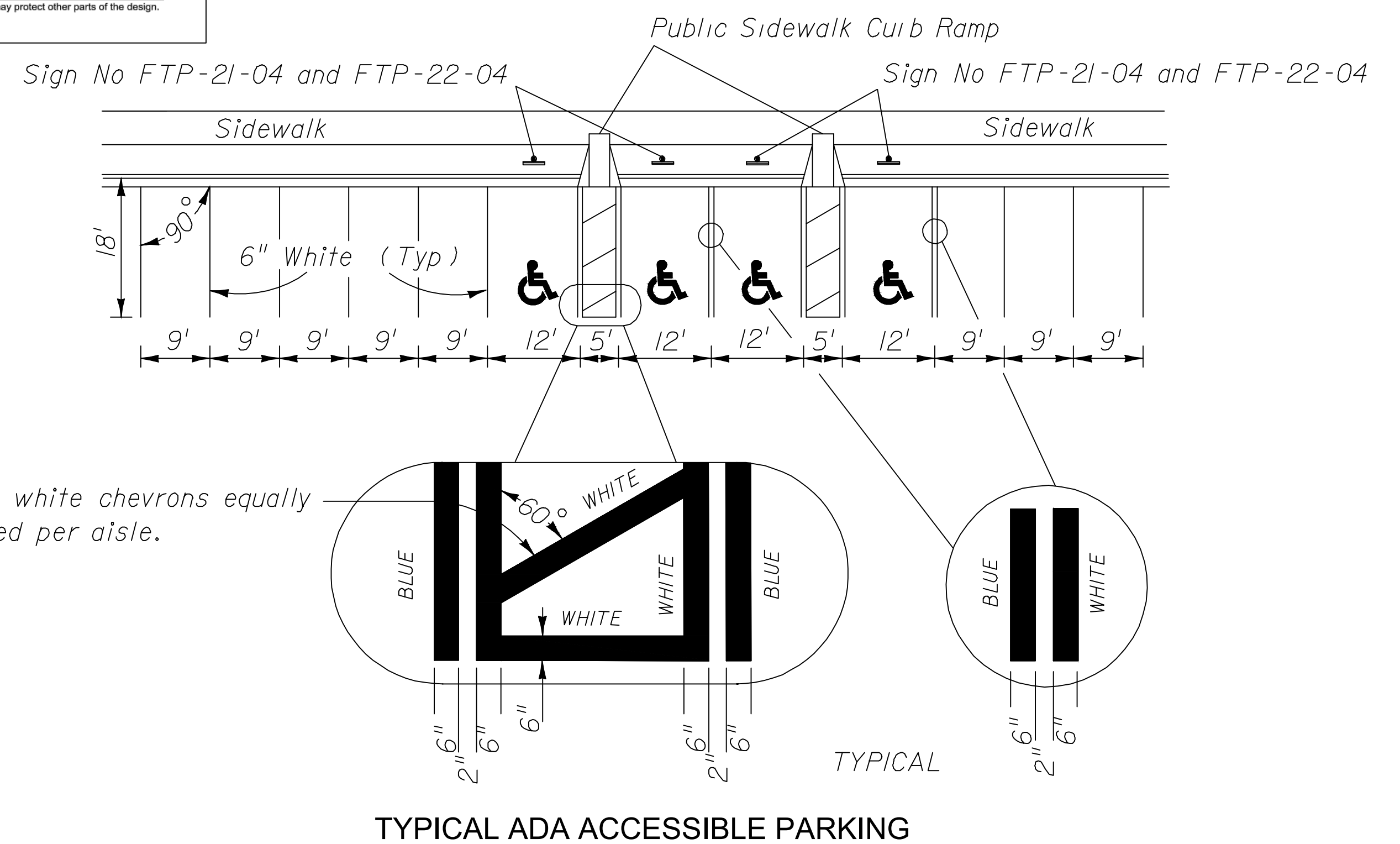
**APPLICATION RATES:**  
 PRIME COAT - 0.10 GALLONS PER SQ. YD.  
 TACK COAT - 0.08 GALLONS PER SQ. YD.

**SUBGRADE:**  
 12" STABILIZED SUBGRADE COMPACTED TO 98% OF MAXIMUM DENSITY (AASHTO T-180); MINIMUM LBR = 40.

**GROUND ADJACENT TO PAVEMENT HAVING RUNOFF SHALL BE GRADED TWO INCHES LOWER THAN THE EDGE OF PAVEMENT TO ALLOW FOR THE PLACEMENT OF SOD.**

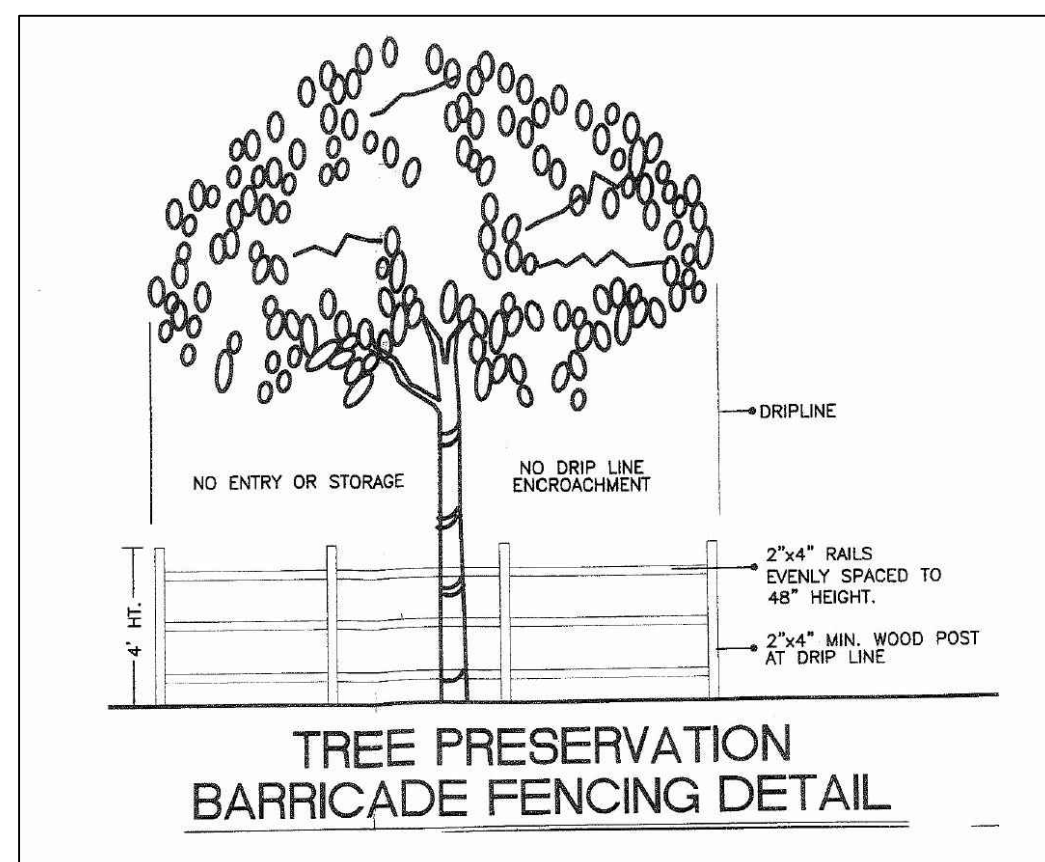
**ASPHALT PAVEMENT DETAIL**

N.T.S.



**TREE PRESERVATION NOTES:**

- THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE PROVISIONS OF THE **SOUTHWEST RANCHES CODE OF ORDINANCES**, CHAPTER 10 ENVIRONMENT, ARTICLE II TREE PRESERVATION, AND SHALL MAKE EVERY EFFORT OUTLINED THEREIN TO PREVENT DAMAGE TO EXISTING TREES, INCLUDING BUT NOT LIMITED TO THE INSTALLATION OF TREE PROTECTION BARRIERS AS SPECIFIED IN THE ORDINANCE.
- PRIOR TO THE PERFORMANCE OF WORK UNDER THIS CONTRACT, CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO TOWN OF TREE PROTECTION EFFORTS TO BE TAKEN AND IDENTIFY ANY CONFLICTS, CONSTRAINTS OR LIMITS.
- WORK TO BE PERFORMED UNDER THIS CONTRACT SHALL NOT INCLUDE ACTIVITIES IDENTIFIED IN THE ORDINANCE AS GENERAL PROHIBITIONS, INCLUDING BUT NOT LIMITED TO CHANGES IN GRADE, ROOT COMPACTION, WOUNDING OF TRUNKS OR CANOPY STRUCTURES. PRUNING OR REMOVAL AS REQUIRED TO FACILITATE CONSTRUCTION MAY ONLY BE PERFORMED UPON PERMITTING BY THE TOWN AS THE CONTROLLING AGENCY, IN ACCORDANCE WITH THE ORDINANCE, AND SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- IF DAMAGE OCCURS FROM WORK PERFORMED UNDER THIS CONTRACT, RESPONSIBILITY FOR ALL REQUIRED REMEDIATION OF SAID DAMAGE SHALL BE AT THE CONTRACTOR'S EXPENSE.



DATE: 09/10/2015  
 SCALE: NTS  
 DRAWN BY: MG  
 DESIGN BY: MG  
 CHECKED BY: SW

REVISED PER SBDD COMMENTS	REVISION
10/22/15	DATE
12/23/15	DATE

STEPHEN D. WILLIAMS, P.E.  
 FLORIDA REG. NO. 22095  
 (FOR THE FIRM)

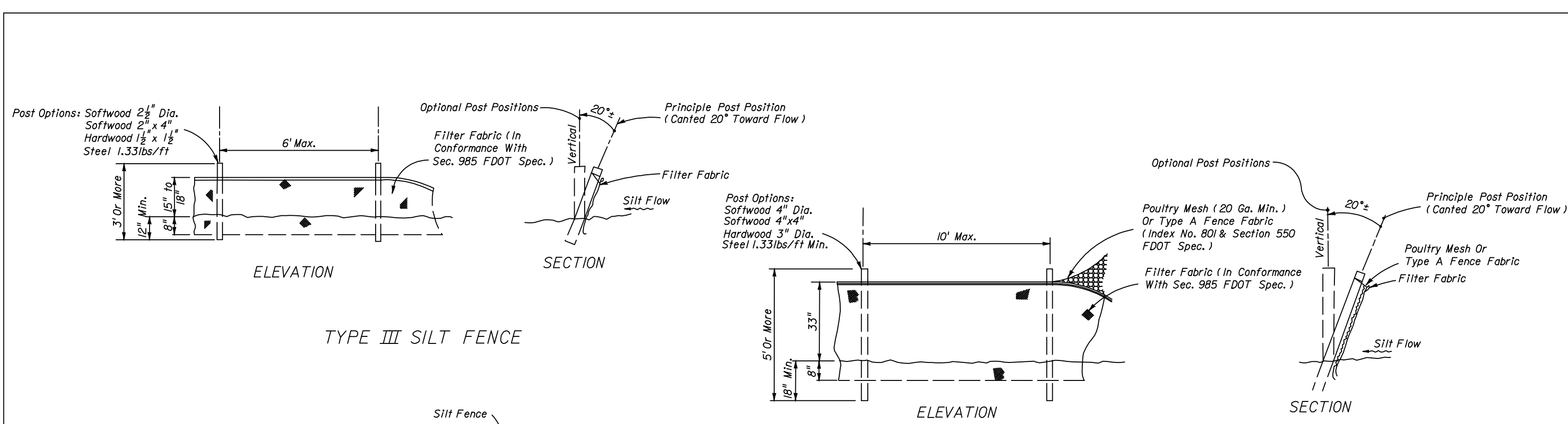
**KEITH & ASSOCIATES INC.**  
 consulting engineers  
 301 East Atlantic Boulevard  
 Pompano Beach, Florida 33060-6643  
 (954) 788-3400; FAX (954) 788-3500  
 State of Florida Certificate of Authorization Number - 7928

**CALUSA CORNERS PARK IMPROVEMENTS**  
 CONSTRUCTION DETAILS  
 TOWN OF SOUTHWEST RANCHES BROWARD COUNTY

SHEET IDENTIFICATION  
 CP-501  
 SHEET 07

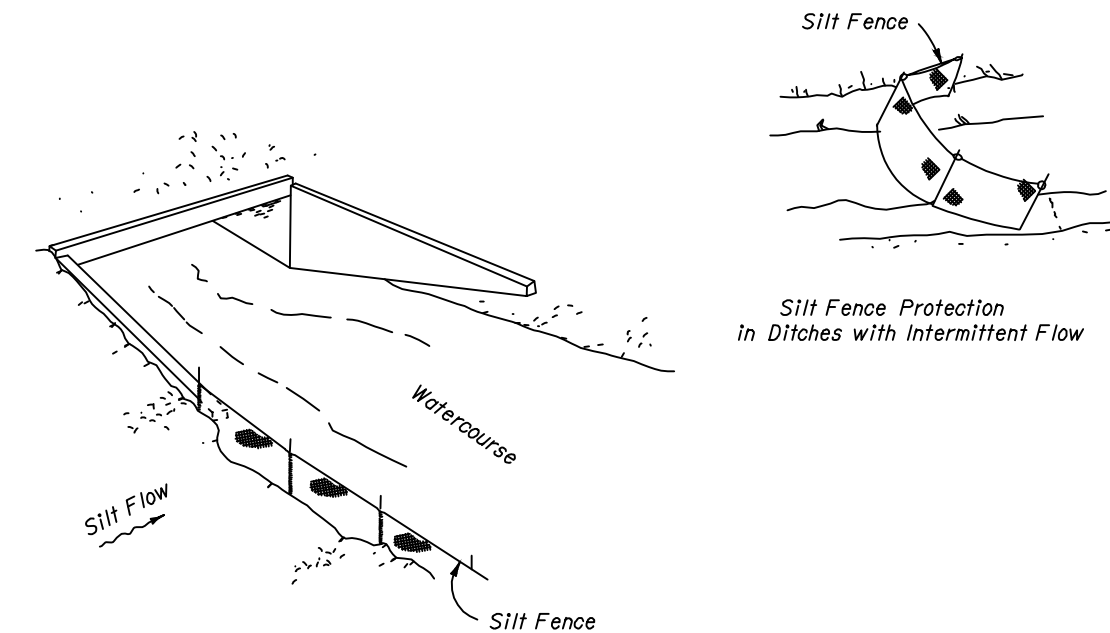
PROJECT NO. 08711.07

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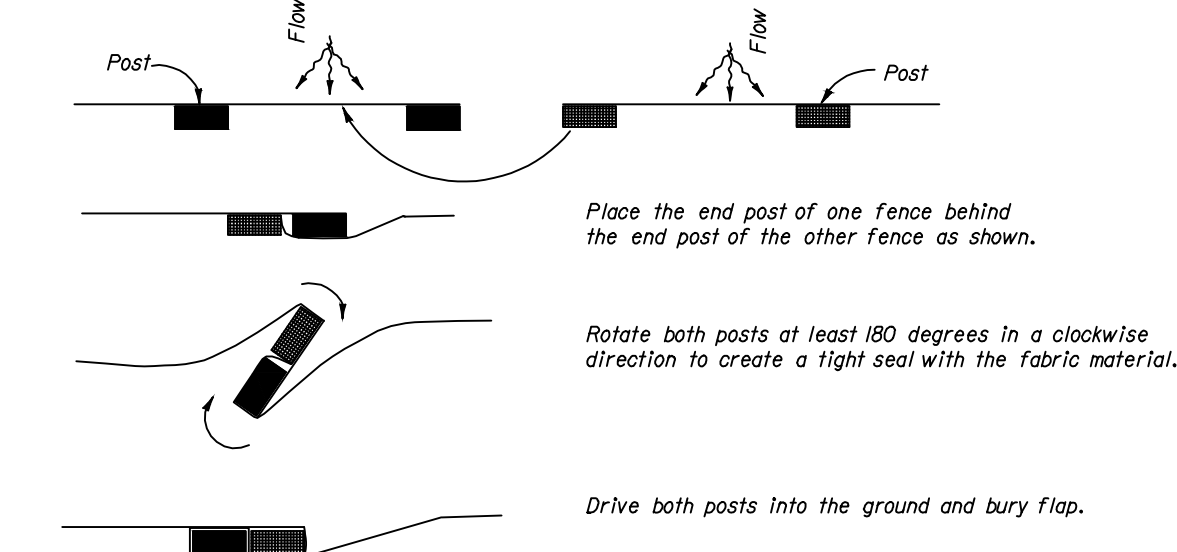


TYPE III SILT FENCE

TYPE IV SILT FENCE



SILT FENCE APPLICATIONS



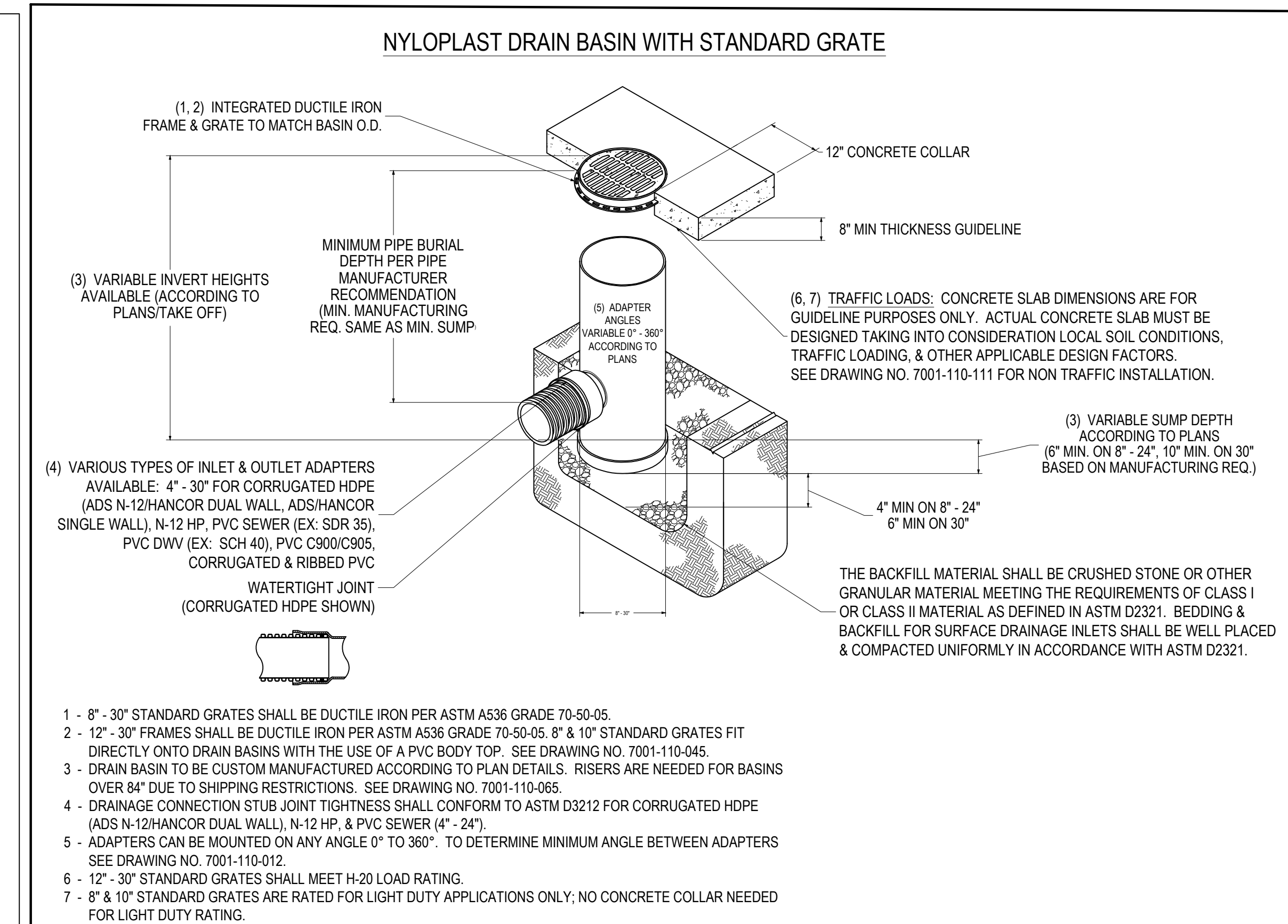
JOINING TWO SILT FENCES

NOTES FOR SILT FENCES

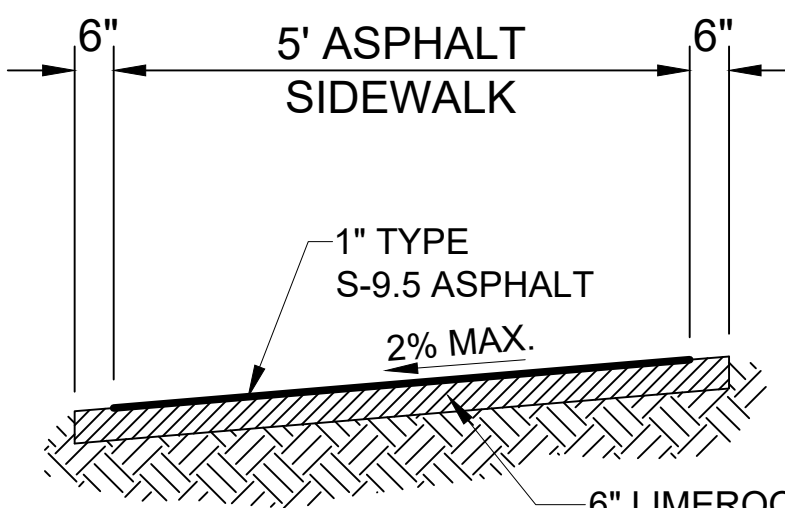
1. Type III Silt Fence to be used at most locations. Where used in ditches, the spacing for Type III Silt fence shall be in accordance with Chart 1, Sheet 1.
2. Type IV Silt Fence to be used where large sediment loads are anticipated. Suggested use is where fill slope is 1:2 or steeper and length of slope exceeds 25 feet. Avoid use where the detained water may back into travel lanes or off the right of way.
3. Do not construct Silt fences across permanent flowing watercourses. Silt fences are to be at upland locations and turbidity barriers used at permanent bodies of water.
4. Where used as slope protection, Silt Fence is to be constructed on 0% longitudinal grade to avoid channelizing runoff along the length of the fence.
5. Silt Fence to be paid for under the contract unit price for Staked Silt Fence, (LF).

TEMPORARY EROSION AND SEDIMENT CONTROL

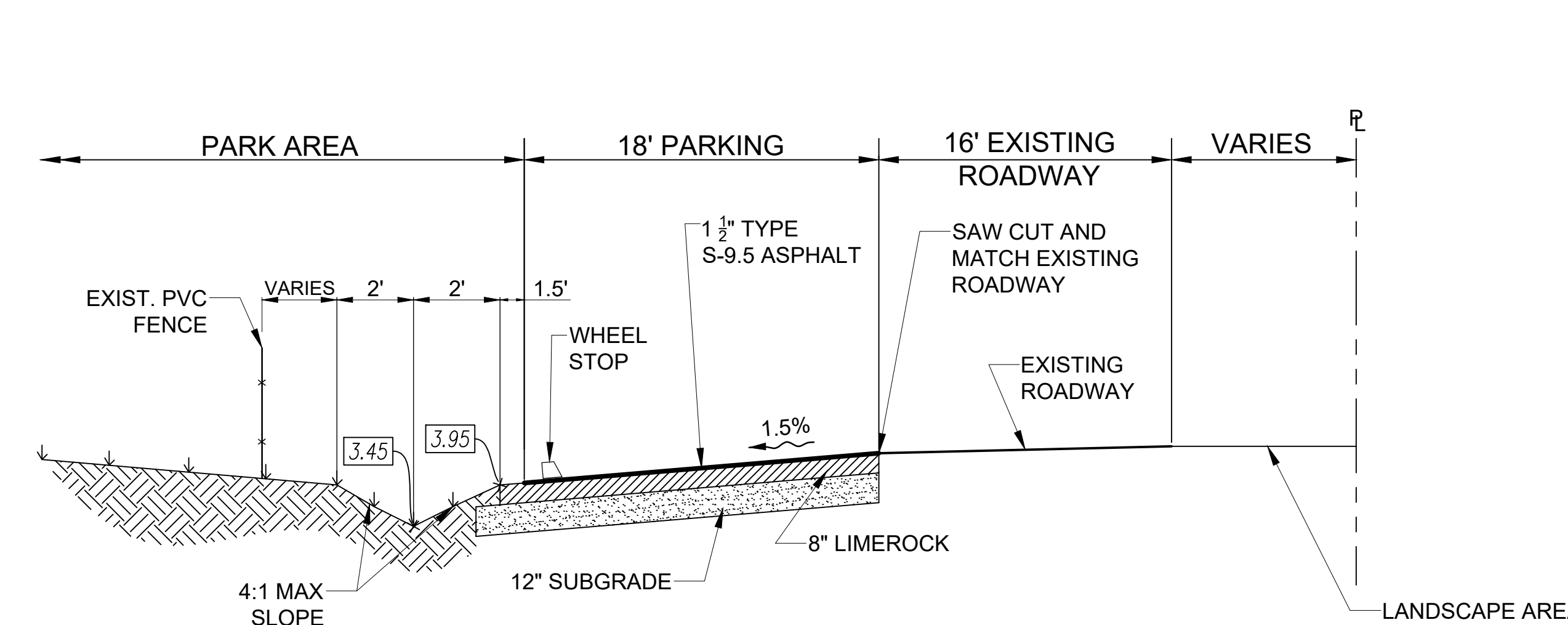
Sheet No. 3 of 3  
Index No. 102



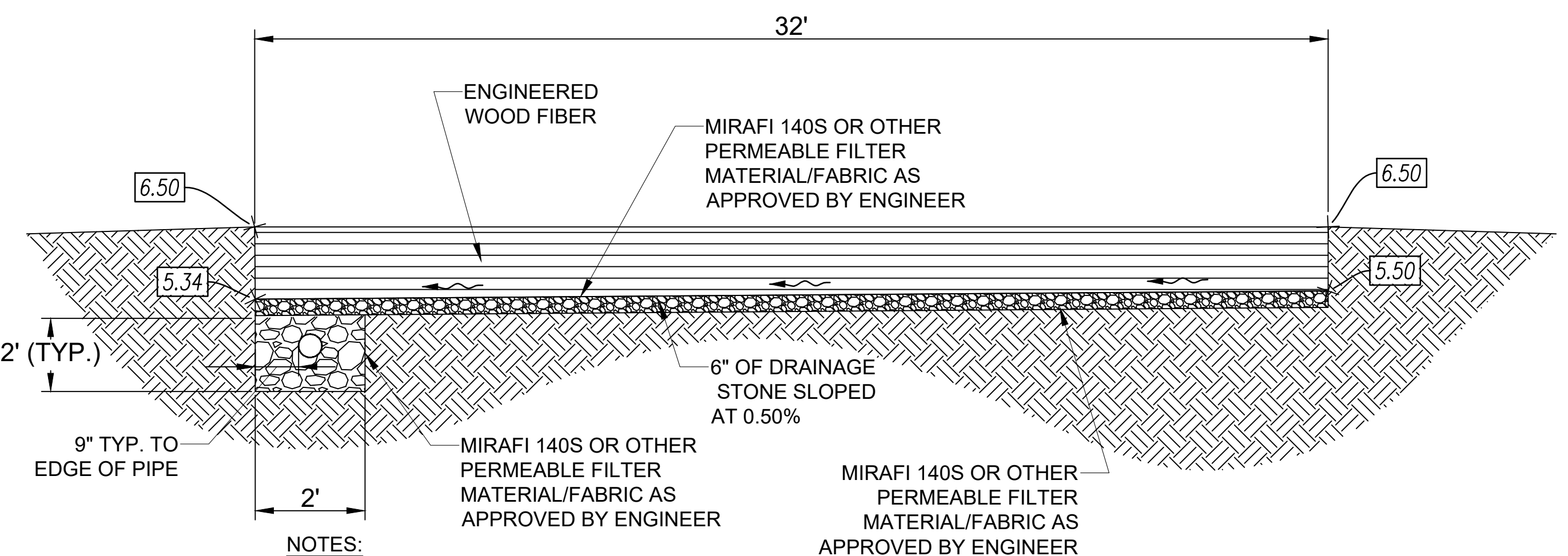
ASPHALT SIDEWALK DETAIL



N.T.S.



SECTION "A-A"  
N.T.S.



SECTION "B-B"  
N.T.S.

- NOTES:
1. PLAY EQUIPMENT, FOOTINGS, STRUCTURES, ETC. TO BE DESIGNED AS PER MINIMUM STANDARDS SET FORTH BY MANUFACTURER FOR EQUIPMENT CITED HEREIN (BY OTHERS).

DATE: 09/10/2015  
SCALE: NTS  
DRAWN BY: MG  
DESIGN BY: MG  
CHECKED BY: SW

REVISED PER SBDD COMMENTS	REVISION
10/22/15	
06/21/16	
09/08/16	

STEPHEN D. WILLIAMS, P.E.  
FLORIDA REG. NO. 22095  
(FOR THE FIRM)

**KEITH & ASSOCIATES INC.**  
consulting engineers  
301 East Atlantic Boulevard  
Pompano Beach, Florida 33060-6643  
(954) 788-3400; FAX (954) 788-3500

State of Florida Certificate of Authorization Number - 7928

**CALUSA CORNERS PARK IMPROVEMENTS**  
CONSTRUCTION DETAILS

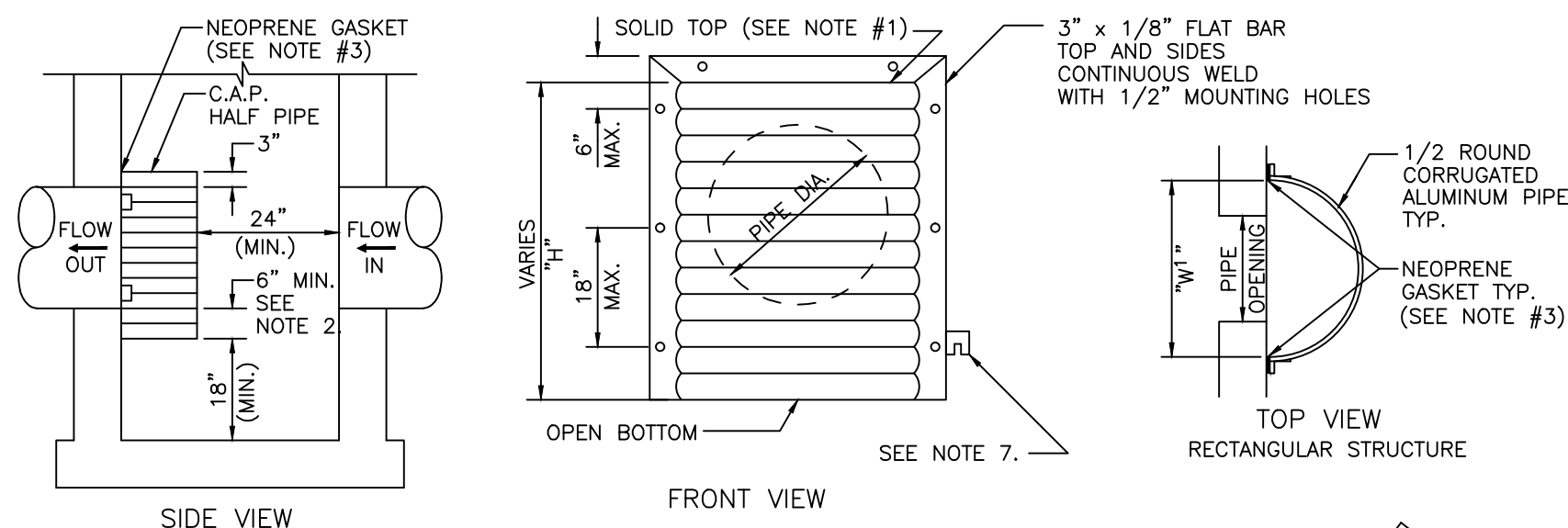
TOWN OF SOUTHWEST RANCHES BROWARD COUNTY

SHEET IDENTIFICATION  
CP-502  
SHEET 08

PROJECT NO. 08711.07

Drawing name: N:\08711.07 Calusa Corners Park - SW Ranches\Engineering\Cad\Construction Drawings\08711.07-CP-502.dwg Layer Name: CP-502 Plotted by: jpwright Plotted on: Sep 19, 2015 4:53pm

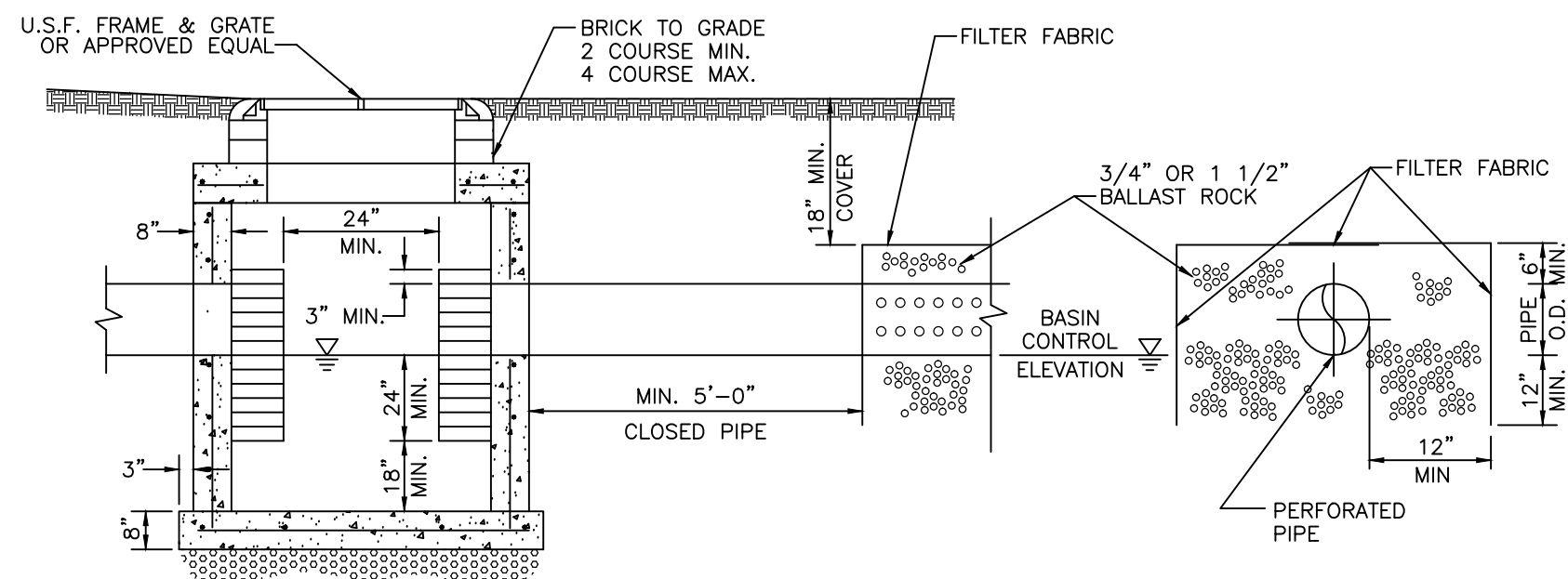
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PIPE DIA. (IN)	W <sup>1</sup> (IN)	W <sup>2</sup> (IN)	T (GAUGE)	H (IN)
15"	21"	21"	16	VARIES
18"	24"	24"	16	VARIES
21"	30"	30"	16	VARIES
24"	30"	36"	16	VARIES
30"	36"	42"	14	VARIES
36"	42"	48"	14	VARIES
42"	48"	54"	14	VARIES
48"	54"	60"	14	VARIES
54"	60"	66"	14	VARIES

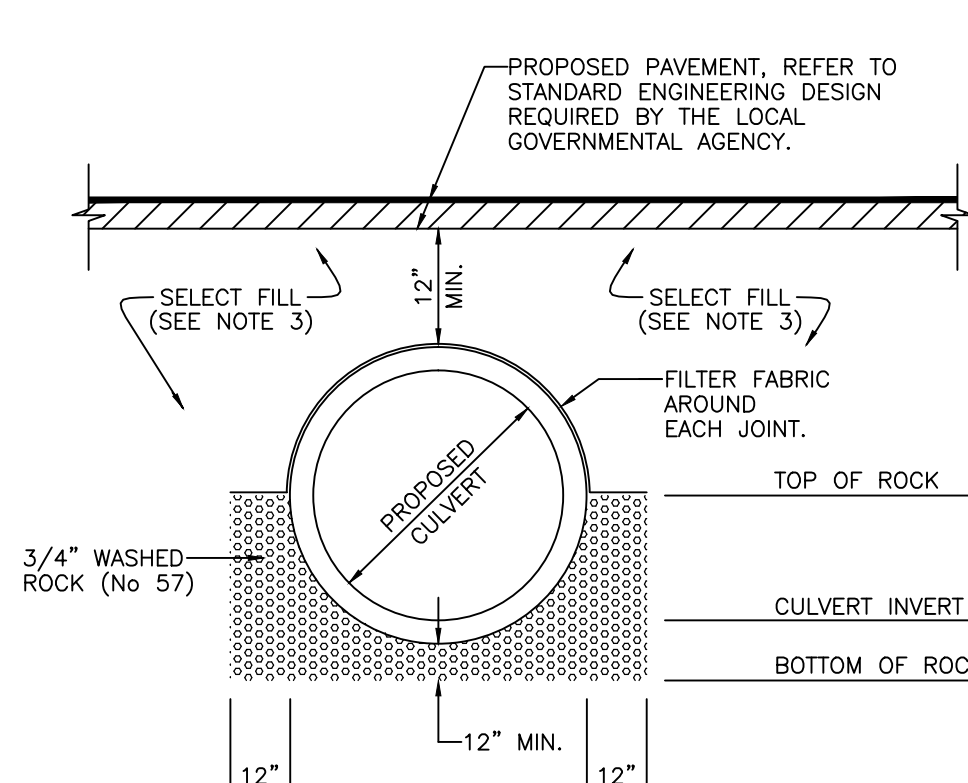
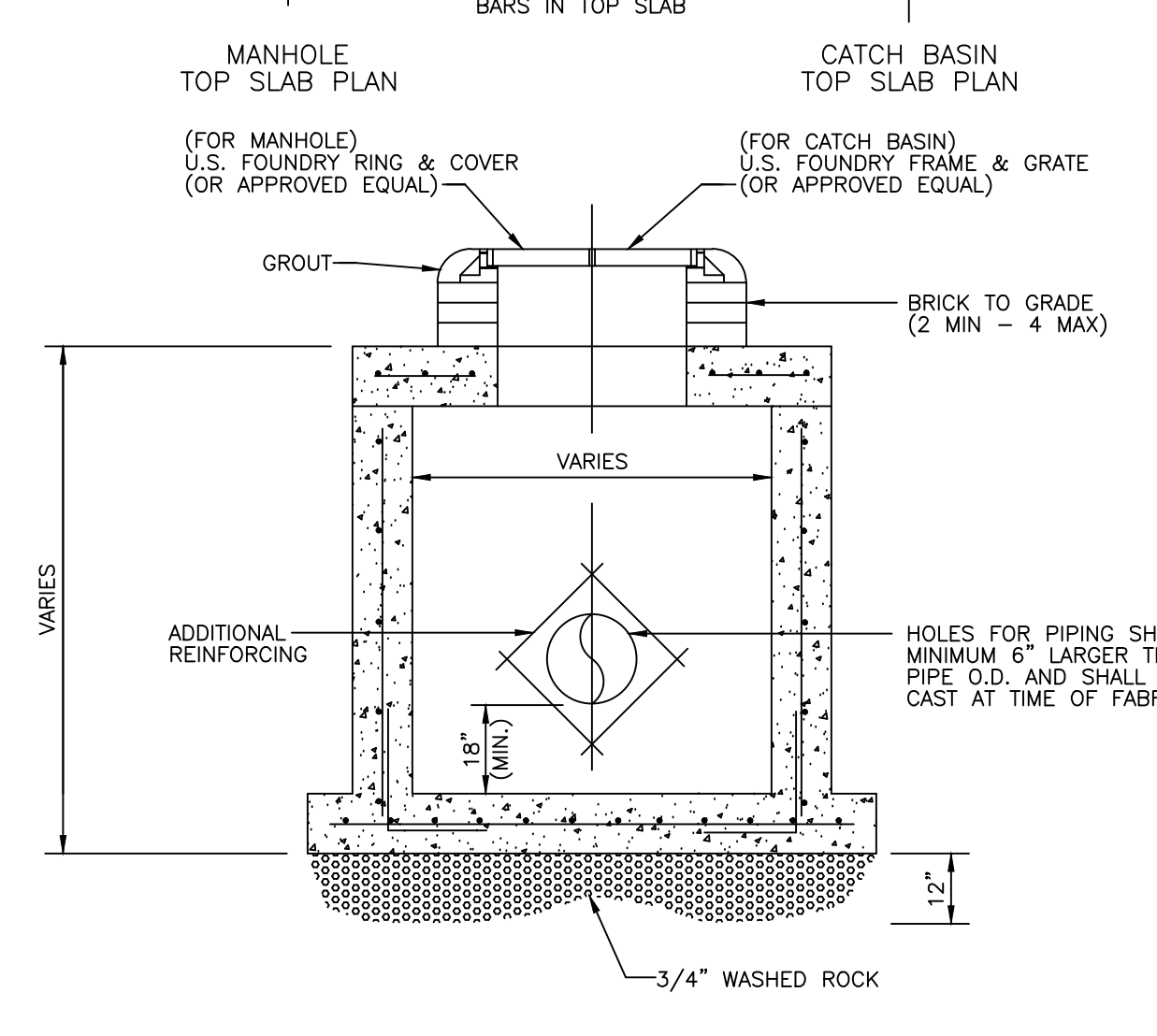
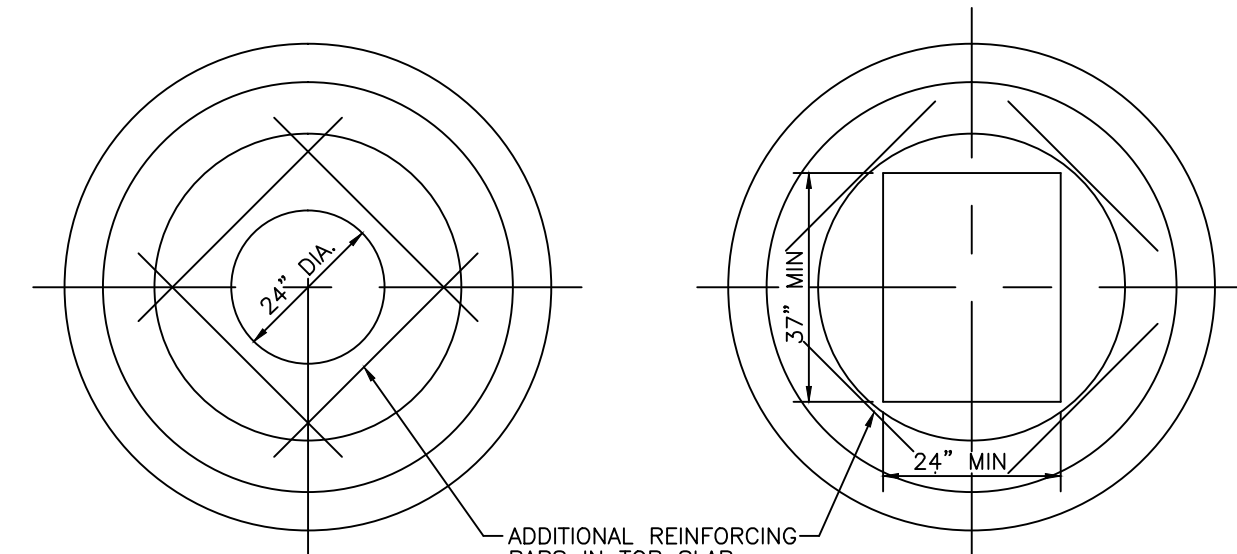
**NOTES:**

- ALUMINUM SHEET OF SAME THICKNESS (GAUGE) AS PIPE SHALL BE WELDED TO CLOSE OPENING AT THE TOP.
- THE BOTTOM ELEVATION OF THE POLLUTION RETARDANT BAFFLE MUST BE AT LEAST 2' BELOW CONTROL ELEVATION.
- NEOPRENE ADHESIVE BACKED GASKET, OR APPROVED EQUAL (1" x 2") SHALL BE INSTALLED ON THE SIDES AND TOP OF ALL BAFFLES.
- POLLUTION RETARDANT BAFFLE TO BE FASTENED IN PLACE WITH 3/8" STAINLESS STEEL "RED HEADS", OR APPROVED EQUAL.
- ALL EXFILTRATION TRENCHES SHALL HAVE A POLLUTION RETARDANT BAFFLE AT EACH CONNECTION POINT TO A STRUCTURE (SEE EXFILTRATION TRENCH DETAIL).
- FIBERGLASS BAFFLES ARE NOT PERMITTED.
- MOUNTING BRACKETS MAY BE ADDED TO FLAT BARS TO EASE INSTALLATION IN ROUND STRUCTURES. SPACING TO MATCH HOLES IN FLAT BARS.



**NOTES:**

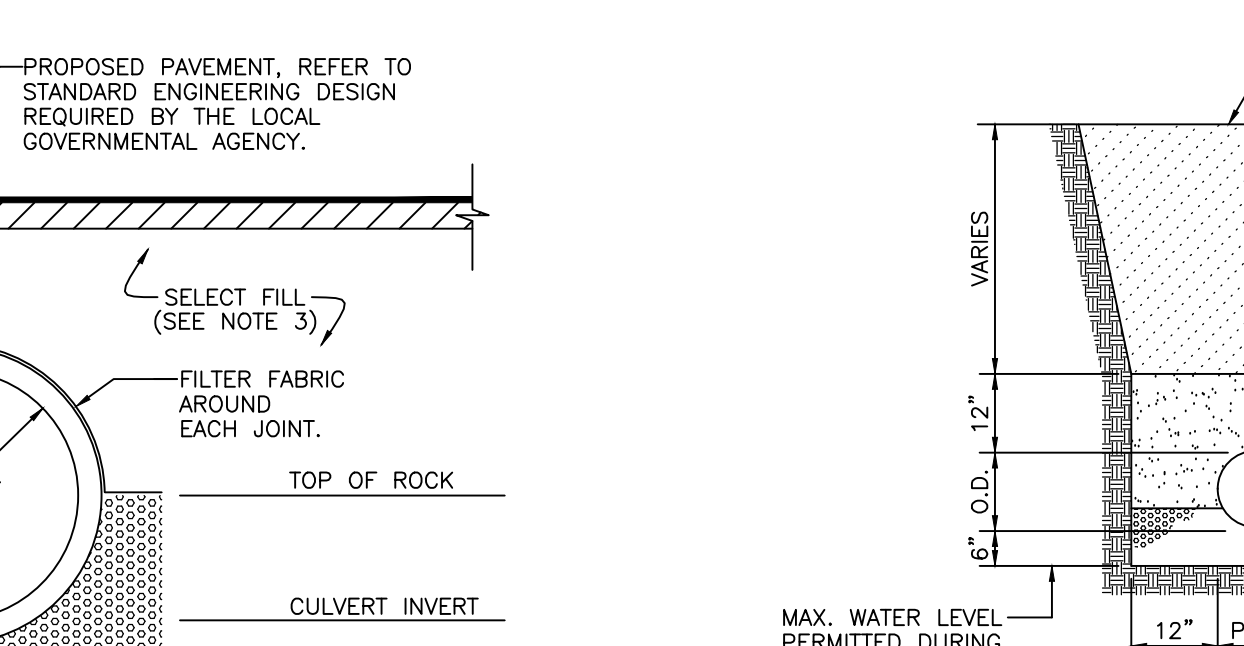
- PIPES SHALL TERMINATE 2' FROM END OF TRENCH (CAP ENDS OF PIPE) OR CONNECT TO ADDITIONAL CATCH BASINS AS REQUIRED.
- SIDES AND TOP OF TRENCH ONLY TO BE LINED WITH FILTER FABRIC. OVERLAP LINER A MINIMUM OF 2' AT THE TOP OF THE TRENCH.
- BALLAST ROCK SHALL BE FROM FRESH WATER, WASHED AND FREE OF DELETERIOUS MATTER.
- ALL EXFILTRATION TRENCHES SHALL HAVE A POLLUTION RETARDANT BAFFLE AT EACH CONNECTION POINT TO A STRUCTURE. (SEE POLLUTION RETARDANT BAFFLE DETAIL, EXHIBIT 16)
- GASKETS SHALL BE USED WITH RCP IN EXFILTRATION TRENCH.



**NOTES:**

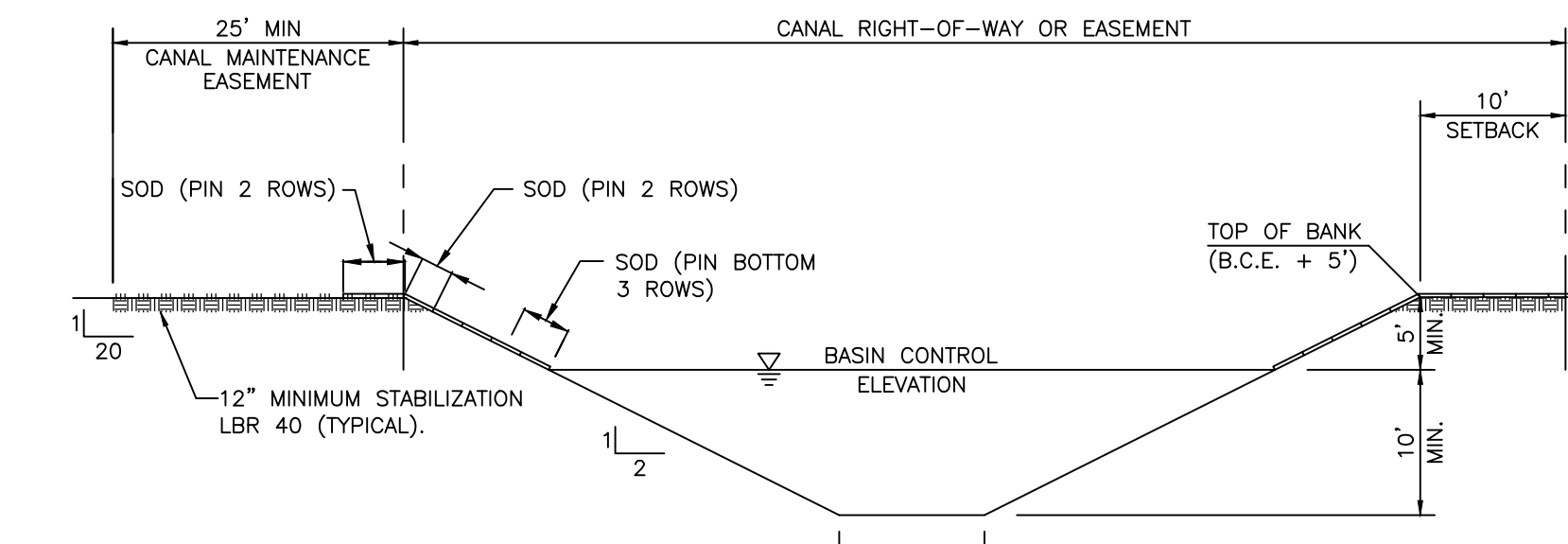
- WHERE SOIL CONDITIONS CANNOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE APPROVED MEANS OF CONSTRUCTION.
- SHEETING WILL BE REQUIRED AS DETERMINED IN THE FIELD.
- BACKFILL IN 6"-12" LAYERS, TO 98% COMPACTION, WITH MATERIALS NOT LARGER THAN 3 1/2".
- IF A CULVERT IS CORRUGATED ALUMINUM STRUCTURAL PLATE, FILTER FABRIC SHALL BE PLACED THE ENTIRE LENGTH OF THE PIPE.
- FILTER FABRIC SHALL BE PLACED THE FULL LENGTH OF ANY SECTION OF CULVERT UNDER ASPHALT.

BASIN No.	B.C.E. (FT-NGVD)	T.O.B. (FT-NGVD)	L (FT)	BASIN No.	B.C.E. (FT-NGVD)	T.O.B. (FT-NGVD)	L (FT)
S-1	2.50	6.50	16.00	S-8	3.50	6.00	10.00
S-2 & S-7	2.70	6.00	13.20	S-9 & S-10	4.00	6.50	10.00
S-3	3.00	6.50	14.00	S-12	3.00	6.50	14.00
S-4	3.50	6.00	10.00	S-13	3.00	6.50	14.00
S-5	4.00	6.00	8.00				
	4.25	6.50	9.00				
	4.50	6.50	8.00				



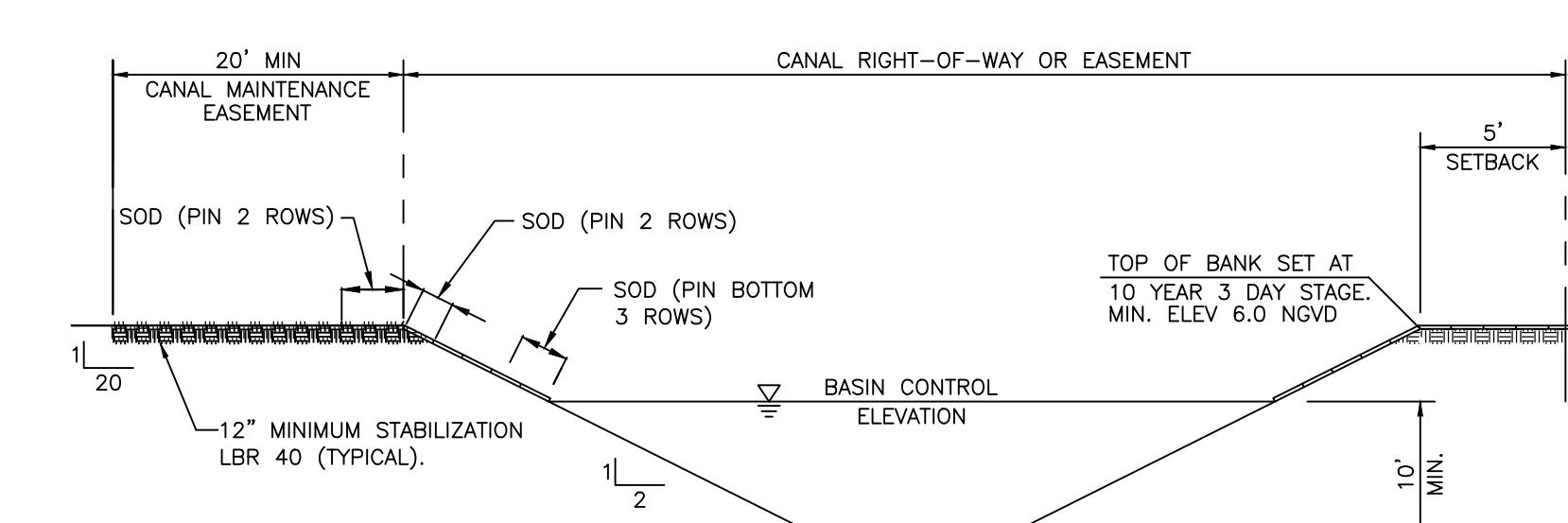
**NOTES:**

- TOP OF CAP TO BE 1' ABOVE THE BASIN CONTROL ELEVATION FOR LAKES AND 2' ABOVE BASIN CONTROL ELEVATION FOR CANALS, UNLESS OTHERWISE APPROVED BY THE DISTRICT.
- REQUIRED FOR ALL LAKE AND CANAL INTERCONNECTS.
- CONCRETE AND RIP-RAP ENDWALLS ARE ACCEPTED PER FDOT INDEX 250-255 AND INDEX 258 WITH EXCEPTIONS AS NOTED IN SECTION 2.15 OF THE SBDD DESIGN CRITERIA MANUAL.
- CHANNEL IN FRONT OF PIPE TO BE MIN 6" BELOW THE INVERT OF THE PIPE AND AT LEAST 1 1/2 TIMES THE DIA. OF THE PIPE TO THE DEEP CUT LINE AND CENTERED ON THE PIPE.



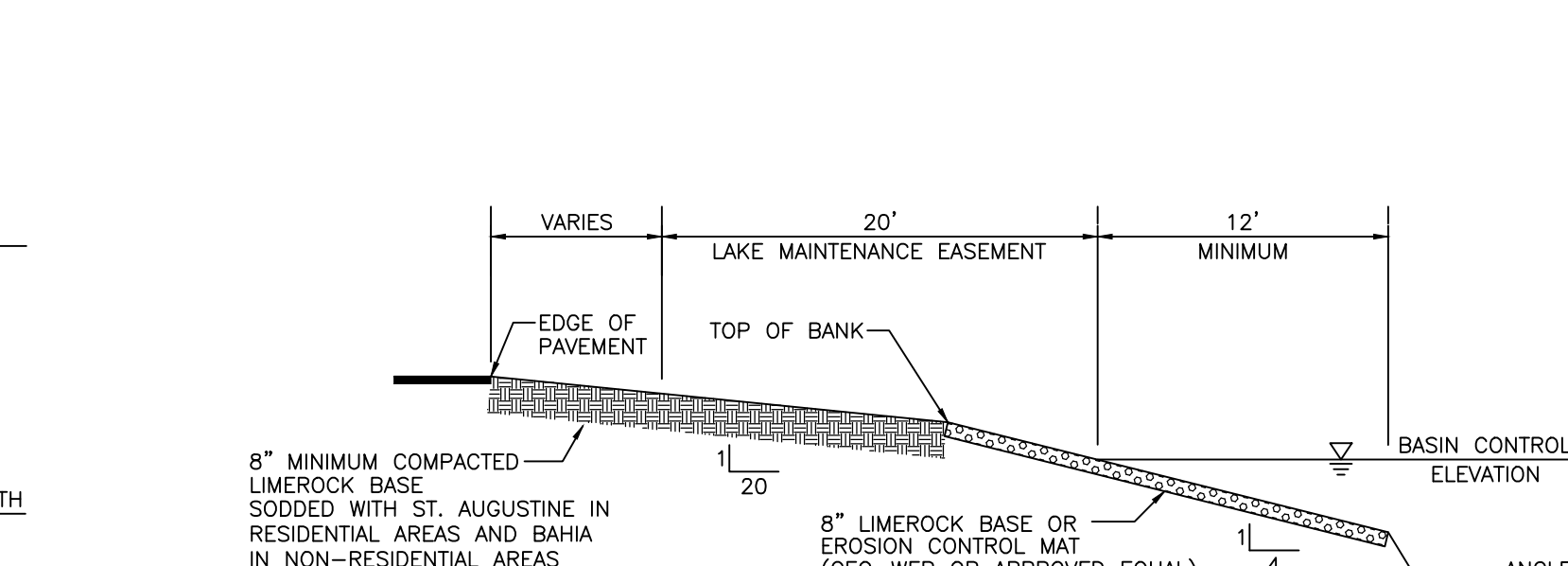
**NOTES:**

- ALL CANALS MUST HAVE A MINIMUM DEPTH OF 10' FROM CONTROL ELEVATION TO BOTTOM OF EXCAVATION
- MINIMUM CANAL BOTTOM IS 10' WIDE
- ALL PROPERTIES ADJACENT TO THE CANAL MUST SLOPE BANKS, SOD AND PROVIDE AS-BUILTS TO THE ABOVE DESIGN.
- THERE SHALL BE NO MUCK WITHIN THE CANAL RIGHT OF WAY AND MAINTENANCE EASEMENT.
- SOD PINS MUST BE WOOD.



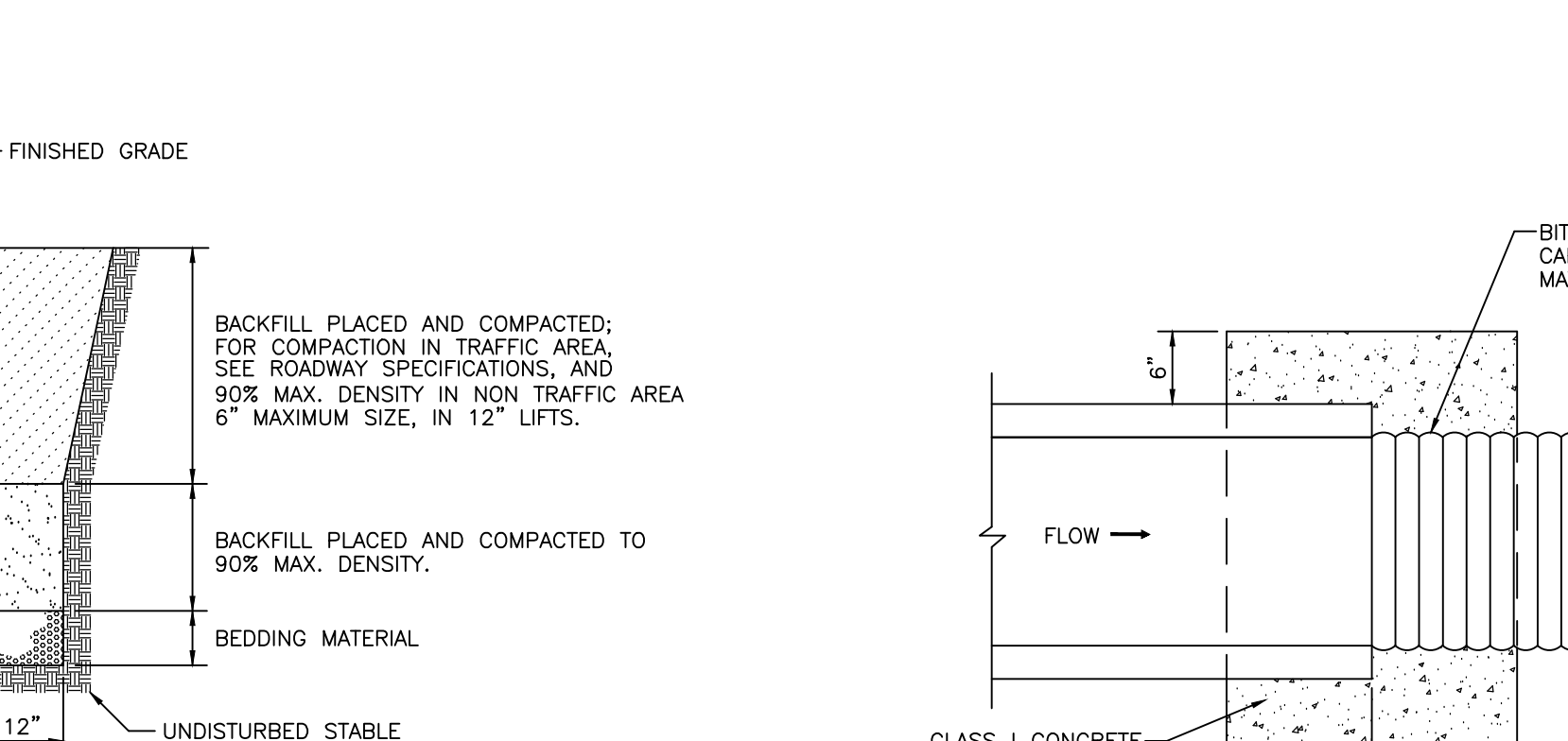
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- SOD PINS MUST BE WOOD.



**NOTES:**

- LOCATION OF BOAT RAMP(S) MUST BE IDENTIFIED, INSPECTED AND APPROVED BY SBDD PRIOR TO CONSTRUCTION
- SLOPE DETAILS AS OUTLINED ABOVE MUST BE INSPECTED AND APPROVED BY THE DISTRICT PRIOR TO INSTALLATION OF EROSION CONTROL MAT.
- UPON COMPLETION OF BOAT RAMP, DISTRICT MUST BE NOTIFIED FOR FINAL APPROVAL.
- BOAT RAMP MUST INTERSECT ADJACENT ROAD AND WATER BODY AT 90° ANGLE UNLESS OTHERWISE APPROVED.
- THE BOAT RAMP(S) MUST BE MINIMUM 12' WIDE.
- PROVIDE DROP CURB AT PAVEMENT WHERE APPLICABLE.
- FOR BOAT RAMP CONSTRUCTED ON AN SBDD CANAL A SLOPE OF 3:1 CAN BE USED FROM EDGE OF WATER UP TO TOP OF BANK.
- BOAT RAMPS SHALL BE CONSTRUCTED OF LIMEROCK OR EROSION CONTROL MAT, AT THE DISCRETION OF THE DISTRICT.
- IF SBDD OPTS FOR AN EROSION CONTROL MAT, THE MAT SHALL BE FILLED WITH AT LEAST 4" OF 3/4" ROCK.



**NOTES:**

- WHERE SOIL CONDITION CANNOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE APPROVED MEANS OF CONSTRUCTION.
- WHERE REQUIRED SHEETING AND SHORING SHALL BE IN ACCORDANCE WITH THE LOCAL GOVERNMENTAL AGENCY.
- MUCK OR OTHER UNSUITABLE MATERIAL SHALL BE COMPLETELY REMOVED.
- WHEN THE PIPE IS LAID IN THE PREPARED TRENCH, TRUE TO LINE AND GRADE, THE PIPE BARREL SHALL RECEIVE CONTINUOUS UNIFORM SUPPORT. WHERE NECESSARY, COURSE SAND, PEA ROCK OR 3/4" LIMESTONE GRAVEL SHALL BE USED TO PROVIDE UNIFORM BEDDING.
- JOINTS MAY BE REQUIRED TO BE WRAPPED AT THE DISCRETION OF THE DISTRICT AND THE SITE CONDITIONS.
- BACKFILL MATERIAL SHALL BE NON-COHESIVE AND NON-PLASTIC SOIL THAT IS FREE OF ALL DEBRIS, LUMPS, WOOD BROKEN PAVING OR ANY ORGANIC OR UNSUITABLE MATERIAL. BACKFILL MATERIAL PLACED WITHIN 12" OF THE PIPE SHALL CONTAIN NO ROCKS OR STONES LARGER THAN 3-1/2" IN DIAMETER. NO ROCKS OR STONES LARGER THAN 6" IN DIAMETER WILL BE PERMITTED IN THE REMAINING BACKFILL UNLESS OTHERWISE SPECIFIED.
- TRENCH BACKFILL SHALL BE COMPACTION TO NOT LESS THAN 90 PERCENT OF THE MAXIMUM DRY DENSITY DETERMINED BY AASHTO T-180. BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE TO THE STANDARD ENGINEERING DESIGN REQUIRED BY THE LOCAL GOVERNMENTAL AGENCY.