



State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

Department of Administrative Services

KIMBERLY K. HOOD
Executive Director

Division of Facilities Construction and Management

DAVID G. BUXTON
Director

ADDENDUM #1

Date: February 6, 2008

To: Contractors

From: Vic Middleton, Project Manager, DFCM

Reference: New Maintenance Building – Sand Hollow State Park
Division of Parks and Recreation – Hurricane, Utah
DFCM Project No. 07025510

Subject: **Addendum No. 1**

Pages	Addendum	1	page
	<u>Architect's Addendum</u>	<u>21</u>	<u>pages</u>
	Total	22	pages

Note: This Addendum shall be included as part of the Contract Documents. Items in this Addendum apply to all drawings and specification sections whether referenced or not involving the portion of the work added, deleted, modified, or otherwise addressed in the Addendum. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to Disqualification.

- 1.1 **SCHEDULE CHANGES** – There are no changes to the project schedule.
- 1.2 **GENERAL** – RB & G Engineering - Geotechnical Investigation and Drawings.

ADDENDUM NO. 1

Project: Sand Hollow State Park Maintenance Shed
Sand Hollow State Park
4405 West 3600 South
Hurricane, Utah 84737

Architect: James T. Dresslar Architect, L.L.C.
387 Park Lane
Moab, Utah 84532
Phone/Fax: 435-259-1155

The following information, clarifications, or corrections are hereby incorporated into the Bidding and Contract Documents of the referenced project. This information supercedes information previously referenced within Bidding and Contract Documents, as indicated. All proposals being submitted shall include modifications to the Work as follows:

SUMMARY:

1. RB & G Engineering issued minor revisions to the Geotechnical Investigation in the form of Addendums 1 and 2 regarding Probabilistic ground motion values in %g and clarifying the method of field density testing to be performed, as indicated below.
2. The Geotechnical Investigation issued by RB & G Engineering, dated January 2008 and bound within the Project Manual, specifies placement of engineered compacted fill, using existing native material, underneath all building foundations and revises the Seismic Site Class used in the original design from B to C. It also specifies procedures for site clearing, quality control testing, and flexible pavement design sections:
 - A. Provide engineered compacted fill at all building foundations as described within the original Geotechnical Investigation and as indicated within the attached drawings SK-1 and SK-2.
 - B. Scarify and excavate the site area as indicated below and as indicated within the original Geotechnical Investigation.
 - C. Revise the quantity of field density quality control testing at building foundations as indicated below and as indicated within the original Geotechnical Investigation.
 - D. Revise the depth of over-excavation and subsequent placement of engineered compacted fill as indicated within the original Geotechnical Investigation and attached drawings SK-1 and SK-2.
 - E. Revise flexible pavement design sections as indicated below and as indicated within the original Geotechnical Investigation.
3. Revise the hot mix asphalt grade as indicated below.
4. The area for disposal of excavation spoils was clarified at the pre-bid meeting. Locate spoils as indicated below.

5. Update the Statement of Special Inspection, Specification Section 014329 Code Required Special Inspections, as indicated below.
6. The Owner requested that the temporary site enclosure fence be omitted from the scope of work.
7. Provide mechanical testing and balancing services as indicated below.
8. The Utah State Fire Marshall requested that smoke detectors be revised to heat detectors as indicated below.
9. Various Comparable Product Requests are approved as indicate below.

PROJECT MANUAL SECTION 003132 GEOTECHNICAL DATA:

1. Incorporate revisions to the Geotechnical Investigation as indicated within the attached Geotechnical Investigation Addendum No's 1 & 2.

PROJECT MANUAL SECTION 014329 CODE REQUIRED SPECIAL INSPECTIONS:

1. Replace the specification bound within the project manual with the specification included herewith.

PROJECT MANUAL 015000 TEMPORARY FACILITIES AND CONTROLS:

1. Delete Sub-paragraph 3.3E. A temporary site enclosure fence is not required.

PROJECT MANUAL SECTION 033000 CONCRETE:

1. Replace Sub-paragraph 1.3A.1.a with the following:
 - a. Foundations: One test per one foot on center at spot footings; one test per 50 foot on center at continuous footings.
2. Replace Sub-paragraph 2.2A.1 with the following:
 1. Compressive Strength at 28 Days: 2,500 psi insulated concrete form walls and footings; 4,000 psi foundation walls, slab on metal deck and interior slabs on grade.

PROJECT MANUAL SECTION 075400 MECHANICALLY ATTACHED THERMOPLASTIC MEMBRANE ROOFING:

1. Versico Roofing Systems "Versiweld" is an approved product.
2. Johns Manville "JM TPO-60" is an approved product.

PROJECT MANUAL SECTION 083613 - SECTIONAL OVERHEAD DOORS:

1. Replace Sub-paragraph 2.1 A.2 with the following:
 2. Wayne Dalton Corporation, Salt Lake City, UT, (801) 975-0889 "Thermospan 150".

PROJECT MANUAL SECTION 087100 DOOR HARDWARE:

1. Dorma Door Controls, Inc. is an approved manufacturer for locksets.

PROJECT MANUAL SECTION 102800 – TOILET ACCESSORIES:

1. American Accessories is an approved manufacturer.

PROJECT MANUAL SECTION 311000 SITE CLEARING:

1. Replace Sub-paragraph 3.2A with the following:
 - A. Remove obstructions, the upper four inches of the soil profile, including shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out obstructions and grubbing roots.

PROJECT MANUAL SECTION 312000 EARTH MOVING:

1. Replace the specification bound within the project manual with the specification included herewith.

PROJECT MANUAL SECTION 312316 EXCAVATION:

1. Revise the cross reference indicated at Sub-paragraph 12.a.2 from Specification No. 23 to “Section 312323”.

PROJECT MANUAL SECTION 312323 EARTH FILL:

1. Replace Sub-paragraph 10 b. with the following:
 - b. Compacted Backfill
 1. This item shall consist of furnishing and installing the on-site silty sand required in both the HMA and UTBC parking areas, along with the entrance access roads as shown on the drawings.
 2. The upper 8 inches of the natural material will be scarified and re-densified to an in-place unit weight equal to 90% of maximum laboratory density, as determined by the ASTM D 1557.
 3. Measurement will not be made. Payment will be made at the contract unit price and shall be full compensation for all labor, material, equipment, and all other items necessary and incidental to complete the work.

PROJECT MANUAL 321216 ASPHALT PAVING (HOT MIXED ASPHALT):

1. Revise Sub-paragraph heading 8.a to read as follows:
 - a. 2 1/2-inches Hot Mix Asphalt (HMA) (AC-30) (1/2-inch Max).
2. Revise the reference to HMA grade in Sub-paragraph 8.a.4 from PG58-22 to “AC-30”.

PROJECT MANUAL 321600 SITE CONCRETE FOR MINOR STRUCTURES

- 1. Revise the cross reference indicated at Sub-paragraph 24.a.4 from Specification No. 23 to "Section 312323".

DRAWING A0.4:

- 1. Replace the applicable Structural Basis of Design references with the following:
 - 1. SOIL BEARING CAPACITY: 2,500 PSF
 - 5. SEISMIC DESIGN INFORMATION:
 - A. SEISMIC DESIGN CATEGORY: C
 - B. I: 1.0
 - C. R: 4.0
 - D. SDS: .463
 - E. SITE CLASS: C
 - F. BASIC WIND SPEED: 90 MPH
 - 6. MINIMUM FROST DEPTH BELOW FINISH GRADE: 18"

DRAWING A9.4:

- 1. Revise Detail 3/A9.4 to include engineered compacted fill at areas of all building foundations per the attached drawings SK-1 and SK-2.

DRAWING C2:

- 1. Add the following note at the southeast corner of the site, just south of the south drive approach: "EXCAVATION DISPOSAL AREA". This area is allocated for disposal of excavation spoils.
- 2. Add the following note at each double swing vehicle access gate: "24' ATHENA WROUGHT IRON GATE BY AMAZING GATES, OR APPROVED EQUAL."
- 3. Add the following note at each single pedestrian access gate: "4' ARCHE WALK THRU GATE BY AMAZING GATES, OR APPROVED EQUAL."

DRAWING C3:

- 1. Replace the drawing issued within bidding documents with the revised attached drawing C3.

DRAWING S1.0.1:

- 1. Revise foundation design information as follows:
 - A. Foundation design is based on minimum criteria set forth in the project Geotechnical Investigation performed by RB&G Engineering Inc, dated January 2008.
 - B. Foundations and retaining walls have been designed for the following design pressures:
 - 1. Soil Bearing Pressure 2,500 psf.
 - 2. Bottom of all exterior footings shall bear a minimum 1'-6" below final exterior grade for frost protection.
- 2. Revise Design Criteria as follows:

A. Seismic Loading:

1. Criteria Selection: ASCE 7-05, Section 12.14, Simplified Alternative Structural Design Criteria for Simple Bearing Wall or Building Frame Systems:
 - a. Seismic Importance Factor (I_e): 1.0
 - b. Seismic Use Group: I
 - c. Mapped Spectral Response Accelerations (%g): SS = 59.9
 - d. Site Class: C
 - e. Spectral Response Coefficients: SDS = 0.463
 - f. Seismic Design Category: C
 - g. Main Seismic Force Resisting System: Ordinary Reinforced Concrete Shear Walls.
 - h. Response Modification Factor (R): 4.0
 - i. Seismic Design Base Shear: 92 k

DRAWING M0.1:

1. Include the following specification section regarding mechanical testing and balancing:

Section 15990:

Obtain the services of an independent Test and Balance company to fully balance and adjust and set up the operation of the system, in accordance with AABC or NEBB Standards. Record all data and provide a written report. Test, adjust, balance, and verify correct operation of the following mechanical systems:

- Supply air systems
- Return air systems
- Exhaust air systems
- Evaporative coolers
- CO exhaust systems
- Unit heater systems

PLUMBING AND MECHANICAL COMPARABLE PRODUCT REQUESTS:

1. The following manufacturers/products are approved for use on this project, subject to compliance with specifications and drawings: Note that physical size, and space constraints are part of the requirements. For visible products, appearance will be a consideration.

A. Furnace and Condensing unit:

1. Carrier
2. Trane
3. York
4. Bryant
5. Lennox
6. Payne
7. Day & Night

- 8. Rheem

- B. Unit Heaters:
 - 1. Airtherm
 - 2. Dunham-Bush
 - 3. McQuay
 - 4. Modine
 - 5. Reznor
 - 6. Sterling.
 - 7. Ruffneck.

- C. Exhaust Fans:
 - 1. Acme.
 - 2. Cook
 - 3. New York Blower.
 - 4. Penn. Ventilator
 - 5. Greenheck
 - 6. Trane Co.
 - 7. Twin City
 - 8. Carnes
 - 9. ILG
 - 10. Jenn.
 - 11. Breidert.
 - 12. Broan.

- D. Evaporative Coolers:
 - 1. Essicks.
 - 2. Arvin.
 - 3. Champion.
 - 4. Artic Circle.

- E. Vibration Isolation:
 - 1. Amber Booth
 - 2. Mason
 - 3. Vibration Mounting and Control
 - 4. Kinetics
 - 5. Bramec

- F. Grilles, Diffusers, Louvers:
 - 1. Krueger
 - 2. Anemostat
 - 3. Carnes
 - 4. Titus
 - 5. Tuttle & Bailey
 - 6. Price
 - 7. Precision Air Peoducts
 - 8. Metal-Aire.
 - 9. Nailor
 - 10. J & J.
 - 11. Airolite
 - 12. American Warming & Ventilating
 - 13. Arrow United

14. Industrial Louvers
15. Louvers & Dampers
16. Ruskin
17. Greenheck
18. Cesco.
19. United.
20. C & S.
21. Daniel
22. Dowco.

G. Insulation:

1. Johns Manville Insulations.
2. Certainteed
3. Knauf
4. Owens-Corning
5. Schuller International
6. Armstrong AP Armaflex.
7. ADA Compliant Fixtures:
 - a. Truebro
 - b. Plumberex Pro-2000
 - c. Mc Guire prowrap

H. Test & Balance:

1. BTC Co. Salt Lake City, Utah. (801) 974-5911. Bob Cherrington.
2. RS Analysis, Salt Lake City, Utah. (801) 255-5015. Derek Shupe.
3. Payson Sheetmetal, Payson, Utah. (801) 465-3018. Dale Barnett.
4. Test & Balance, Inc., West Jordan, Utah. (801) 288-0889. Lyle Cazier.
5. Diamond Test & Balancing. Salt Lake City, Utah. (801) 282-3480. Jim Halcomb.
6. Certified Test & Balancing. Salt Lake City, Utah. (801) 446-8031. Ray Coleman.
7. Danis Test & Balance, New Harmony, Utah. (435) 867-0158. Joe Danis.
8. Temp-Co Services, St. George, Utah. (435) 559-7904. Allen Washburn.

I. Water Heaters:

1. Lochinvar
2. PVI Industries
3. Ruud
4. Rheem
5. A.O. Smith
6. Laars

J. Plumbing Fixtures and Accessories:

1. Water Closets & Urinals
 - a. Briggs.
 - b. American Standard.
 - c. Kohler.
 - d. Crane.
 - e. Eljer.
 - f. Gerber.
2. Flush Valves:
 - a. Delany 402-1 or equal.
 - b. Sloan Regal or Royal.
 - c. Zurn.

3. Lavatories
 - a. Briggs.
 - b. American Standard.
 - c. Crane.
 - d. Eljer.
 - e. Kohler.
 - f. Gerber.
4. Emergency Shower
 - a. Speakman.
 - b. Bradley.
 - c. Haws

DRAWING E1.1

1. Change the four smoke detectors in the shop to heat detectors.

DRAWING E1.2

1. Change the two smoke detectors in the mezzanine to heat detectors.

END OF ADDENDUM NO. 1

January 14, 2008

Johansen & Tuttle Engineering
Box 487
Castle Dale, UT 84513
jt@etv.net

Subject: Sand Hollow State Park Maintenance Shed
Geotechnical Investigation
Addendum No. 1

Gentlemen:

Included herewith are 5 copies of Addendum No. 1 to the January 9, 2008 Geotechnical Investigation report for the proposed Maintenance Shed to be located at the Sand Hollow State Park in Washington County, Utah. Please insert in your copies of the report.

Sincerely,

RB&G ENGINEERING, INC


Bradford E. Price, P.E.



bep/jal

**SAND HOLLOW
STATE PARK MAINTENANCE SHED
Washington County, Utah**

Geotechnical Investigation

**ADDENDUM NO. 1
*January 14, 2008***

The following changes are made to Section V.C. (page 6) of the January 9, 2008 Geotechnical Investigation report for the Sand Hollow State Park Maintenance Shed in Washington County, Utah:

Probabilistic peak ground acceleration (PGA) values are tabulated below:

PGA	Probabilistic ground motion values in %g.	
	10%PE in 50 yr	2%PE in 50 yr
PGA	9.5	25.0
0.2 sec SA	22.4	59.9
1.0 sec SA	7.1	19.2

January 16, 2008

Johansen & Tuttle Engineering
Box 487
Castle Dale, UT 84513
jt@etv.net

Subject: Sand Hollow State Park Maintenance Shed
Geotechnical Investigation
Addendum No. 2

Gentlemen:

Included herewith are 5 copies of Addendum No. 2 to the January 9, 2008 Geotechnical Investigation report for the proposed Maintenance Shed to be located at the Sand Hollow State Park in Washington County, Utah. Please insert in your copies of the report.

Sincerely,

RB&G ENGINEERING, INC.


Bradford E. Price, P.E.



bep/jal

**SAND HOLLOW
STATE PARK MAINTENANCE SHED
Washington County, Utah**

Geotechnical Investigation

ADDENDUM NO. 2

January 16, 2008

The following changes are made to Section V.A. (page 5) of the January 9, 2008 Geotechnical Investigation report for the Sand Hollow State Park Maintenance Shed in Washington County, Utah:

The sentence which reads:

“This will require over excavation of 1.5 to 3.5 feet.”

Should be changed to read:

“This will require over excavation of 2.5 to 5 feet.”

The following sentence shall be added to the end of the second paragraph:

Field density tests shall be performed in accordance with procedures outlined in ASTM D 6938 (nuclear method) or ASTM D 1556 (sandcone method).

SECTION 014329 – CODE REQUIRED SPECIAL INSPECTIONS (REV 1)

PART 1 - GENERAL

1.1 RELATED SECTIONS

- A. 014000 Quality Requirements

1.2 SECTION REQUIREMENTS

- A. Basic Seismic Force Resisting System: Ordinary reinforced insulated concrete form and cast in place concrete shear walls, footings and the north cold formed metal framed wall under the mezzanine.
- B. Submittals: Each contractor responsible for the construction of a main wind or seismic force resisting system, designated seismic system or a wind or seismic resisting component listed in this section shall submit a written statement of responsibility to the building official and the owner prior to the commencement of work on the system or component. The contractor's statement of responsibility shall contain the following:
 - 1. Acknowledgement of awareness of the special requirements contained in the statement of special inspections;
 - 2. Acknowledgment that control will be exercised to obtain conformance with the construction documents approved by the building official;
 - 3. Procedures of exercising control within the contractor's organization, the method and frequency of reporting and the distribution of the reports; and
 - 4. Identification and qualifications of the person(s) exercising such control and their positions(s) in the organization.
- C. Special Inspection services are required to verify compliance with requirements specified or indicated. Unless otherwise noted, the Owner will provide these services. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Special inspection services are specified in this section and are required by authorities having jurisdiction and shall be performed by independent testing agencies.
 - 2. Contractor is responsible for scheduling times for tests, inspections, and obtaining samples and notifying testing agency.
 - 3. Retesting and Reinspecting: Contractor shall pay for additional testing and inspecting required as a result of tests and inspections indicating noncompliance with requirements.
- B. Special inspectors shall keep records of inspections. The special inspector shall furnish inspection reports to the building official, and to the registered design professional in responsible charge. Reports shall indicate that work inspected was done in conformance to approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the building official and to the registered design professional in responsible charge prior to the completion of that phase of the work. A final report documenting required special inspections and correction of any discrepancies noted in the inspections shall be

submitted at a point in time agreed upon by the permit applicant and the building official prior to the start of work.

- C. Inspection of fabricators: Where fabrication of structural load-bearing members and assemblies is being performed on the premises of a fabricator's shop, special inspection of the fabricated items shall be required by this section.
1. Fabrication and implementation procedures. The special inspector shall verify that the fabricator maintains detailed fabrication and quality control procedures that provide a basis for inspection control of the workmanship and the fabricator's ability to conform to approved construction documents and referenced standards. The special inspector shall review the procedures for completeness and adequacy relative to the code requirements for the fabricator's scope of work.
 - A. Exception: Special inspections required by this section are not required where the work is done on the premises of a fabricator registered and approved to perform such work without special inspection. Approval shall be based upon review of the fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by an approved special inspection agency. At completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building official stating that the work was performed in accordance with the approved construction documents.
- D. Steel Construction:
1. Welding: Welding inspection shall be in compliance with AWS D1.1. The basis for welding inspector qualification shall be AWS D 1.1.
 2. Details: The special inspector shall perform an inspection of the steel frame to verify compliance with the details shown on the approved construction documents, such as bracing, stiffening, member locations and proper application of joint details at each connection.
 3. Material verification of structural steel.
 - A. Identification markings to conform to AWS specification in the approved construction documents per ASTM A 6 or ASTM A 568.
 - B. Manufacturer's certified mill test reports.
 4. Material verification of weld filler materials.
 - A. Identification markings to conform to AWS specification in the approved construction documents per AISC 360, Section A3.5.
 - B. Manufacturer's certificate of compliance required.
 5. Periodic inspection of floor and deck welds and single fillet welds < 5/16 inch.
 6. Periodic inspection of steel stairs and railing systems and a visual inspection of wall welds is made prior to completion or prior to shipment of shop welding.
 7. Periodic inspection of steel frame joint details for compliance with approved construction documents.
- E. Insulated Concrete Form, Footing and Mezzanine Slab Concrete:
1. Periodic inspection of reinforcing steel per ACI 318: 3.5, 7.1-7.7.
 2. Periodic inspection verifying use of required design mix per ACI 318: Ch. 4, 5.2-5.4.
 3. Continuous inspection that at the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.
 4. Continuous inspection of concrete placement for proper application techniques.
 5. Periodic inspection for maintenance of specified curing temperature and techniques.
 6. Periodic inspection of formwork for shape, location and dimensions of the concrete member being formed.

7. In the absence of sufficient data or documentation providing evidence of conformance to quality standards for materials in Chapter 3 of ACI 318, the building official shall require testing of materials in accordance with the appropriate standards and criteria for the material in Chapter 3 of ACI 318.

F. Soils:

1. During fill placement, the special inspector shall determine that proper materials and procedures are used in accordance with the provisions of the approved soils report.
2. Periodically verify materials below footings are adequate to achieve the design bearing capacity.
3. Periodically verify excavations are extended to proper depth and have reached proper material.
4. Periodically perform classification and testing of controlled fill materials.
5. Continuously verify use of proper materials, densities and lift thicknesses during placement and compaction of controlled fill.
6. Prior to placement of controlled fill periodically observe subgrade and verify that site has been prepared properly

G. Cold Formed Steel Framing:

1. Periodic special inspection is required during welding operation of elements of the seismic force resisting system. Periodic special inspection is required for screw attachment, bolting, anchoring and other fastening of components within the seismic force resisting system, including struts, braces, and hold-downs.

H. Mechanical and Electrical Systems:

1. Periodic special inspection is required during installation of piping systems intended to carry flammable, combustible or high toxic contents and their associated mechanical units.

END OF SECTION 014329

SECTION 312000 - EARTH MOVING (REV 1)

PART 1 - GENERAL

1.1 RELATED SECTIONS

- A. 312316 Excavation
- B. 003132 Geotechnical Report

1.2 SECTION REQUIREMENTS

- A. Unauthorized excavation consists of excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.
- B. Do not interrupt existing utilities serving facilities occupied by Owner or others unless permitted in writing by the Owner's Representative and then only after arranging to provide temporary utility services according to requirements indicated.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Satisfactory Soil: ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM; free of rock or gravel larger than 2 inches in any dimension, debris, waste, frozen materials, vegetation, or other deleterious matter.
- B. Unsatisfactory Soil: ASTM D 2487 Soil Classification Groups GC, SC, ML, MH, CL, CH, OL, OH, and PT.
- C. Backfill: Satisfactory soil materials.
- D. Fill: On-site silty sand, moisture conditioned, placed in lifts and compacted per the geotechnical report.
- E. Base Course (Un-treated Base Course): Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand, Utah State Department of Transportation 1 inch gradation specification, with 100 percent passing a 1 inch sieve, 79 – 91 percent passing a ½" sieve, 49 – 61 percent passing a number 4 sieve, 27 – 35 percent passing a number 16 sieve, and 7 – 11 percent passing a number 200 sieve. Alternatively, ¼" washed chip under-slab fill material may be used if sides of fill are contained.
- F. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.

- G. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-inch sieve and 0 to 5 percent passing a No. 200 sieve. Material passing a No. 200 sieve shall have a plasticity index of less than 6.

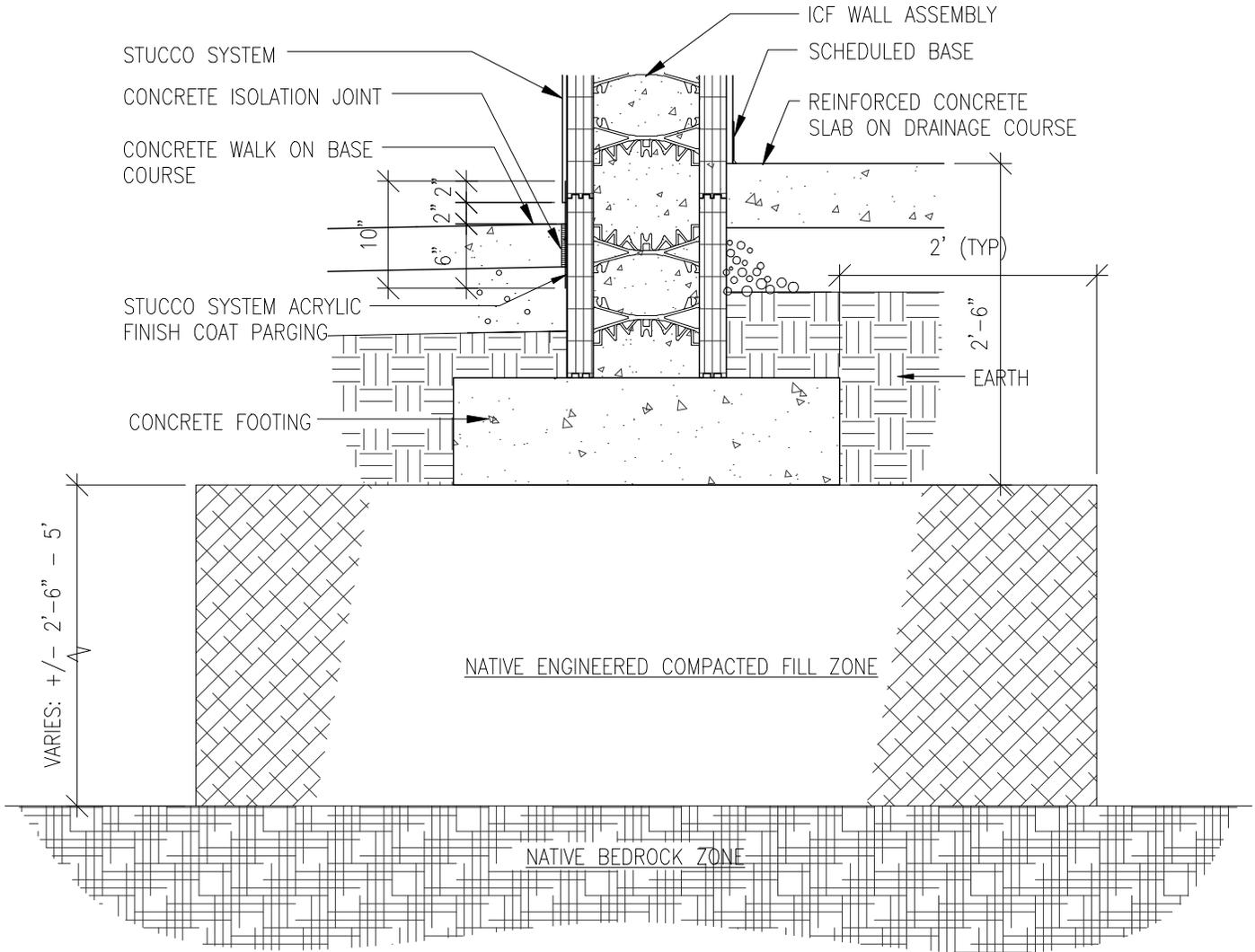
PART 3 - EXECUTION

3.1 EARTHWORK

- A. Protect and maintain erosion and sedimentation controls, which are specified in Division 31 Section "Site Clearing," during earthwork operations.
- B. Protect subgrades and foundation soils from softening and damage by water, freezing temperatures, or frost.
- C. Explosives: Do not use explosives.
- D. Excavate to subgrade elevations regardless of character of materials and obstructions encountered.
- E. Excavate for structures, building slabs, pavements, and walkways. Trim subgrades to required lines and grades:
 - 1. At Building Foundations: Over-excavate existing material to the layer of existing bedrock and place moisture conditioned fill from bedrock to bottom of foundations as indicated within the geotechnical report.
 - 2. Beneath Pavements, Floor Slabs and Walkways: Scarify, moisture condition and compact existing material as indicated within the geotechnical report.
- F. Utility Trenches: Excavate trenches to indicated slopes, lines, depths, and invert elevations. Maintain 12 inches of working clearance on each side of pipe or conduit.
 - 1. Place, compact, and shape bedding course to provide continuous support for pipes and conduits over rock and other unyielding bearing surfaces and to fill unauthorized excavations.
 - 2. Place and compact initial backfill of satisfactory soil material or base course material, free of particles larger than 1 inch, to a height of 12 inches over the utility pipe or conduit. Place and compact final backfill of satisfactory soil material to final subgrade.
- G. Plow strip or break up sloped surfaces steeper than 1 vertical to 4 horizontal to receive fill.
- H. When subgrade or existing ground surface to receive fill has a density less than that required for fill, break up ground surface, pulverize, moisture-condition or aerate soil, and recompact.
- I. Place backfill and engineered compacted fill in layers as indicated within the geotechnical report. Compact each layer under foundations and building slabs to 95% of maximum dry unit weight according to ASTM D 1557; 92% under exterior slabs, walkways, curb, gutter and pavements; elsewhere to 90 percent.

- J. Grade areas to a smooth surface to cross sections, lines, and elevations indicated. Grade lawns, walkways, and unpaved subgrades to tolerances of plus or minus 1 inch and pavements and areas within building lines to plus or minus 1/2 inch.
- K. Under pavements and walkways, place base course material on prepared subgrades and compact all bases as indicated within the geotechnical report, providing required grades, lines, cross sections, and thicknesses.
- L. Under interior slabs-on-grade, place drainage course on prepared subgrade and compact to required cross section and thickness by means of four passes with a smooth drum 5-ton vibratory roller or equivalent.
- M. Allow testing agency to inspect and test each subgrade and each fill or backfill layer and verify compliance with requirements.
- N. Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION 312000



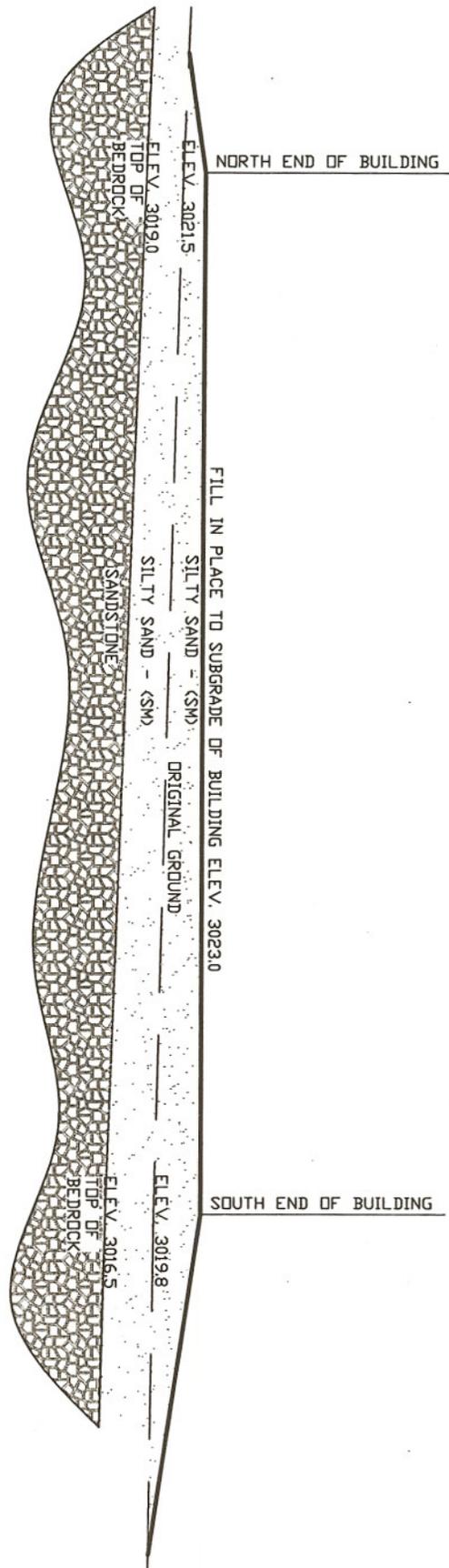
**JAMES T. DRESSLAR
ARCHITECT, L.L.C.**

387 PARK LANE
MOAB, UTAH 84532

1/14/08
SAND HOLLOW MAINTENANCE SHED

ADDENDUM NO. 1
SK-1 ©

SOIL INVESTIGATION DETAIL
NORTH VIEW



SK-2



Johansen & Tuttle Engineering Inc.
 BOX 487, CASTLE DALE, UTAH 84513, (435) 381-2523, FAX 381-2522, email jt@etv.net

**SAND HOLLOW MAINTENANCE BUILDING
SOIL INVESTIGATION DETAIL**

DESIGNED	CHECKED	DATE	BY
DRAWN LMS	CHECKED HRT	8-98	
SURVEYED	CHECKED		
B.O.M.	CHECKED		

PROJECT NO.
1

CROSS SECTION

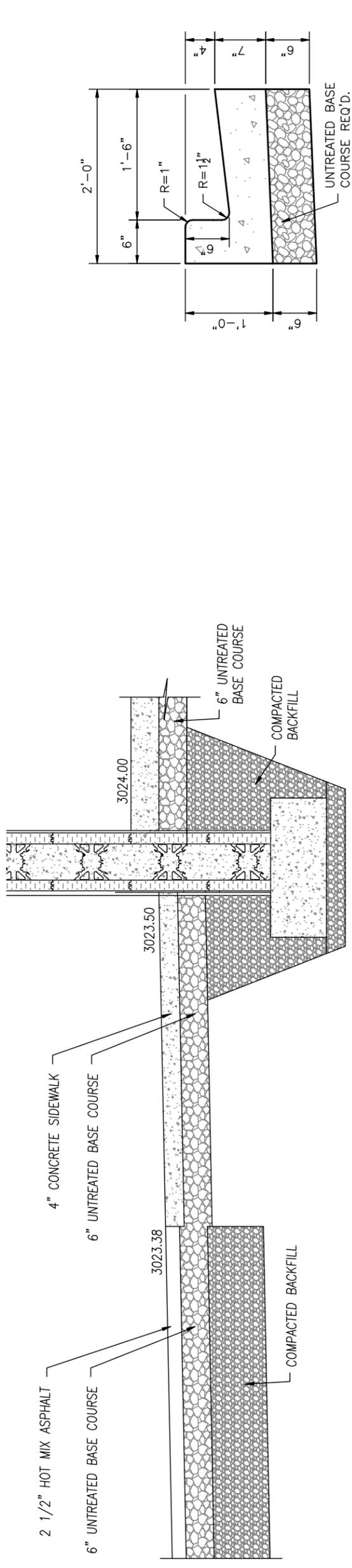
ISSUE / REVISIONS:	TO CONSULTANTS 9/10/07
CD REVIEW 11/2/07	DFCM REVIEW 11/30/07
CDD 1/2/08	ADENDUM #1 1/17/08

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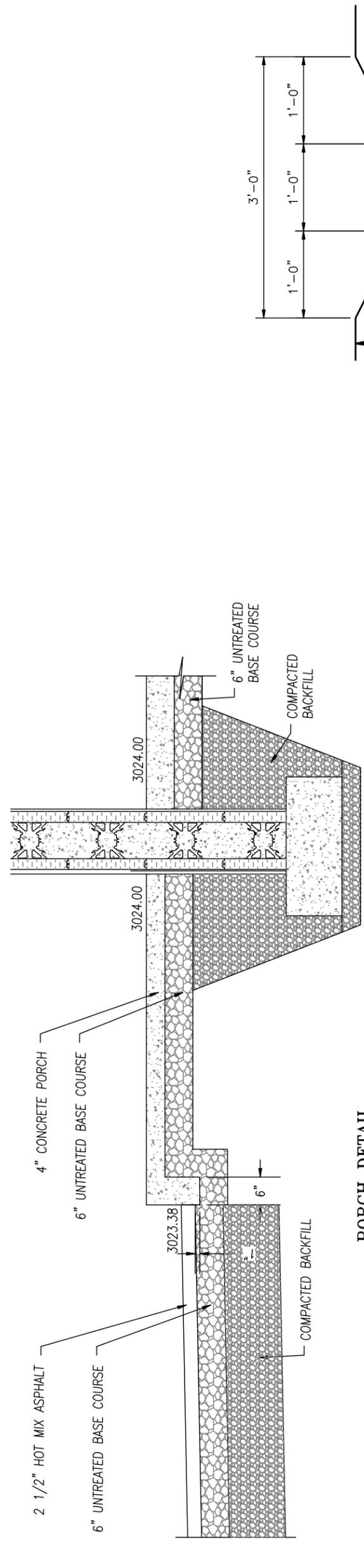
DETAIL SHEET		DATE:	
PROJECT NO.:	DFC 0713	DRAWN BY:	DMF
PROJECT:		STATE OF UTAH DIVISION OF PARKS AND RECREATION SAND HOLLOW STATE PARK MAINTENANCE SHED DFCM PROJECT NO. 07025510	

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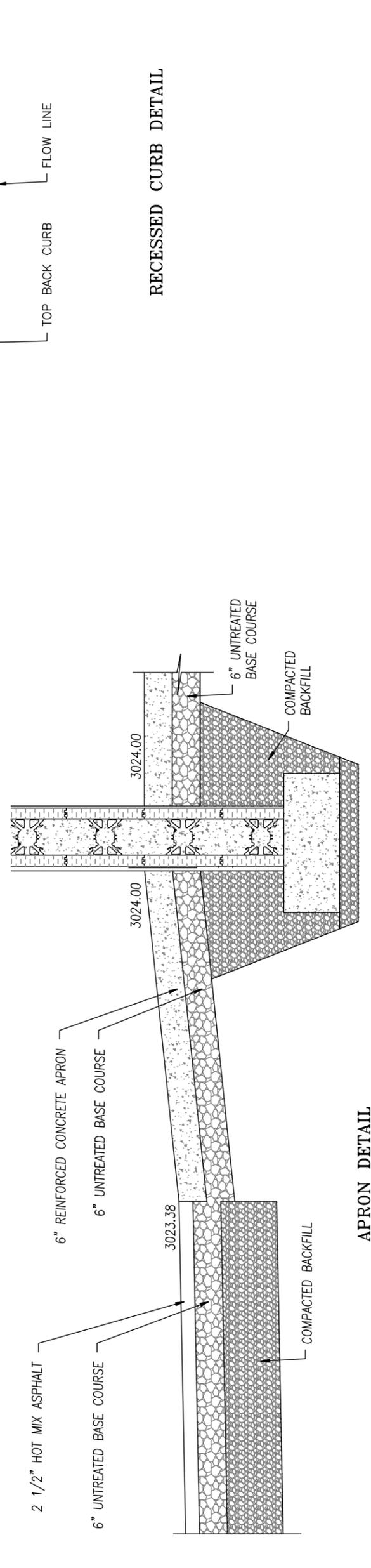
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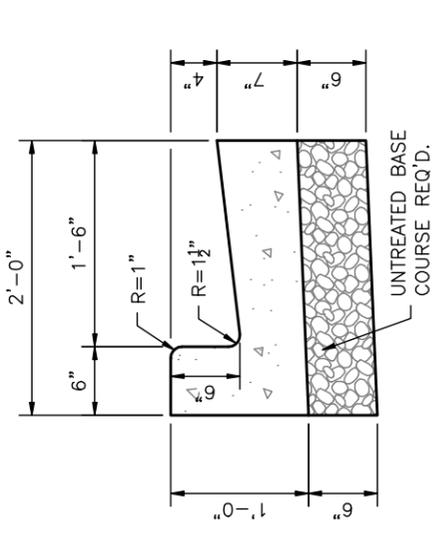
SIDEWALK DETAIL



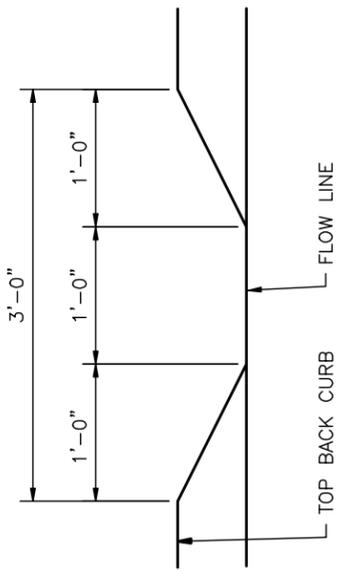
PORCH DETAIL



APRON DETAIL



CURB and GUTTER DETAIL



RECESSED CURB DETAIL