

### 3.9 SCHEDULE

OPERATION	FREQUENCY												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL
Prune Trees (NOT CRAPE MYRTLES)											1		1
Prune Crape Myrtle Trees		1											1
Weed all Site Areas (Pre–Emergent application)		1											1
Lawn Fertilization			1	1	1	1	1	1	1	1	1		9
Lawn SuperSeaweed Application			1			1			1				3
Lawn Mowing	1		1	1	4	4	4	4	1		1		22
Tree and Planting Bed Fertilization			1	1	1	1	1	1	1	1	1		9
Weed all Site Areas (Post–emergent application and by hand if needed)	1		1	1	4	4	4	4	1		1		22
Mulch/Aerate all Site Areas	1			1	1				1				3
Tree Sucker Removal				1	1	1	1	1					5
Insect Control (Inspect)			1		1		1		1		1		5
Litter Pickup (General Clean up)	2	2	4	4	4	4	4	4	4	4	2	2	40
Disease Control (Inspect)			1		1		1		1		1		5
Edging saucers, planting beds, walks	1		1	1	4	4	4	4	1		1	1	22
1 hr. Deep Watering	1	1	1	1	1	4	4	4	4	1	1	1	128hrs
Irrigation System Maintenance	1	1	1	1	1	1	1	1	1	1	1	1	12

**END OF SECTION 32 01 90**

- A. Furnish and install Hunter Solar Sync Sensor, manufactured by the Hunter Corporation, 1940 Diamond Street, San Marcus, California, 92069, telephone number 1-800-733-2823. Coordinate with the General Contractor and Landscape Architect or Owner's Representative for location prior to installation.

## 2.11 OTHER MATERIALS

- A. All other materials not specifically described, such as air relief valves and automatic drain valves, but required for a complete and proper irrigation system installation, shall be new, first quality of their respective kinds and subject to the approval of the Landscape Architect or Owner's Representative.

## 2.12 TREE GATOR BAGS

- A. Provide 'Treegator Slow Release Watering Bags' for Contractor provided trees. Provide a double bag set up for trees 4 inch to 8 inch caliper. Bags should be empty within 5 to 9 hours and then removed and stored off site. On-site storage shall only be allowed with written Owner's Representative approval. Treegator bags are available from (but not limited to) San Jacinto Environmental. Telephone number: 713-957-0909. Contractor shall be responsible for method to fill bags with water.

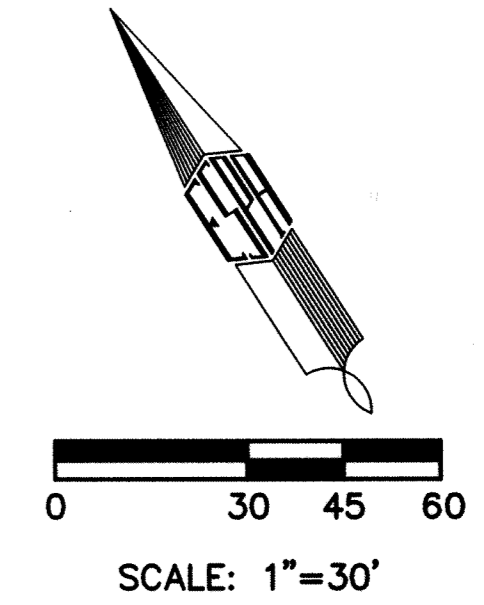
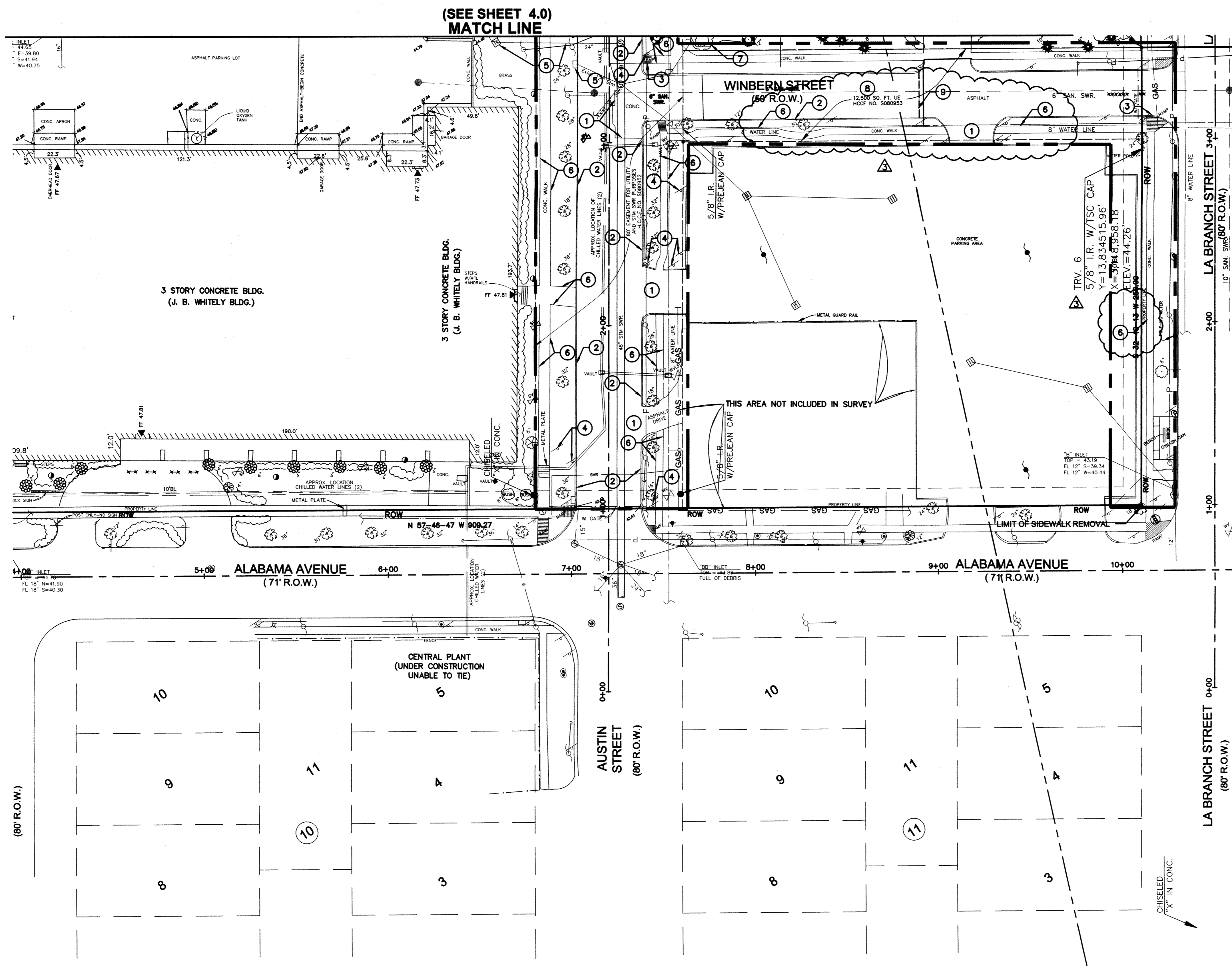
## PART 3 - EXECUTION

### 3.1 SURFACE CONDITIONS

- A. Prior to work of this Section, carefully inspect the installed work of other trades and verify that such work is complete to the point where this installation may properly commence.
- B. Verify that the irrigation system will be installed in strict accordance with pertinent codes and regulations, the original design, the referenced standards and the manufacturer's recommendations.

### 3.2 FIELD CONDITIONS

- A. Verify field conditions including property lines, rights-of-ways, tract boundaries, easements, landscape setback lines and any other legal or physical element as required for the successful completion of the project.
- B. In the event of discrepancy, immediately notify the Landscape Architect or Owner's Representative. Do not proceed with installation in areas of discrepancy until such discrepancies have been fully resolved.
- C. Make necessary measurements in the field to insure precise fit of items in accordance with the original design as are commonly encountered underground and take proper precautions not to damage or disturb such improvements. If a conflict exists between such obstacles and the proposed work, promptly notify the Landscape Architect or



- LEGEND**
- POST
  - MONITOR WELL
  - VALVE
  - SIGN
  - CONCRETE COLUMN
  - POWER POLE
  - LIGHT POLE
  - H.L. & P. MANHOLE
  - SANITARY MANHOLE
  - S.W.B.T. MANHOLE
  - STORM MANHOLE
  - UNIDENTIFIED MANHOLE
  - SAMPLE WELL
  - WATER METER
  - WATER VALVE
  - TELEPHONE PEDESTAL
  - ELECTRIC BOX
  - GRATE INLET
  - CURB INLET
  - FLUSH VALVE
  - GUY ANCHOR
  - SANITARY CLEAN OUT
  - OVER HEAD ELECTRIC
  - WATER LINE
  - TC TOP OF CURB
  - G GUTTER
  - FENCE
  - TRAFFIC SIGNAL BOX
  - TRAFFIC SIGNAL
  - TELEPHONE BOX
  - PARKING METER
  - TBM
  - GAS METER
  - BENCH
  - SCULPTURE
  - BUILDING ENTRANCE
  - FF FINISHED FLOOR ELEVATION
  - DOWN SPOUT
  - GAS VALVE
  - SPRINKLER VALVE
- TREE LEGEND**
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  - PECAN TREE
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  - CREPE MYRTLE TREE
  - HOLLY TREE
  - MULBERRY TREE
  - PINE TREE
  - CAMPHOR TREE
  - PALM TREE
  - SHRUBBERY
- LIMITS OF DISTURBANCE

**GENERAL NOTES**

1. CONTRACTOR SHALL COMPLY WITH ALL CITY REGULATIONS AND SECURE NECESSARY PERMITS REQUIRED BY CITY OF HOUSTON FOR DEMOLITION AND REMOVAL OF BUILDINGS.
2. CONTRACTOR SHALL PROTECT ALL ADJACENT STREETS FROM DAMAGE DUE TO HEAVY EQUIPMENT OR JOB RELATED VEHICLES.
3. CONTRACTOR SHALL REMOVE ALL MAN-MADE ITEMS (DEBRIS AND GARBAGE) FROM THE COMPLETED DEMOLITION SITE.
4. PROVIDE PEDESTRIAN PROTECTION AS REQUIRED BY THE CITY OF HOUSTON.
5. SITE DRAINAGE SHALL BE MAINTAINED ACROSS THE ENTIRE SITE. NO PONDING OR WATER ENTRAPMENTS SHALL BE ALLOWED.
6. DRAINAGE DITCHES OR SWALES AT THE STREETS SHALL HAVE THE FLOWLINES AND SLOPES OF SHOULDERS MAINTAINED TO PROVIDE FLOW OR STORM DRAINAGE; REMOVE ANY TRASH OR DEBRIS
7. THE LIMITS OF DEMOLITION ARE INDICATED ON THIS SHEET. THE CONTRACTOR SHALL END PAVEMENT AND CURB REMOVAL AT THE "LIMITS OF DEMOLITION" LINE. SAW-CUTTING METHOD SHALL BE USED AT THESE LOCATIONS.
8. THE DEMOLITION CONTRACTOR SHALL SUBMIT CONSTRUCTION/DEMOLITION SCHEDULE (SIMPLE BAR CHART) TO THE ARCHITECT/ENGINEER WITHIN TWO (2) WEEKS OF NOTICE TO PROCEED. THE DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY ONCE DEMOLITION STARTS.
9. THE DEMOLITION CONTRACTOR TO HAVE AN OFFICE TRAILER ON SITE EQUIPPED WITH TELEPHONE AND TEMPORARY FACILITIES SUCH AS PORTABLE TOILETS.
10. DEMOLITION DOCUMENTS TO BE MAINTAINED ON SITE DURING THE WORK-DRAWINGS, SPECIFICATIONS, ADDENDA, ETC. RECORD ANY SIGNIFICANT CHANGES AND TURN IN AT THE COMPLETION OF THE PROJECT AS-BUILT DRAWINGS.
11. ALL EXISTING DRIVEWAY NOT TO BE USED AND EXISTING DRIVEWAY SIDEWALK AND CULVERTS TO BE REMOVED. THIS AREA TO BE REGARDED TO PROVIDE POSITIVE DRAINAGE.

**DEMOLITION KEY NOTES**

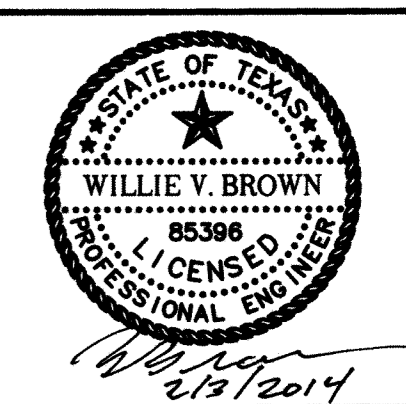
- 1 REMOVE EXISTING CONCRETE PAVEMENT, CONCRETE DRIVEWAY APRONS AND CONCRETE PEDESTALS
- 2 REMOVE EXISTING CONCRETE CURB
- 3 REMOVE EXISTING CONCRETE HC RAMP
- 4 REMOVE EXISTING SIGNS
- 5 REMOVE EXISTING AREA INLETS, TYPE "B" INLET, MANHOLE AND STORM SEWER
- 6 REMOVE EXISTING SIDEWALK
- 7 REMOVE TREES WITH COMPLETE ROOT STRUCTURE TO BELOW 6'-0" SEE GEOTECHNICAL REPORT
- 8 REMOVE EXISTING ASPHALT PAVEMENT, BASE, AND SUBGRADE
- 9 LIMIT OF PAVEMENT REMOVAL. SAWCUT EXISTING ASPHALT PAVEMENT FULL DEPTH, INCLUDING BASE

F:\2166-024\Austin St\Austin St\_705\CA1-Demolition Plan\_Austin Street.dwg Plotted: Feb 02, 2014 - 11:44pm by willie.brown



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**Issue/Revision:**

REV	DESCRIPTION	DATE	BY
1	Owner Review	7/20/12	
2	Issued for Permit	2/8/2013	
3	Issued for Bid	8/19/2013	
4	Issued for Bid	11/15/2013	
5	Revisions	1/29/2014	

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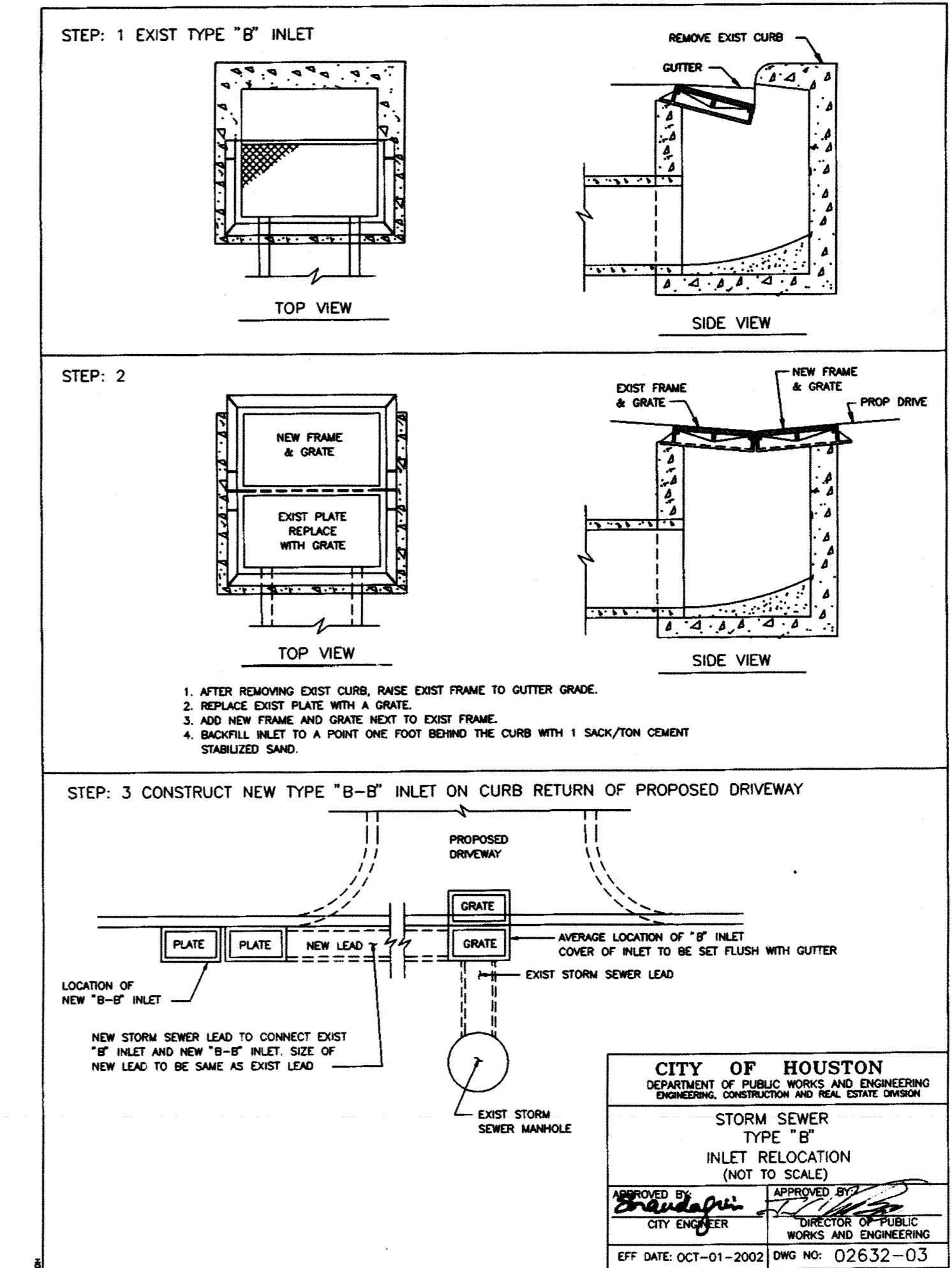
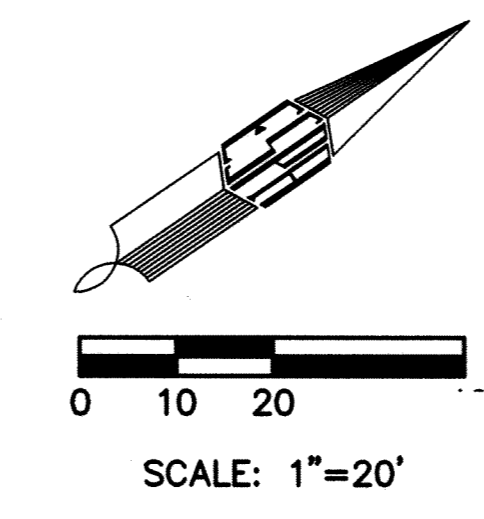
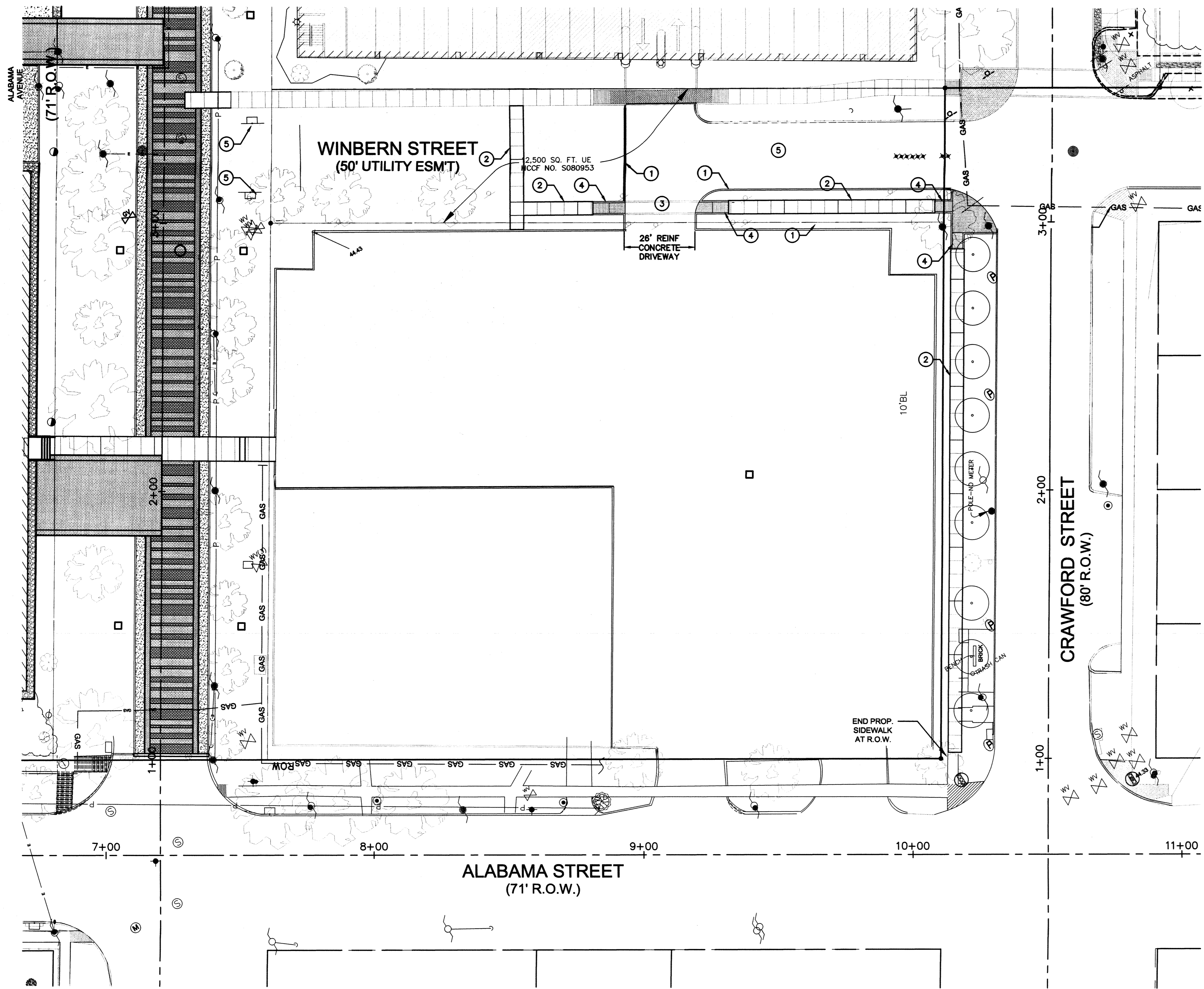
**Central Campus**  
Austin Street Improvements  
1300 Holman Street  
Houston, TX 77004

Contract No.: A/E Project No.:  
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Checked By: Date:  
Approved By: Date:

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DEMOLITION PLAN

Scale: 1"=30'



**LEGEND:**

- PROP AREA INLET
- PROP STORM MANHOLE
- EXIST STM SWR MH
- EXIST TYPE "A" INLET
- EXIST SAN SWR MH
- B OR BB INLET
- POST
- ⚡ FIRE DEPARTMENT CONNECTIONS
- ▭ BUILDING
- WOOD FENCE
- CHAIN LINK FENCE
- OVERHEAD LINE
- UNDERGROUND LINE
- ▭ MAILBOX
- FOUND IRON ROD
- GAS METER
- FOUND IRON PIPE
- HANDICAP
- UNDERGROUND CABLE MARKER
- SET MONUMENTS BY TERAN GROUP
- PARKING METER
- PROPERTY LINE
- VOLUME
- PAGE
- H.C.C.F. HARRIS COUNTY CLERK'S FILE
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**TREE LEGEND**

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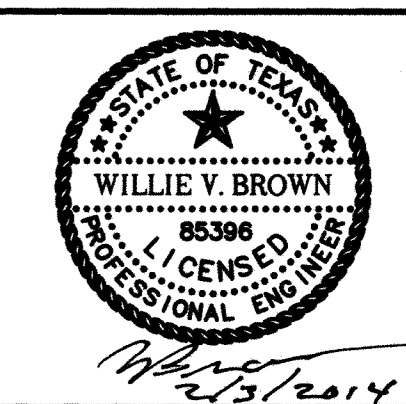
**KEY NOTES**

- ① PROP 6" MONOLITHIC CURB AND GUTTER; REF C-11.0-A12
- ② PROP 5' WIDE CONC SIDEWALK; REF C11.0-AB
- ③ PROP. CONC DRIVEWAY; REF: COH DETAIL 02754-01
- ④ PROP HANDICAP RAMP
- ⑤ PROP 2" HMA OVERLAY. MILL OFF 2" EXIST. HMA PVMT.
- ⑥ CONVERT TYPE "B" CURB INLET INTO GRATE INLET. REF COH DETAIL 02632-03, STEP 2 (SEE ABOVE)



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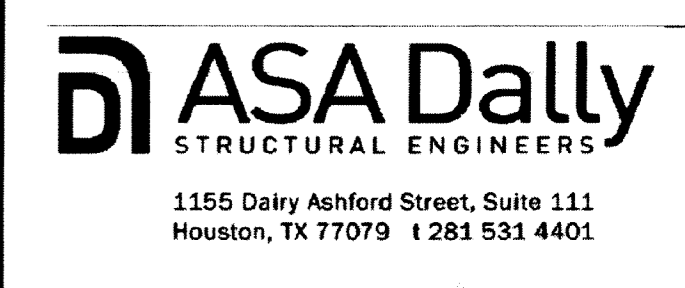
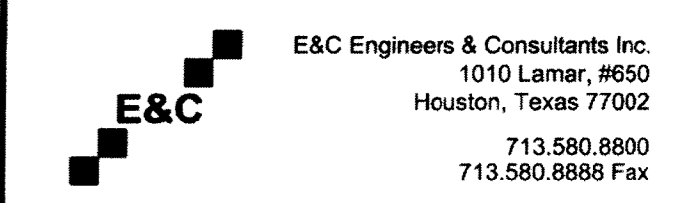
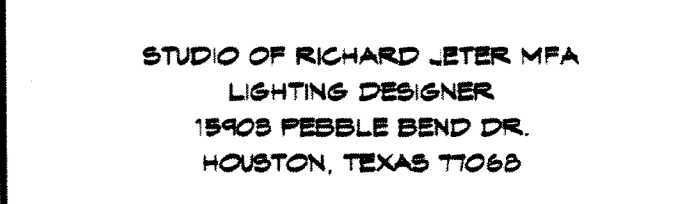
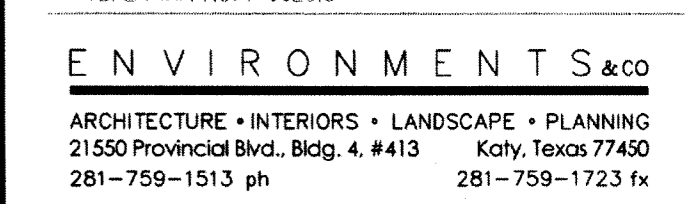
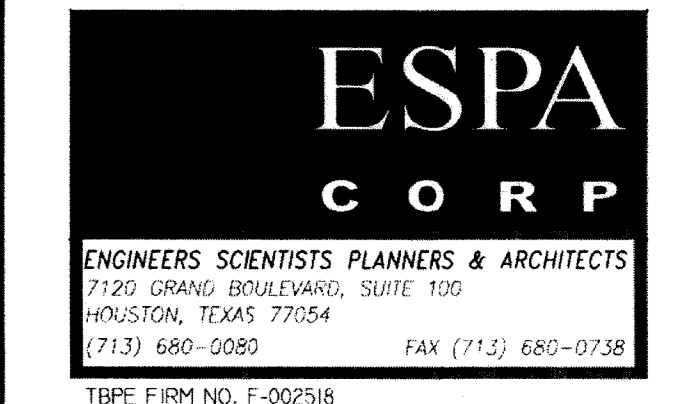


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CIVIL SITE PLAN  
WINBERN STREET

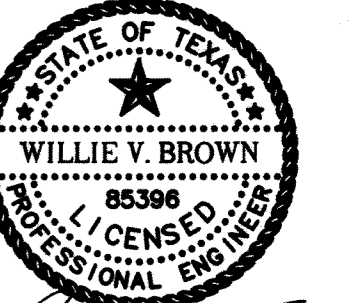
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**C-5.1**



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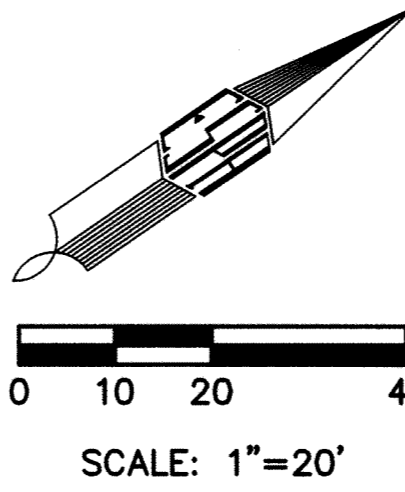
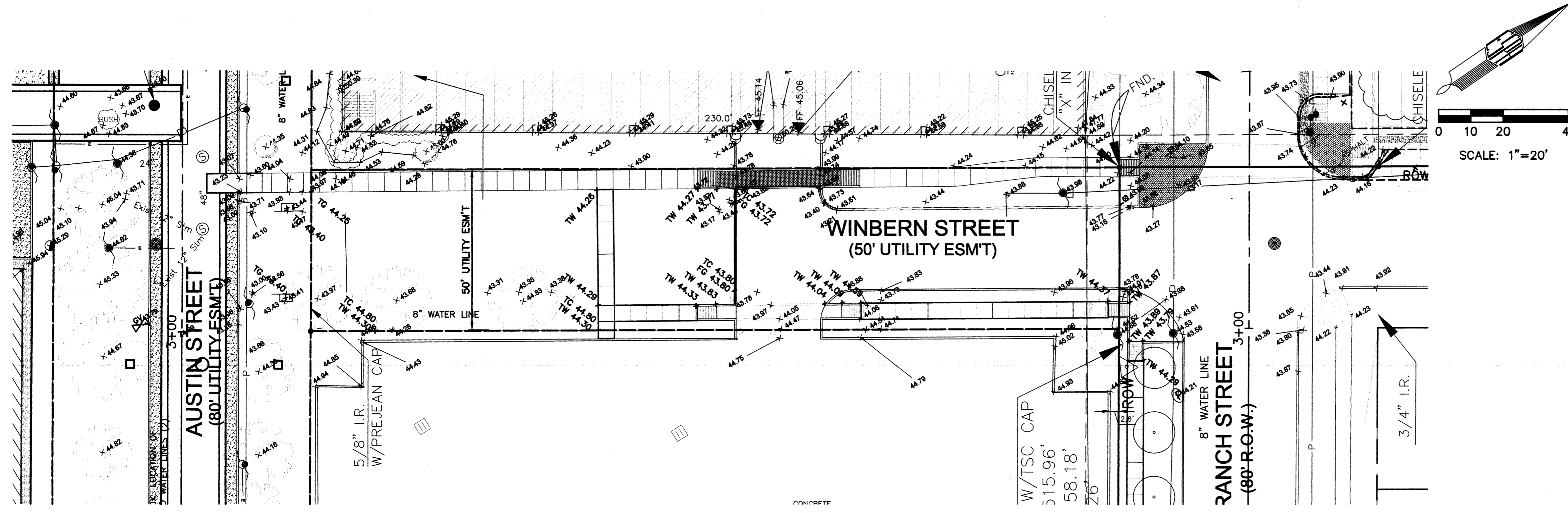
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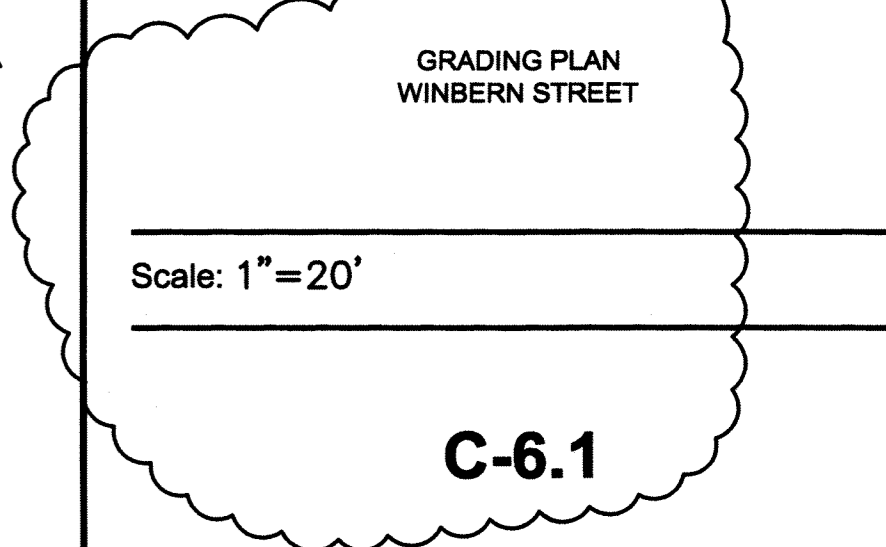
**NOTE**  
PROPOSED SIDEWALKS SHALL HAVE 2% MAX GROSS SLOPE (1/4" PER FT) TOWARD STREET

**LEGEND:**

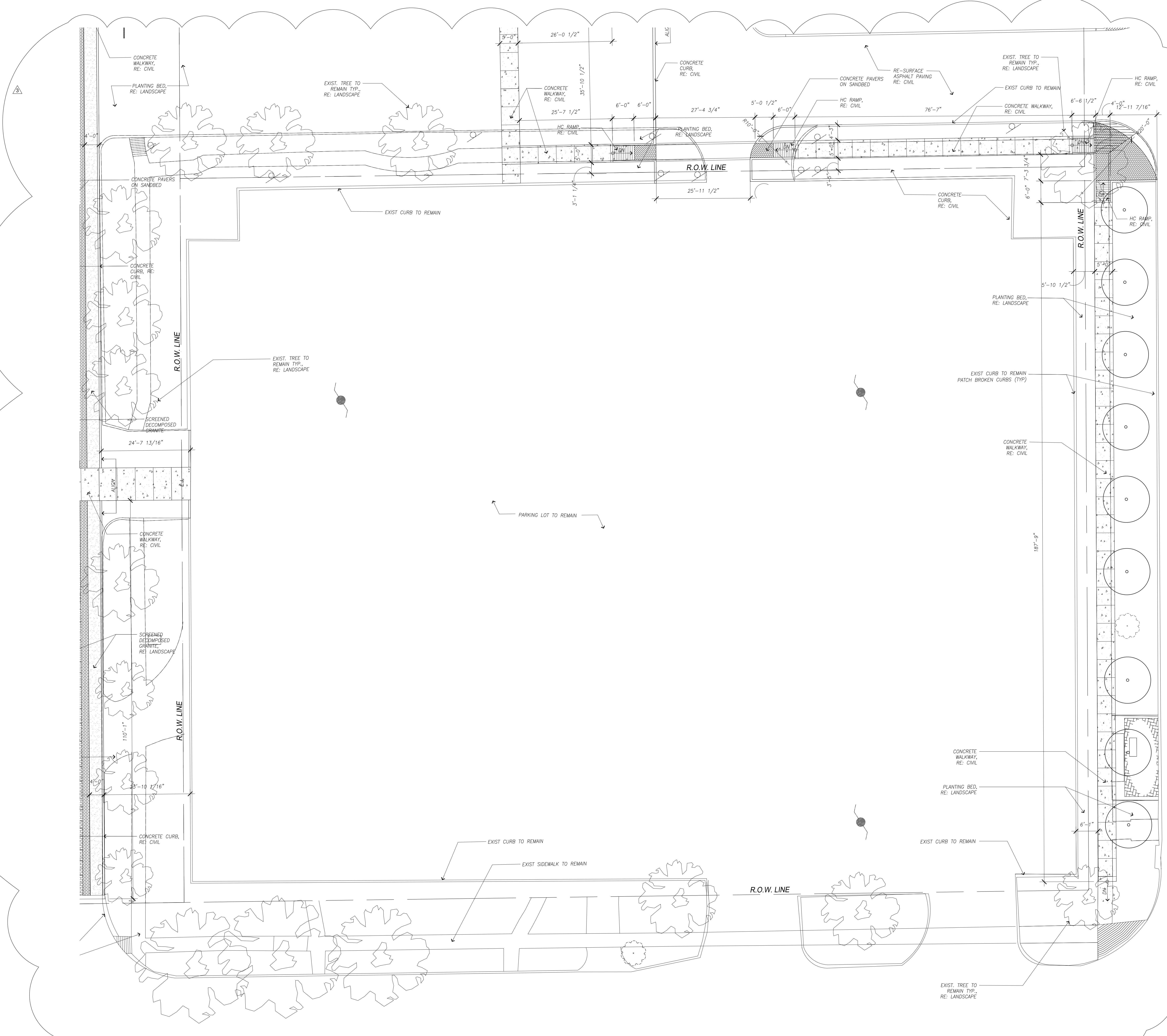
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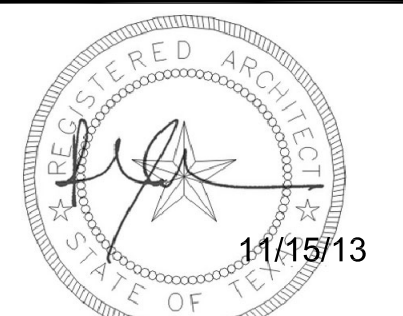


**13** Detail Site Plan  
 SCALE: 3/32" = 1'-0"  
 PN



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**Central Campus  
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 1300 Holman Street  
 Houston, TX 77004

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Drawn By: JA	Date: 11-30-12
Checked By: JS	Date: 1-10-13
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**Detail  
 Site Plan**

Scale: 3/32" = 1'-0"

**AS-1.22**

## **RFCSP 14-02**

### **AUSTIN STREET IMPROVEMENTS & SAN JACINTO MEMORIAL GREEN (SJMG)**

#### ***AE Comments***

- 1. Construction Sequence Plan (G-1.00) from the San Jacinto Memorial Green Drawings is no longer necessary and can be ignored.*
- 2. Added Civil Drawings C-5.1 and C-6.1 to Austin Street Improvements Drawing Set.*
- 3. Final Sign Text Schedule for monumental sign (Re: 3/AS-2.00 SJMG Drawing Set) to be provided by Architect.*

#### **Contractor Questions & AE Responses:**

##### **RFI#1**

- Drawing C-4.1 is missing from the Austin Street plans.  
*AE Response: Drawing C-4.1 is being issued with Addendum 001.*
- Will there be a demolition drawing issued for the parking lot area surrounded by Austin, Alabama & LaBranch?  
*AE Response: Please see Drawing C-4.1.*
- Drawing C-5.0 Note 17 references detail A12 on C-11.0.  
Detail A12 is a curb and gutter design. Is this the correct type of curb to use at the perimeter of the decomposed granite?  
*AE Response: No. Please see SKC-2-Rev 1 – Addendum 001.*
- Drawing C-5.0 Note 14 references detail A8 on C-11.0.  
Detail A8 shows 6" concrete beneath the pavers. Is this correct?  
*AE Response: Yes.*
- The Unit Price Proposal has several items which require multiple unit prices; such as utility pipe and trees.  
Is it acceptable to submit additional pages with the proposal to list these?  
*AE Response: Yes Please additional pages as needed for multiple unit prices as well as 'add' and 'deduct' unit prices.*

##### **RFI#2**

- Drawing AS-3.01 designates Redwood, Stained Wood, and Wood Decking.  
Spec 06 20 13 specifies Ipe or Cumaru.  
What is the correct wood species for the deck and seating?  
*AE Response: Please see Addendum 001. All exterior wood decking and seating is Ipe or Cumaru.*



2. FYI: Drawing AS-3.04 has two (2) detail 10's.

***AE Response: Please see Addendum 001***

3. Details 10, 11, 13, 14, 15, and 16 on Drawing AS-3.00 have crushed base beneath the pavers.

Details 18, 19, and 20 have concrete beneath the pavers.

How do you determine which area of pavers have base, and which areas have concrete?

***AE Response: Please see Addendum 001. We are not using crushed concrete beneath pavers. All pavers to be installed on concrete slab base.***

### **RFI#3**

1. Is the Ipe decking thickness to be 1x or 2x?

***AE Response: Ipe or Cumaru thickness to be 2X or 1-1/2”.***

2. Detail 10 Drawing AS-1.07: is this deck to be composite or Ipe?

***AE Response: This deck is composite.***

3. Drawing AS-1.02C: Are all of the decks on this page considered as Alternate 1?

***AE Response: All decks shown on Drawing No. 17/AS-1.02C are part of Alternate 1.***

### **RFI#4**

1. Drawing LP-1.01 SanJac Mem.: what is the unidentified texture pattern surrounding the 15 Allee Elm square planters?

***AE Response: There is crushed limestone at base of tree and decomposed granite around that. Please see Addendum 001 – LP -1.01.***

2. Does the area across Holman Street require irrigation?

***AE Response: (3) Trees within the courtyard across San Jac Plaza are to use Treegator bags for watering. Please reference spec 32 80 00.***

3. Where is the existing irrigation controller located?

***AE Response: Controller is provided under Austin Street Improvements Package. Please see Addendum 001 – LI -1.02.***

## **RFCSP 14-02**

### **AUSTIN STREET IMPROVEMENTS & SAN JACINTO MEMORIAL GREEN (SJMG)**

#### ***AE Comments***

- 1. Construction Sequence Plan (G-1.00) from the San Jacinto Memorial Green Drawings is no longer necessary and can be ignored.*
- 2. Added Civil Drawings C-5.1 and C-6.1 to Austin Street Improvements Drawing Set.*
- 3. Final Sign Text Schedule for monumental sign (Re: 3/AS-2.00 SJMG Drawing Set) to be provided by Architect.*

#### **Contractor Questions & AE Responses:**

##### **RFI#1**

- Drawing C-4.1 is missing from the Austin Street plans.  
*AE Response: Drawing C-4.1 is being issued with Addendum 001.*
- Will there be a demolition drawing issued for the parking lot area surrounded by Austin, Alabama & LaBranch?  
*AE Response: Please see Drawing C-4.1.*
- Drawing C-5.0 Note 17 references detail A12 on C-11.0.  
Detail A12 is a curb and gutter design. Is this the correct type of curb to use at the perimeter of the decomposed granite?  
*AE Response: No. Please see SKC-2-Rev 1 – Addendum 001.*
- Drawing C-5.0 Note 14 references detail A8 on C-11.0.  
Detail A8 shows 6" concrete beneath the pavers. Is this correct?  
*AE Response: Yes.*
- The Unit Price Proposal has several items which require multiple unit prices; such as utility pipe and trees.  
Is it acceptable to submit additional pages with the proposal to list these?  
*AE Response: Yes Please additional pages as needed for multiple unit prices as well as 'add' and 'deduct' unit prices.*

##### **RFI#2**

- Drawing AS-3.01 designates Redwood, Stained Wood, and Wood Decking.  
Spec 06 20 13 specifies Ipe or Cumaru.  
What is the correct wood species for the deck and seating?  
*AE Response: Please see Addendum 001. All exterior wood decking and seating is Ipe or Cumaru.*

2. FYI: Drawing AS-3.04 has two (2) detail 10's.

***AE Response: Please see Addendum 001***

3. Details 10, 11, 13, 14, 15, and 16 on Drawing AS-3.00 have crushed base beneath the pavers.

Details 18, 19, and 20 have concrete beneath the pavers.

How do you determine which area of pavers have base, and which areas have concrete?

***AE Response: Please see Addendum 001. We are not using crushed concrete beneath pavers. All pavers to be installed on concrete slab base.***

### **RFI#3**

1. Is the Ipe decking thickness to be 1x or 2x?

***AE Response: Ipe or Cumaru thickness to be 2X or 1-1/2”.***

2. Detail 10 Drawing AS-1.07: is this deck to be composite or Ipe?

***AE Response: This deck is composite.***

3. Drawing AS-1.02C: Are all of the decks on this page considered as Alternate 1?

***AE Response: All decks shown on Drawing No. 17/AS-1.02C are part of Alternate 1.***

### **RFI#4**

1. Drawing LP-1.01 SanJac Mem.: what is the unidentified texture pattern surrounding the 15 Allee Elm square planters?

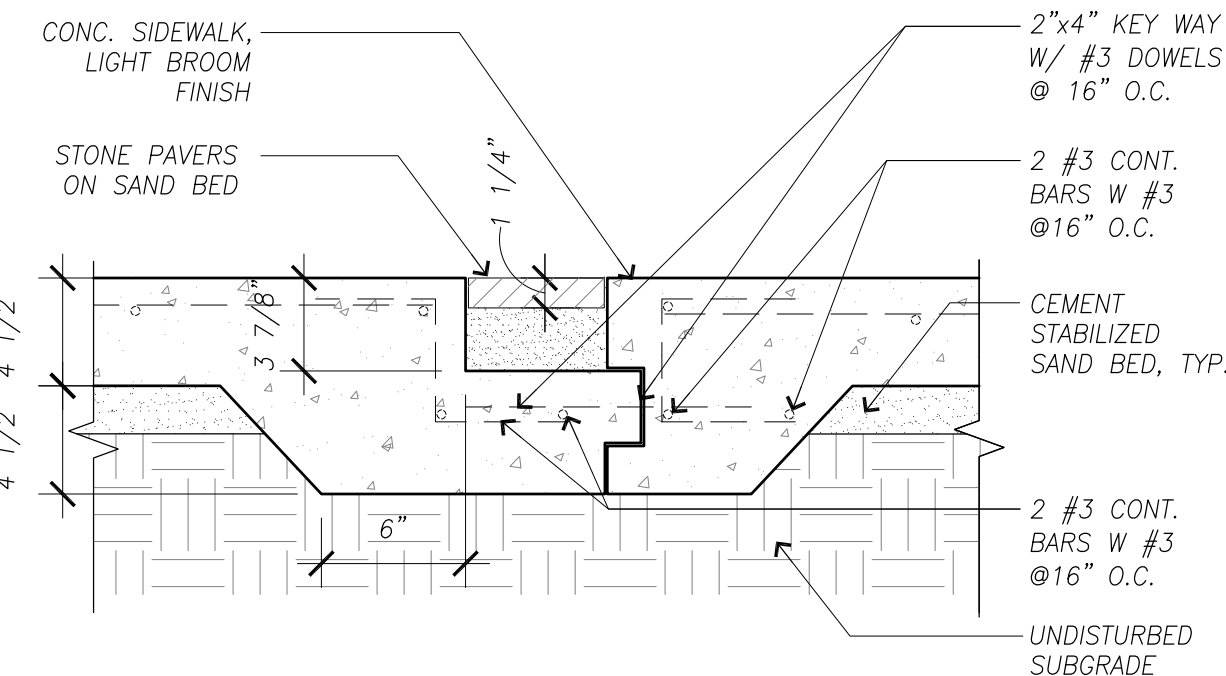
***AE Response: There is crushed limestone at base of tree and decomposed granite around that. Please see Addendum 001 – LP -1.01.***

2. Does the area across Holman Street require irrigation?

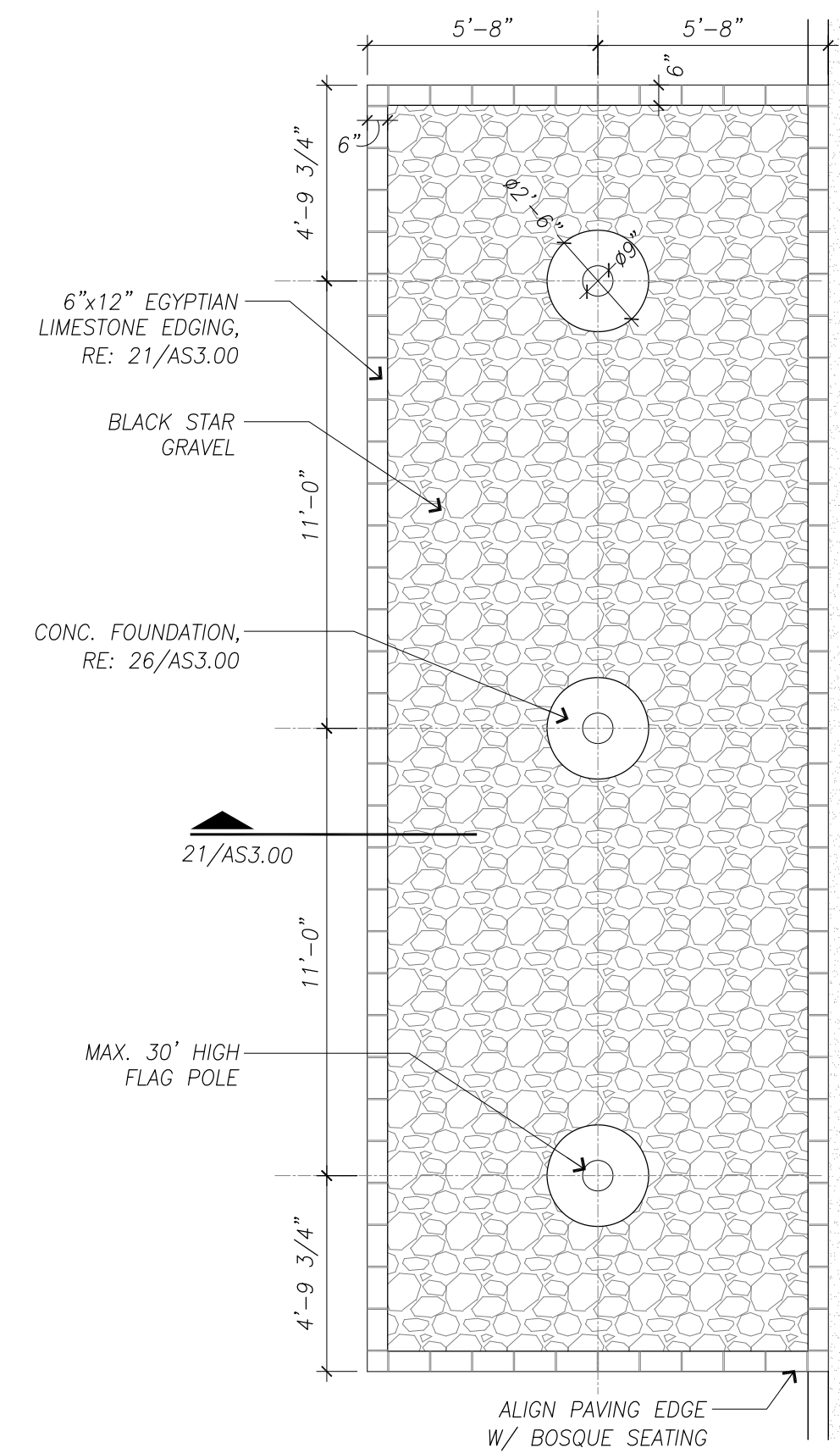
***AE Response: (3) Trees within the courtyard across San Jac Plaza are to use Treegator bags for watering. Please reference spec 32 80 00.***

3. Where is the existing irrigation controller located?

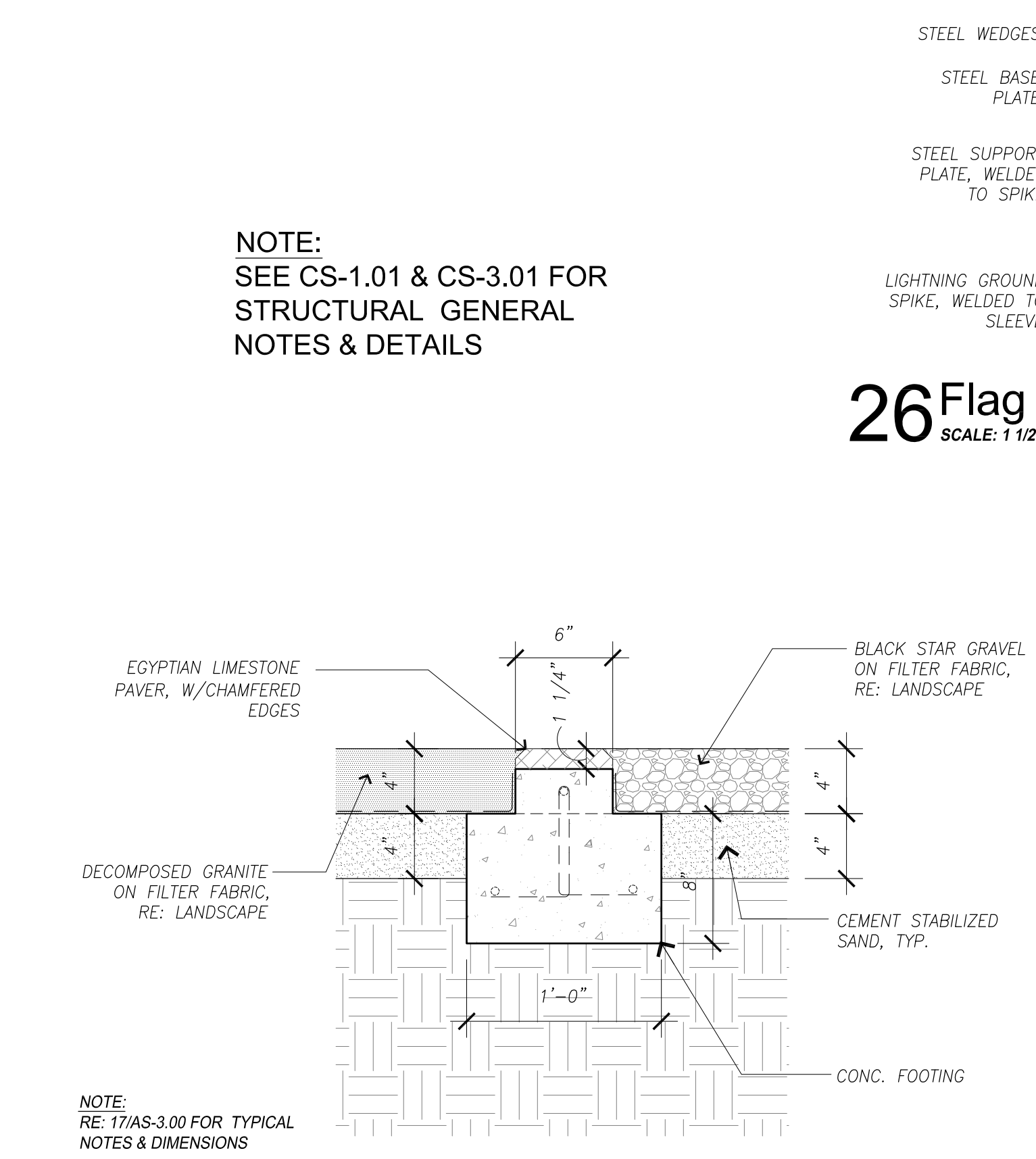
***AE Response: Controller is provided under Austin Street Improvements Package. Please see Addendum 001 – LI -1.02.***



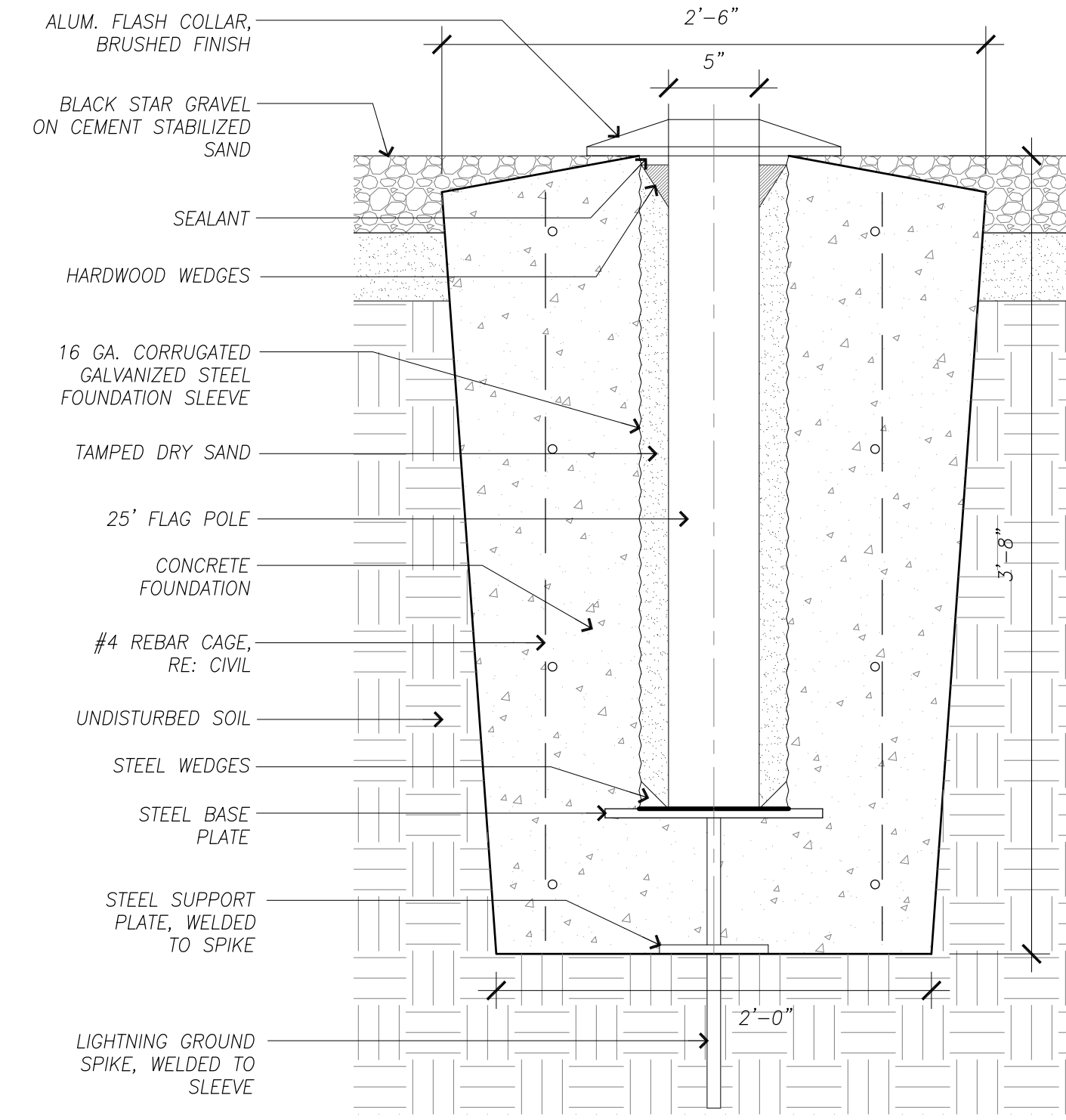
**27 Site Transition Detail**  
SCALE: 1/12" = 1'-0"



**22 Flagpole Podium Plan**  
SCALE: 1/4" = 1'-0"

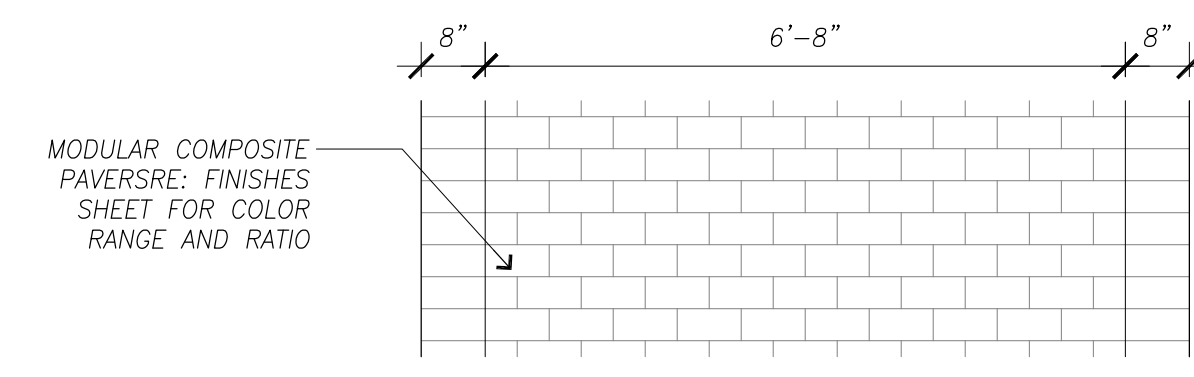


**21 Flagpole Podium Edge Paving Detail**  
SCALE: 1/12" = 1'-0"

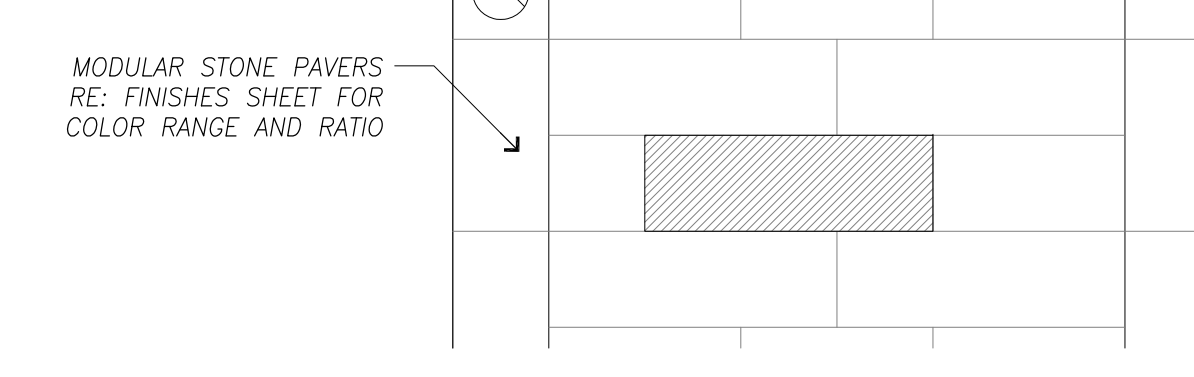


**26 Flagpole Foundation Detail**  
SCALE: 1/12" = 1'-0"

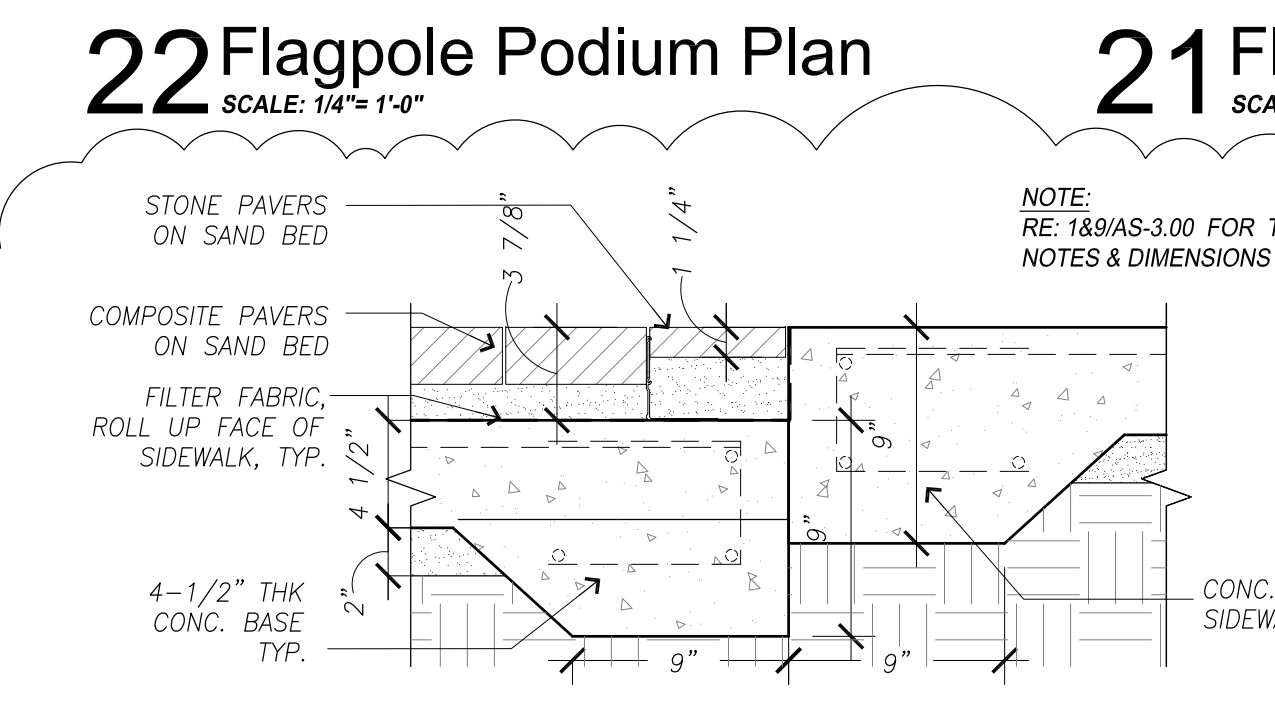
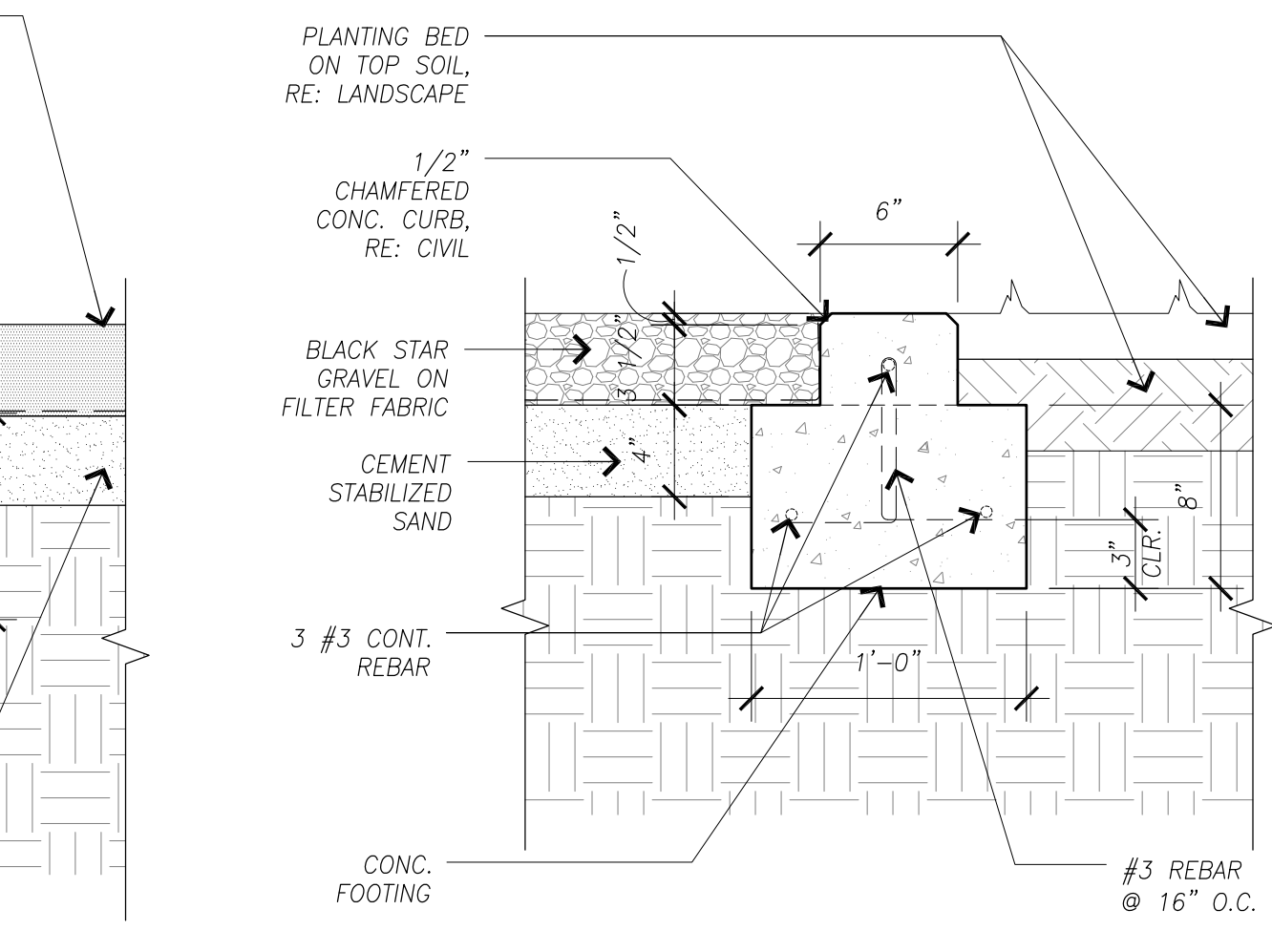
**25 Diagonal Cross Walk Paving Plan**  
SCALE: 1/2" = 1'-0"



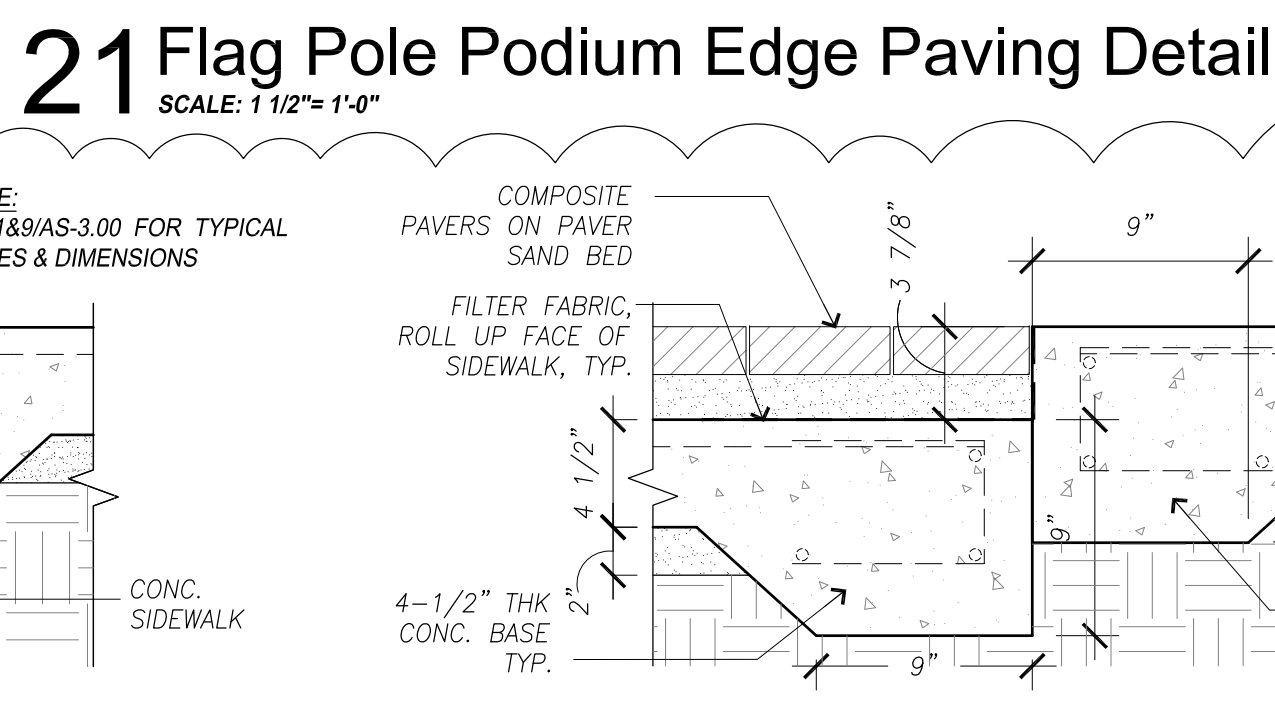
**24 Horizontal Cross Walk Paving Plan**  
SCALE: 1/2" = 1'-0"



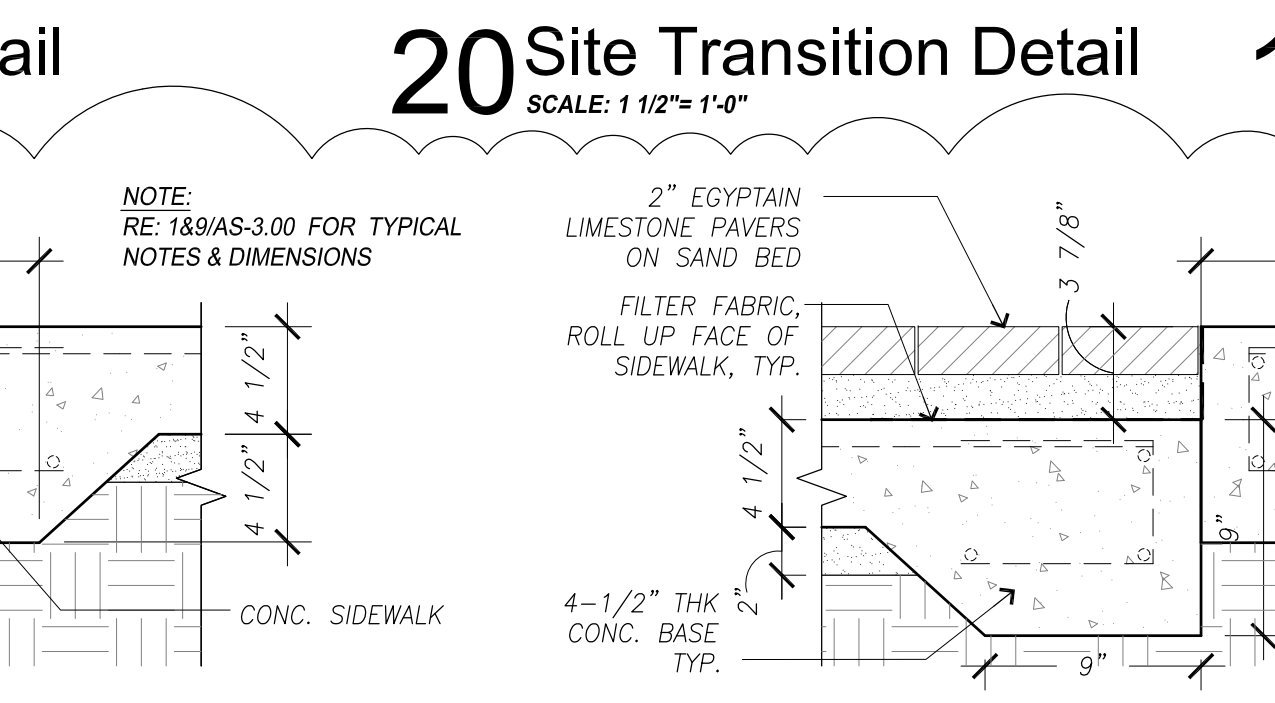
**23 Timeline Walk Paving Plan**  
SCALE: 1/2" = 1'-0"



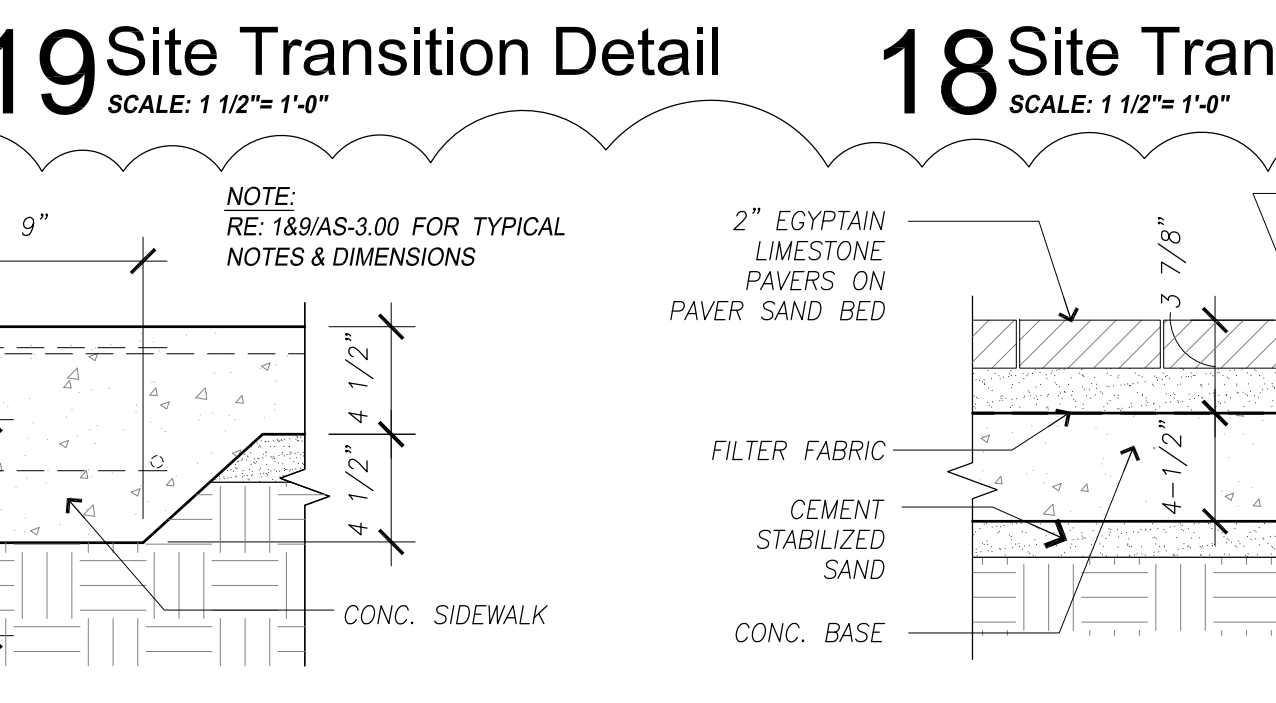
**16 Site Transition Detail**  
SCALE: 1/12" = 1'-0"



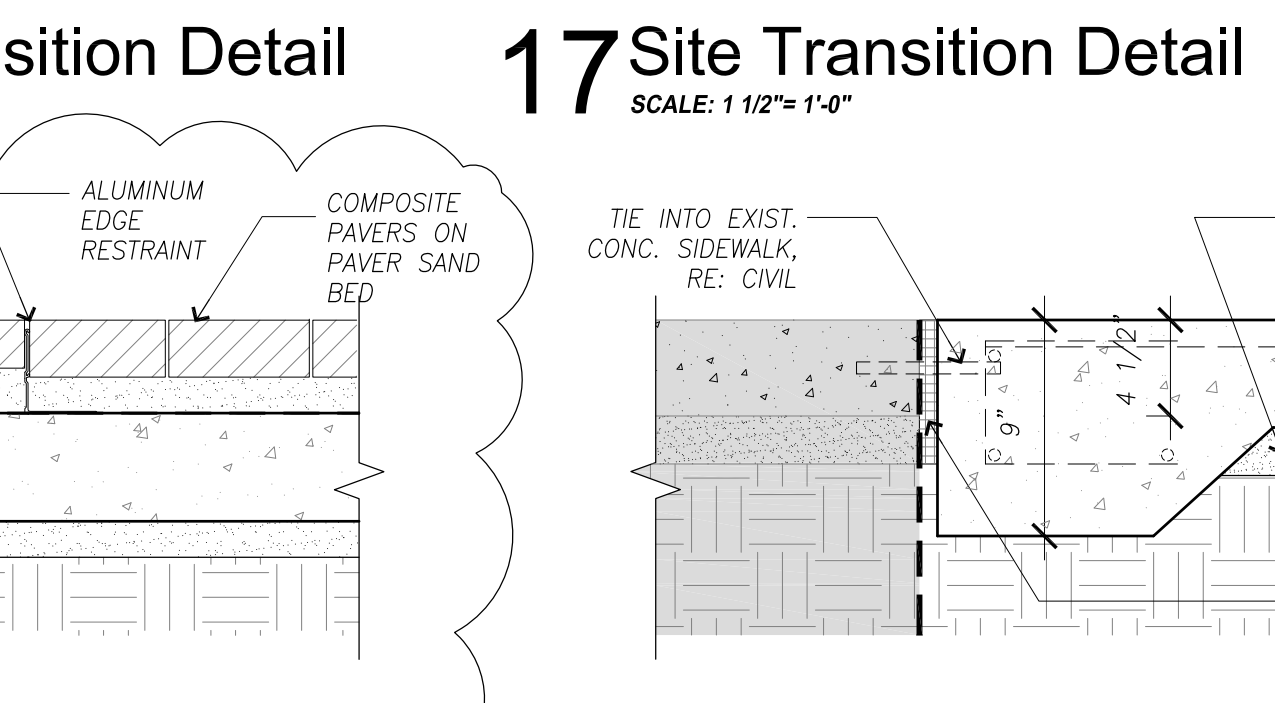
**15 Site Transition Detail**  
SCALE: 1/12" = 1'-0"



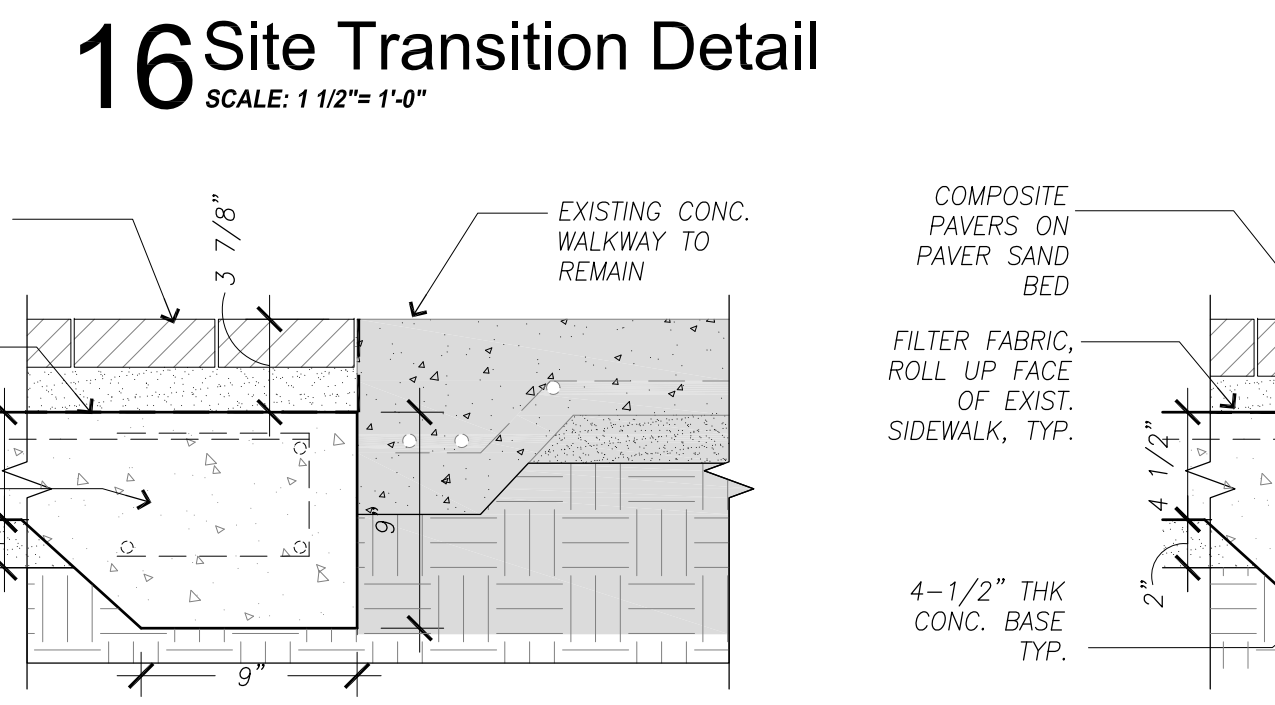
**14 Site Transition Detail**  
SCALE: 1/12" = 1'-0"



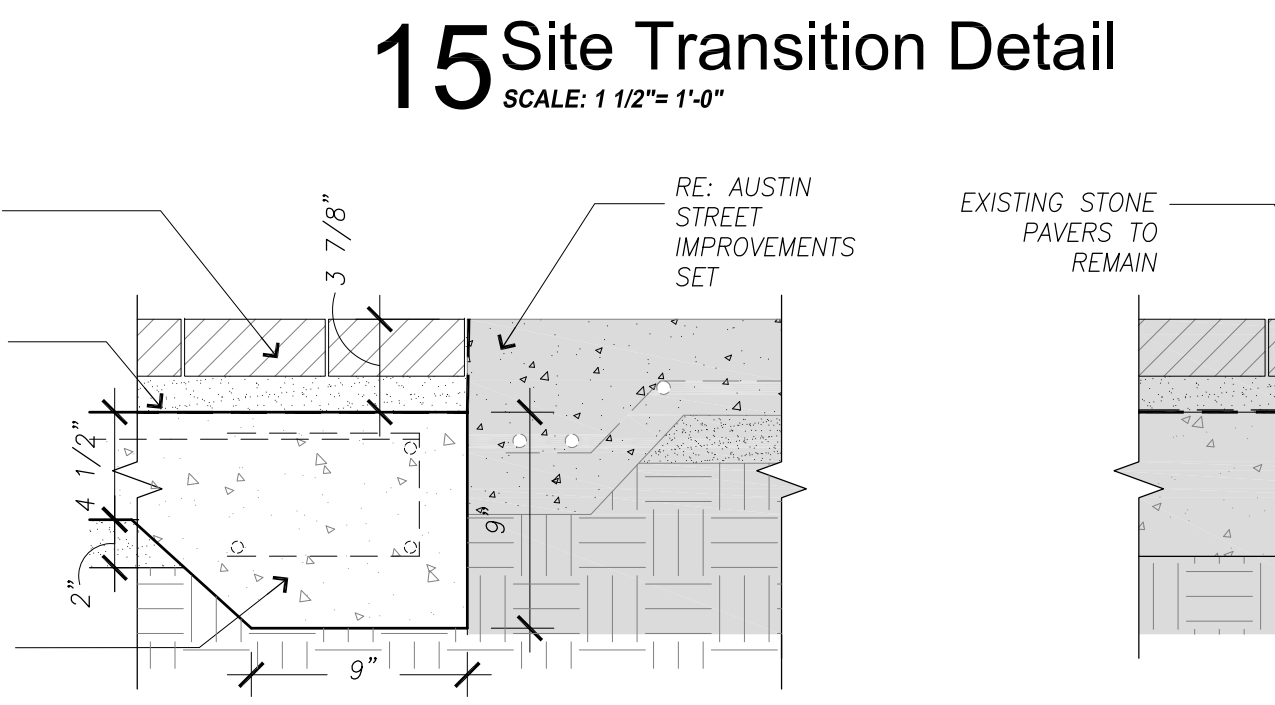
**13 Site Transition Detail**  
SCALE: 1/12" = 1'-0"



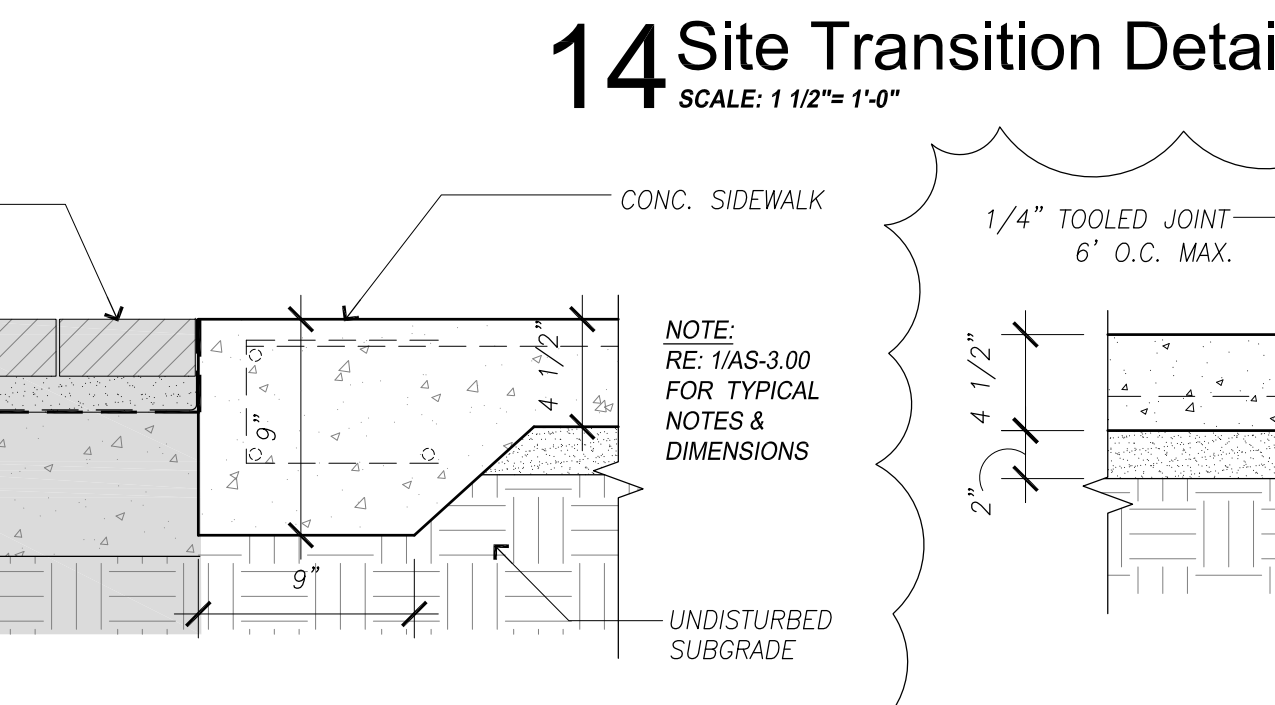
**12 Site Transition Detail**  
SCALE: 1/12" = 1'-0"



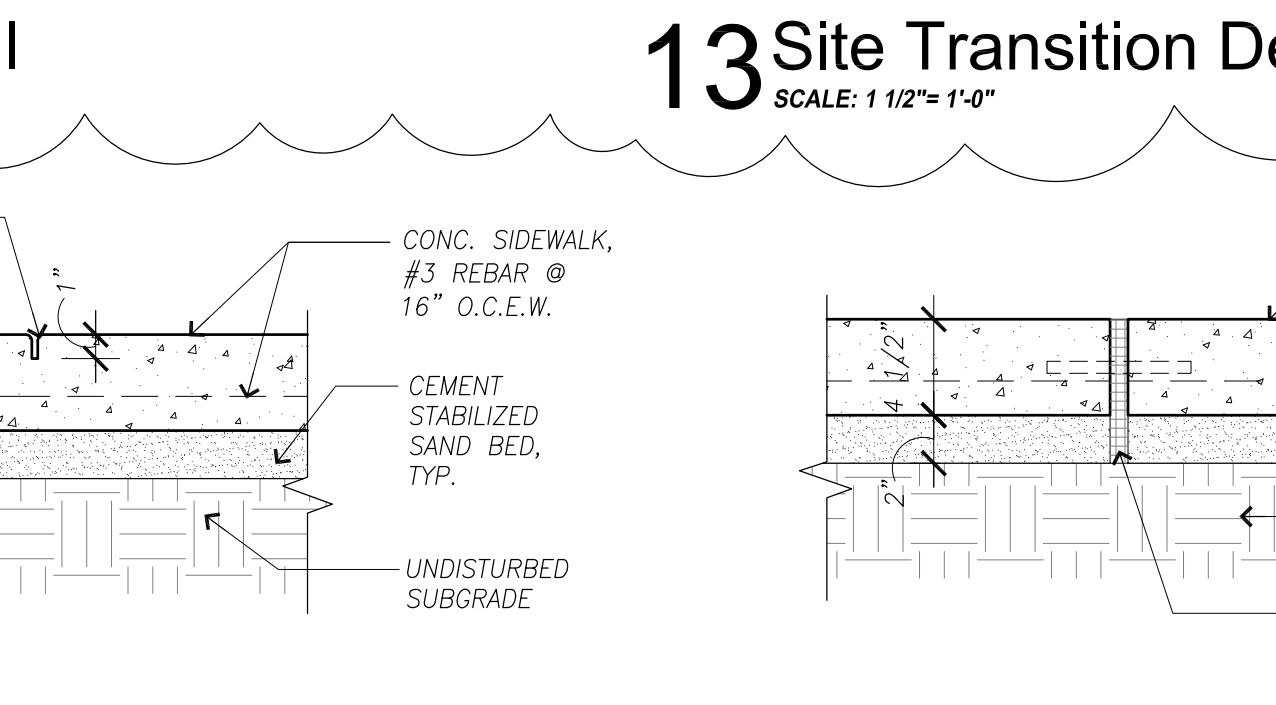
**11 Site Transition Detail**  
SCALE: 1/12" = 1'-0"



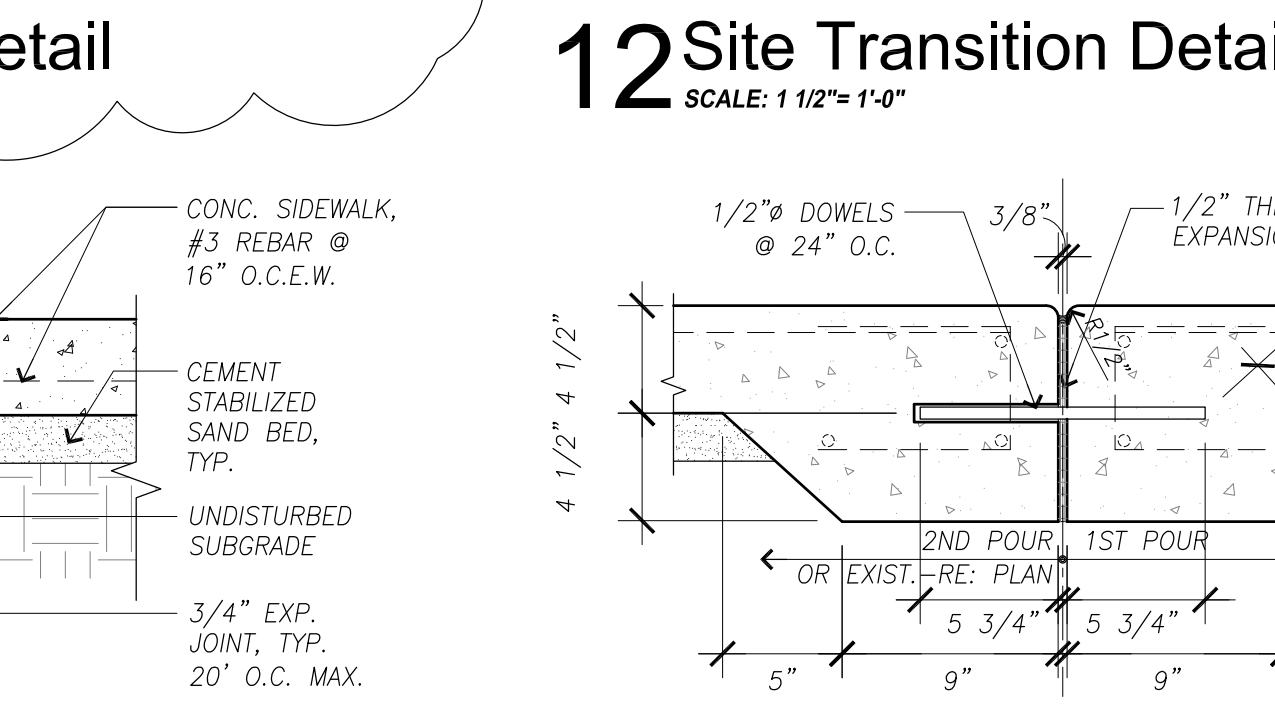
**10 Site Transition Detail**  
SCALE: 1/12" = 1'-0"



**9 Site Transition Detail**  
SCALE: 1/12" = 1'-0"

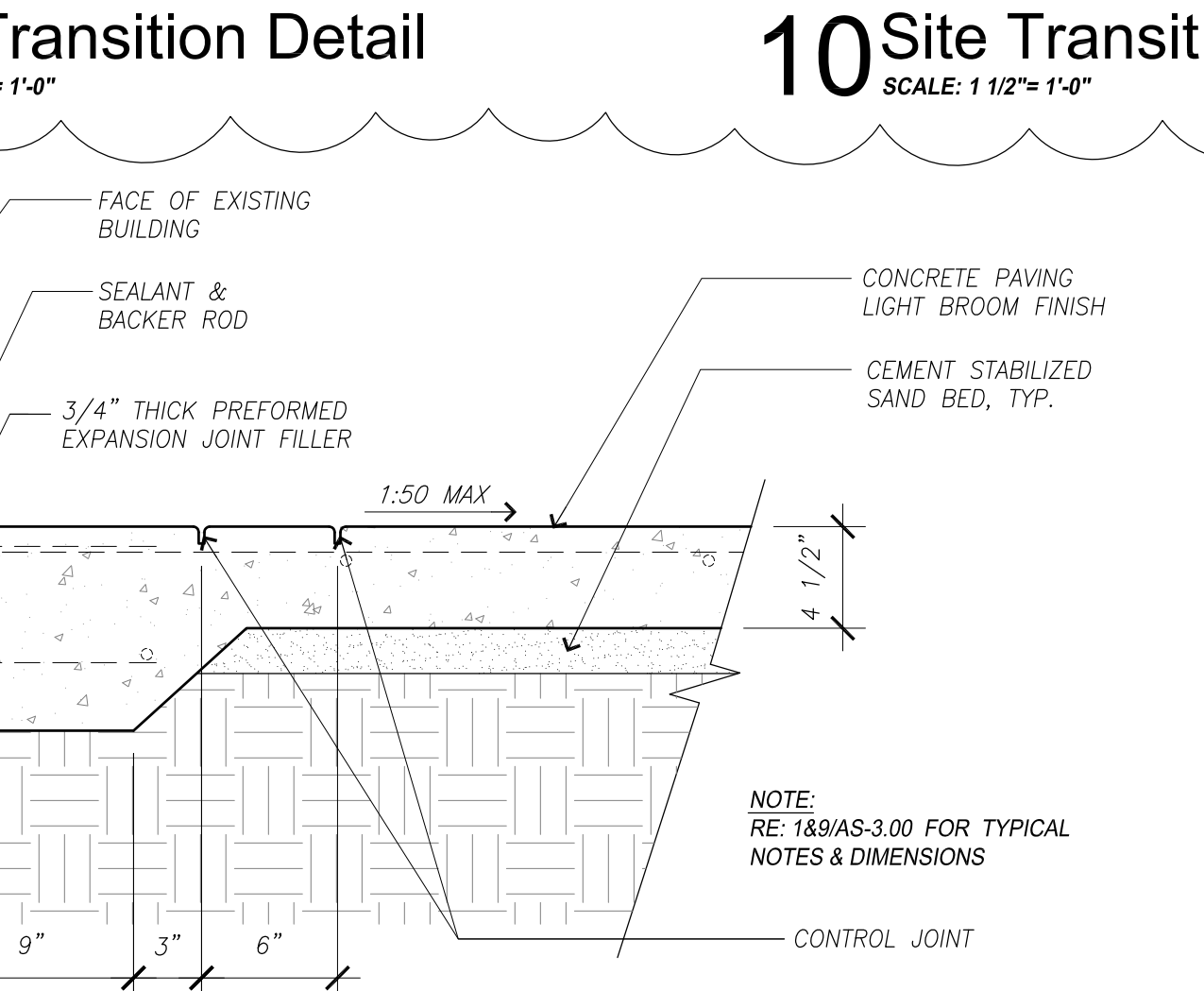


**8 Control Joint Detail**  
SCALE: 1/12" = 1'-0"

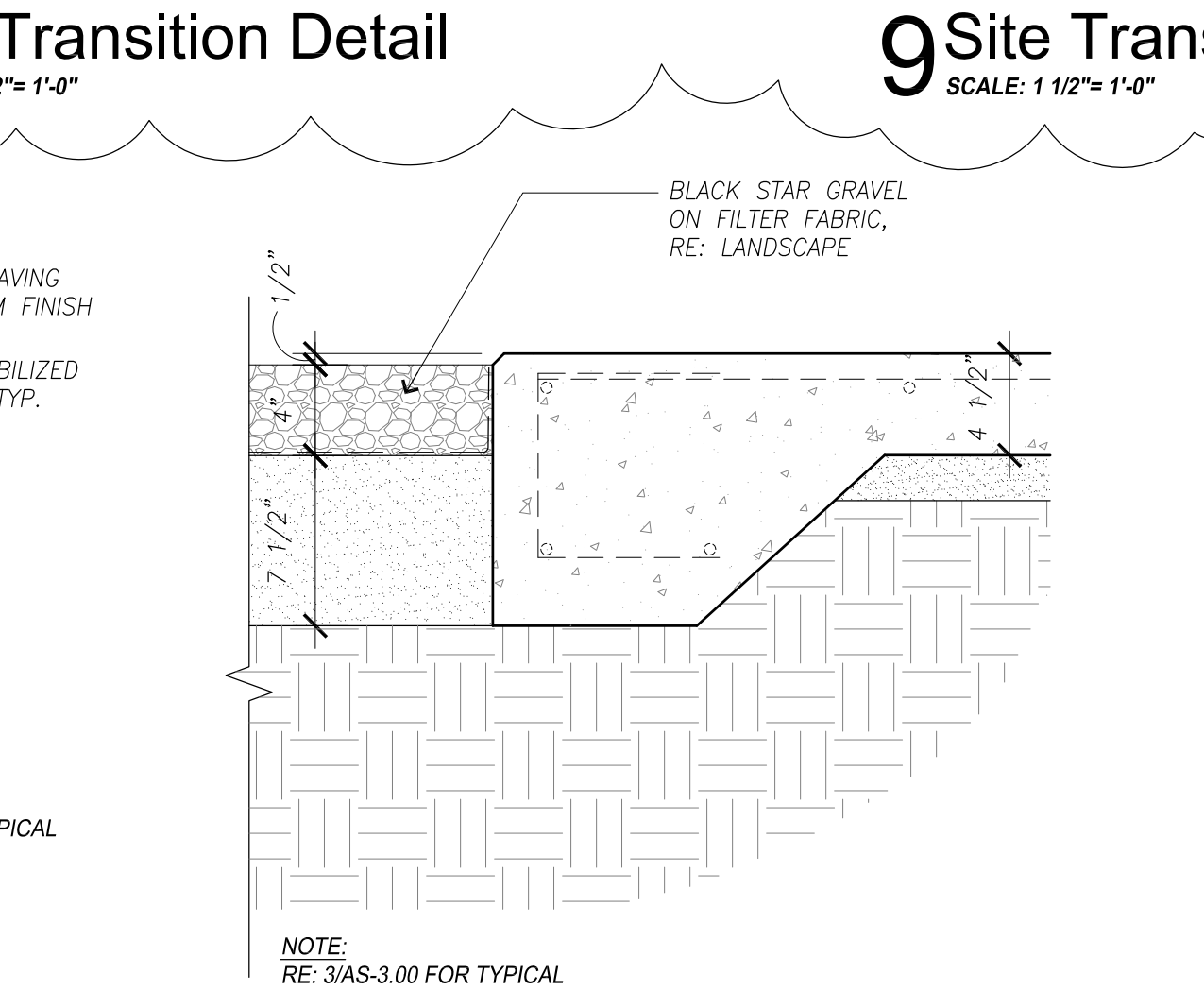


**7 Expansion Joint Detail**  
SCALE: 1/12" = 1'-0"

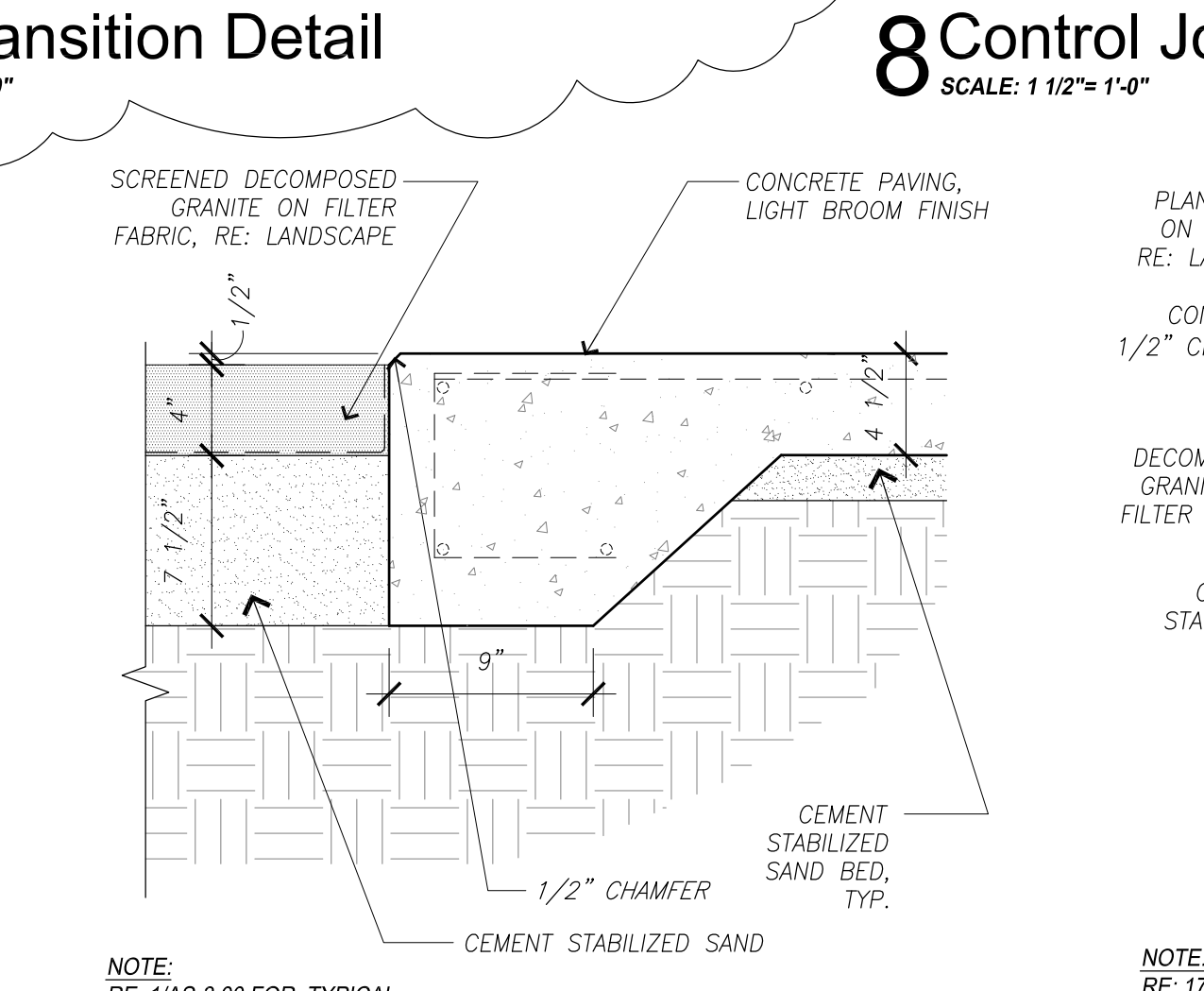
**6 Expansion Joint Detail**  
SCALE: 1/12" = 1'-0"



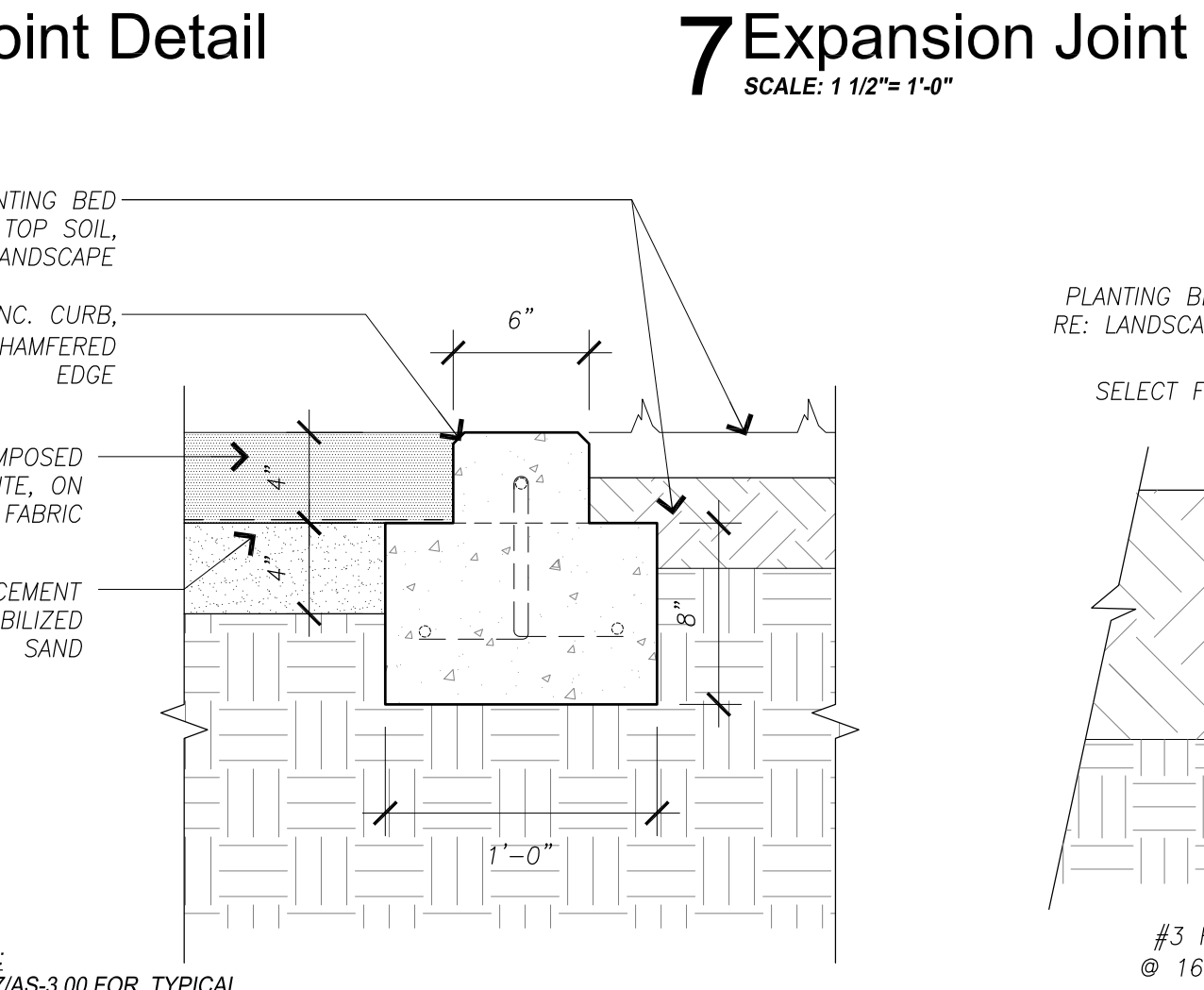
**5 Detail @ Existing Building**  
SCALE: 1/12" = 1'-0"



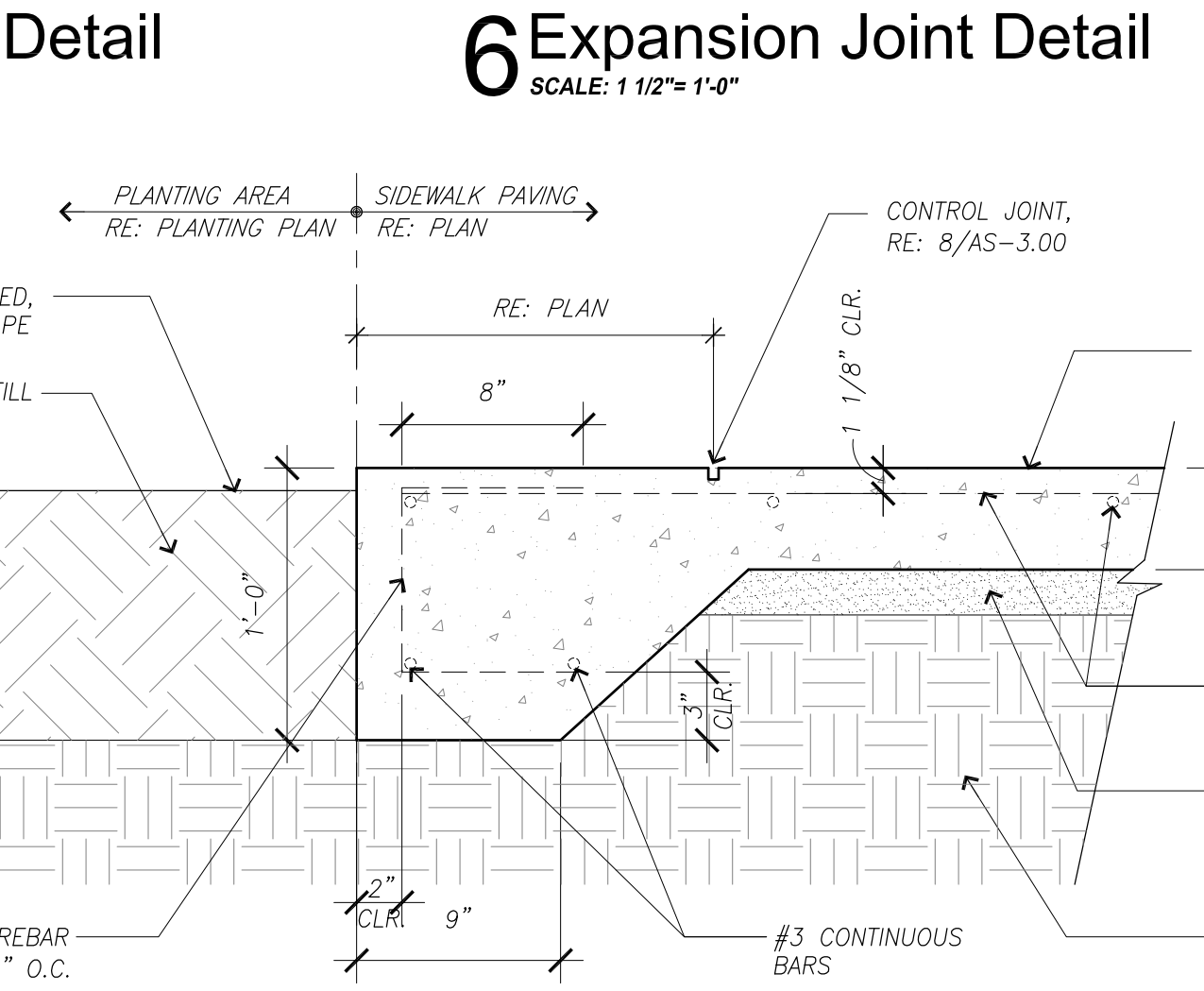
**4 Site Transition Detail**  
SCALE: 1/12" = 1'-0"



**3 Site Transition Detail**  
SCALE: 1/12" = 1'-0"



**2 Site Transition Detail**  
SCALE: 1/12" = 1'-0"



**1 Site Transition Detail**  
SCALE: 1/12" = 1'-0"

NOTE:  
SEE CS-1.01 & CS-3.01 FOR  
STRUCTURAL GENERAL  
NOTES & DETAILS

NOTE:  
RE: 17/AS-3.00 FOR TYPICAL  
NOTES & DIMENSIONS

NOTE:  
RE: 18/AS-3.00 FOR TYPICAL  
NOTES & DIMENSIONS

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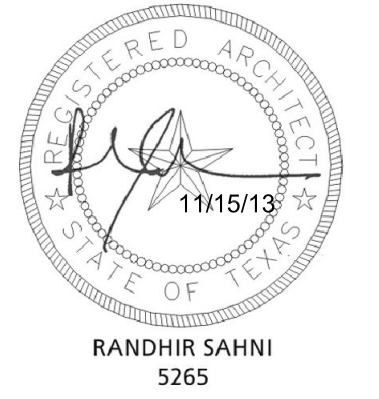
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Issue/Revision:

REV	DESCRIPTION	DATE	BY
1	Owner Review	10/13/11	JA
2	Issued For Permit	02/08/13	AP
3	Permit Revisions	11/13/13	JA
4	Issued for Bid	11/15/13	JA
5	Revisions	01/17/14	RR



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**Central Campus  
San Jacinto Memorial  
Green Improvements**  
1300 Holman Street  
Houston, TX 77004

Contract No.: AVE Project No.: 803  
Drawn By: JA/AP Date: 05/23/11  
Checked By: JS Date:  
Approved By: RR Date:

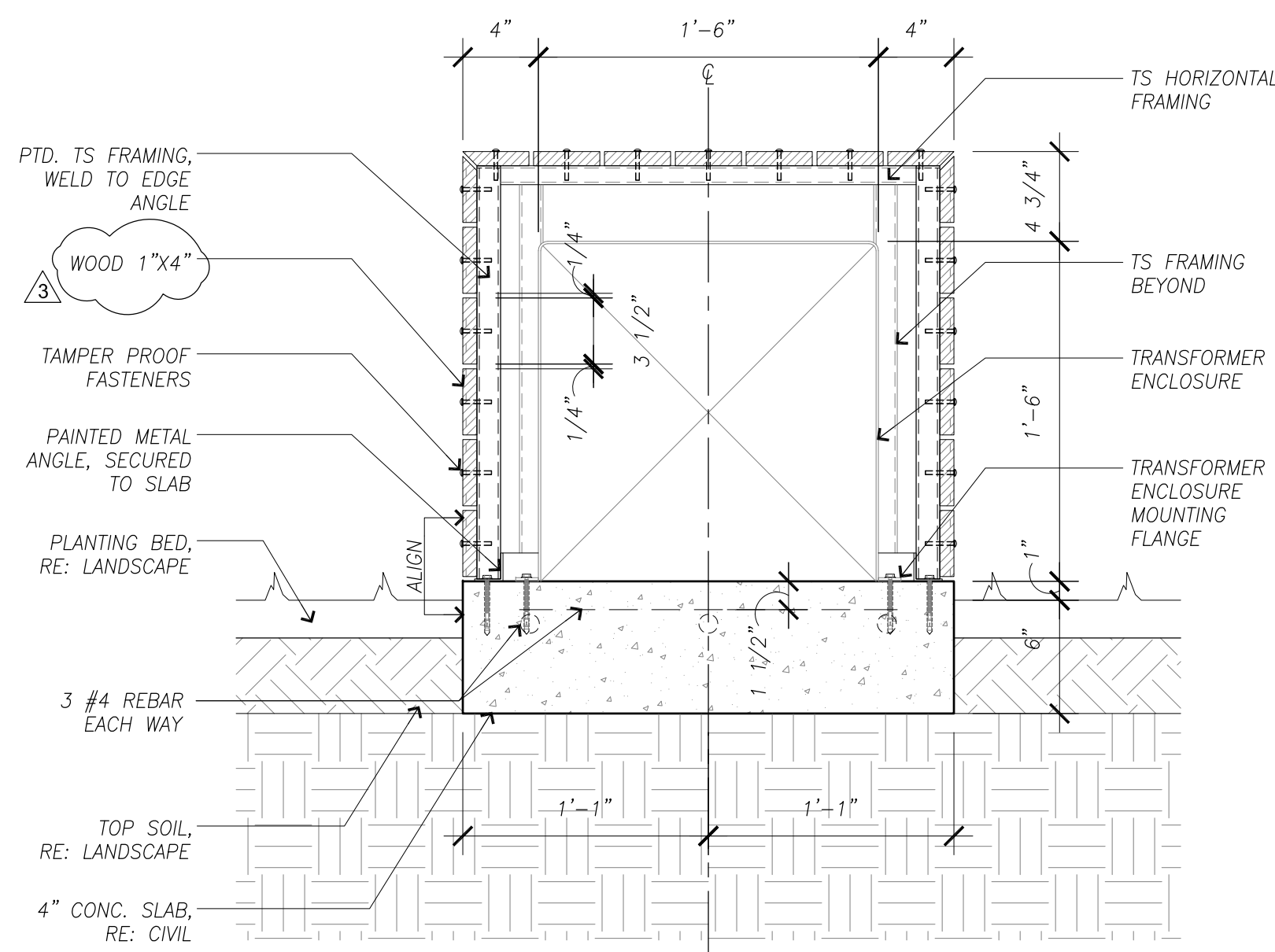
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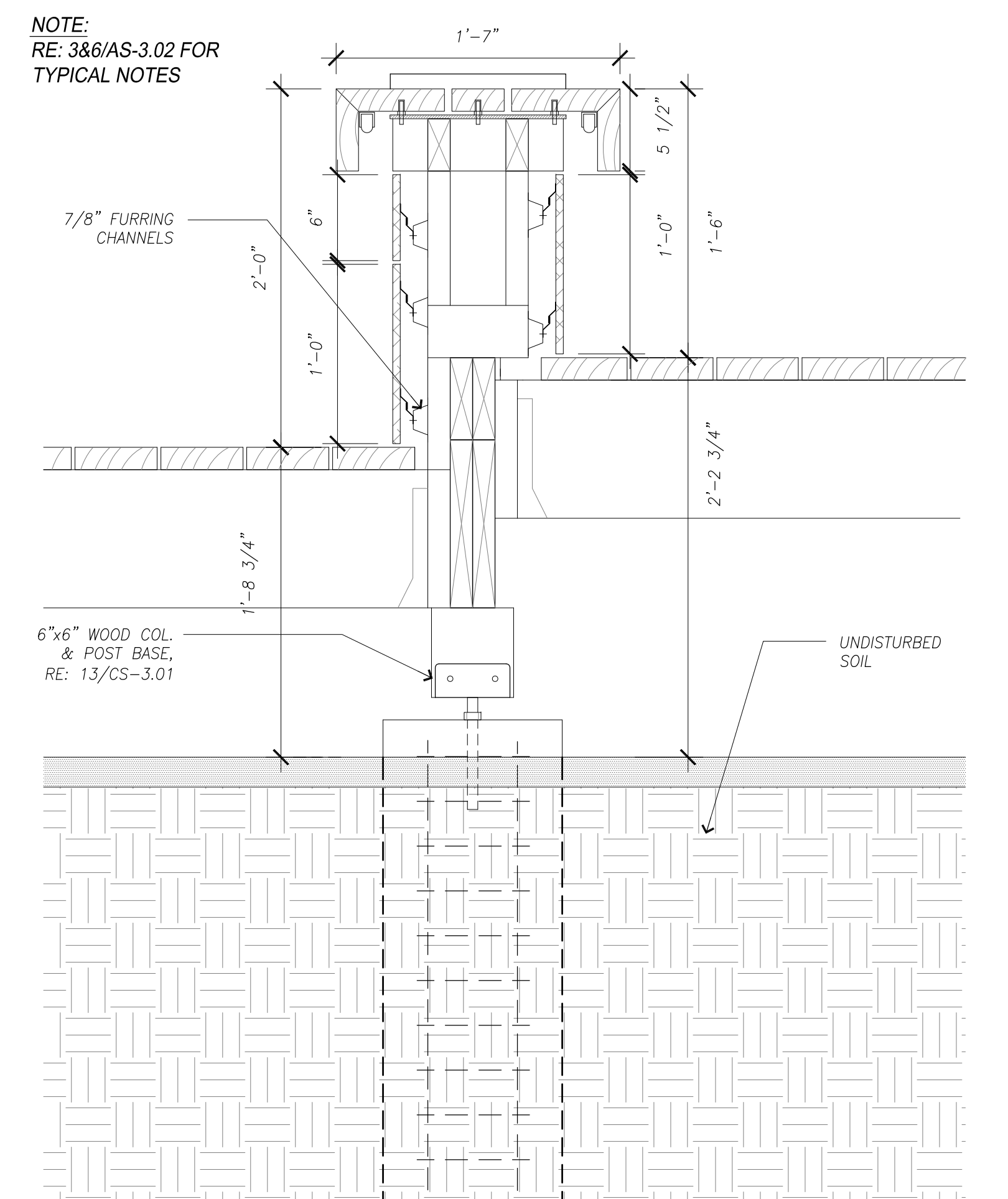
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**AS-3.00**

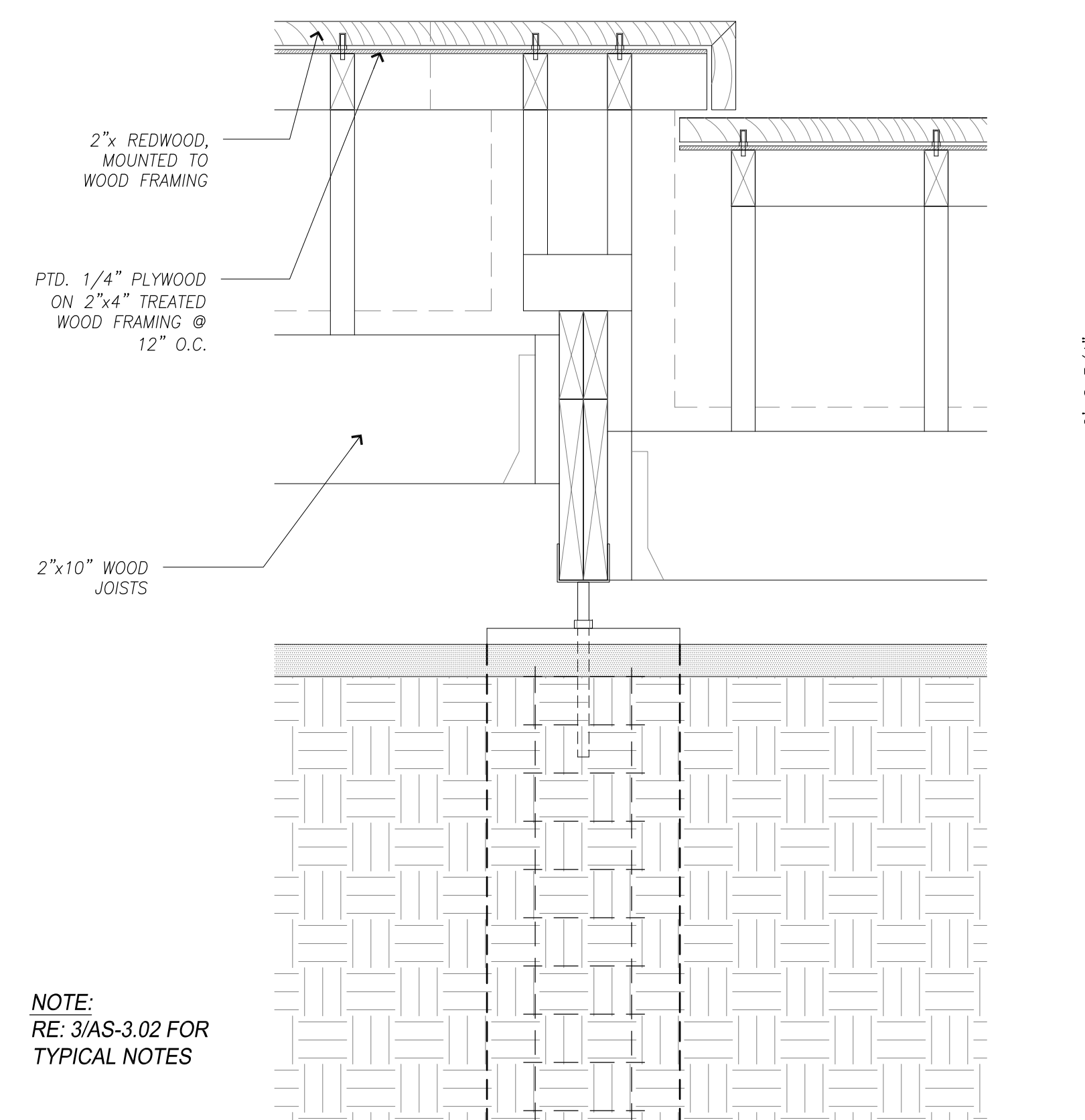




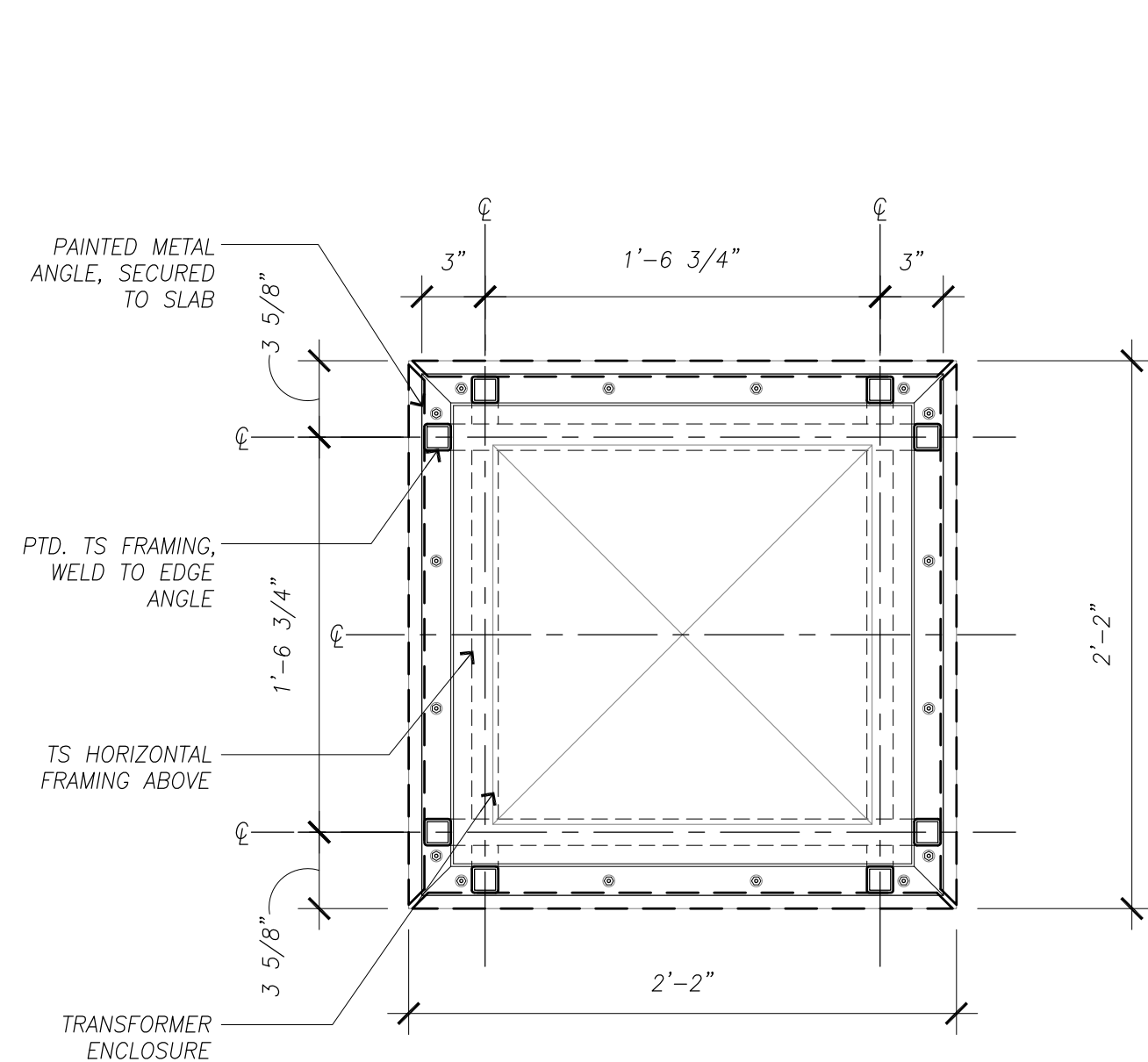
**12 Transformer Enclosure Section**  
SCALE: 1/12" = 1'-0"



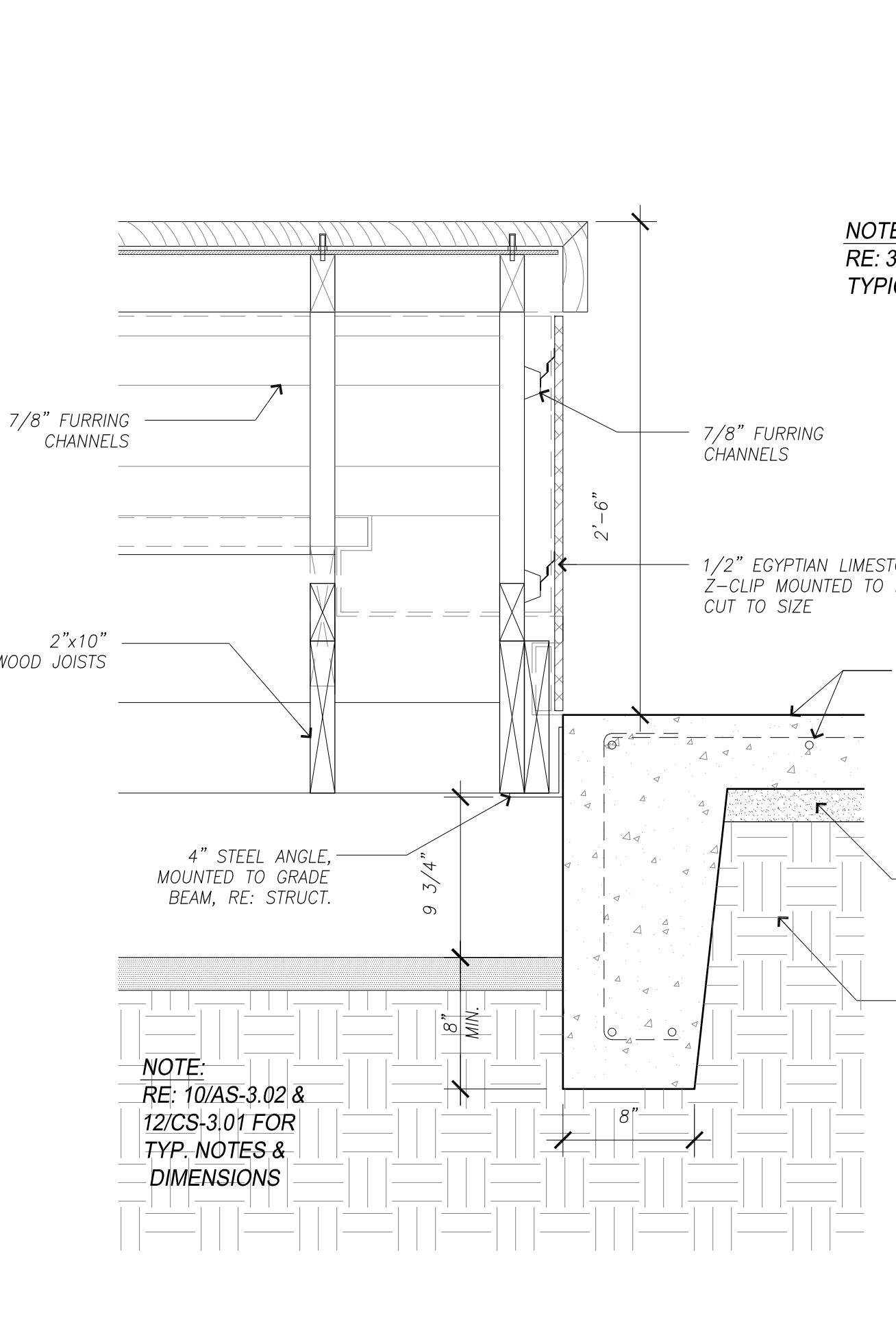
**8 Bench Section +6"/>+12" Deck**  
SCALE: 1/12" = 1'-0"



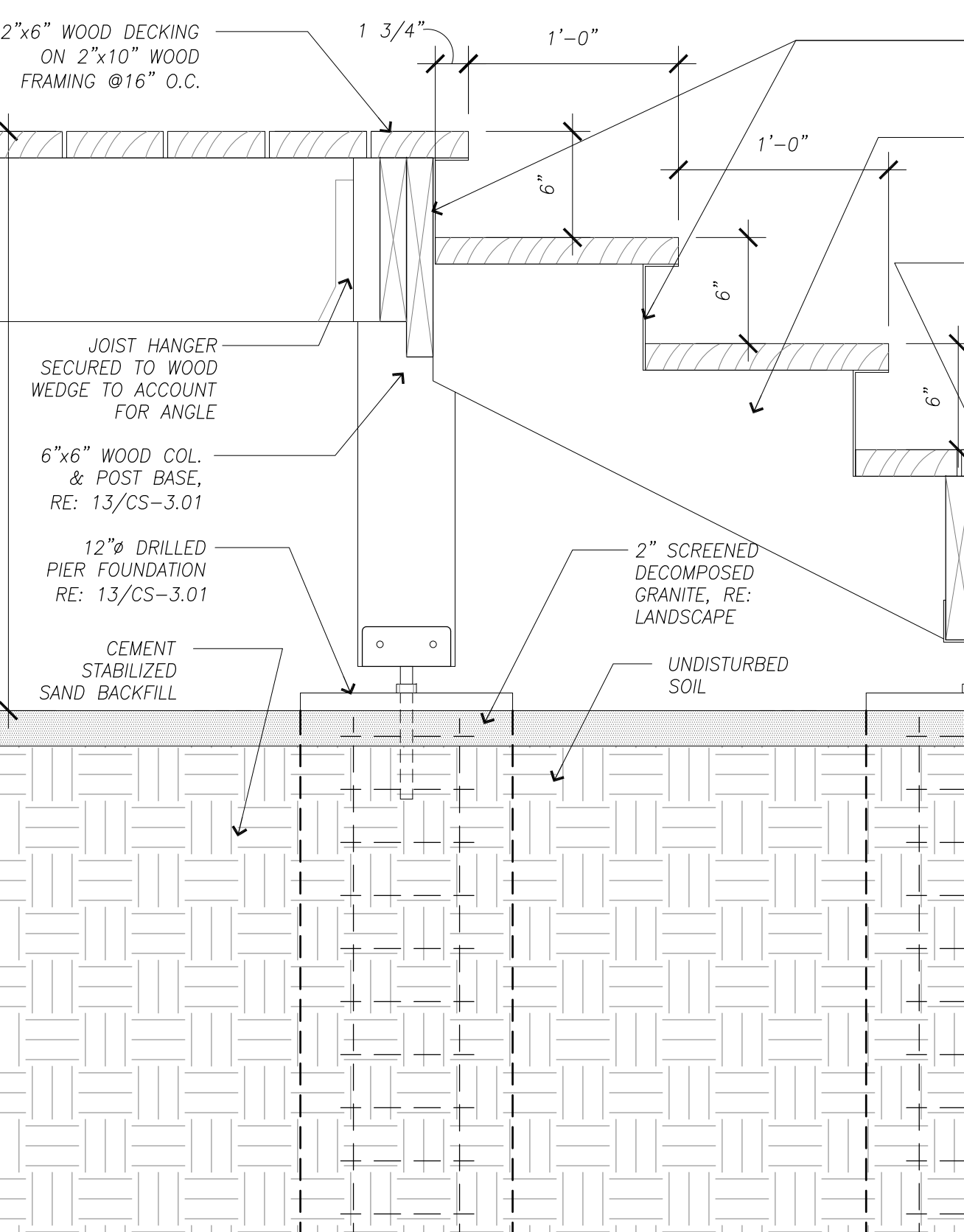
**4 Bench End Detail**  
SCALE: 1/12" = 1'-0"



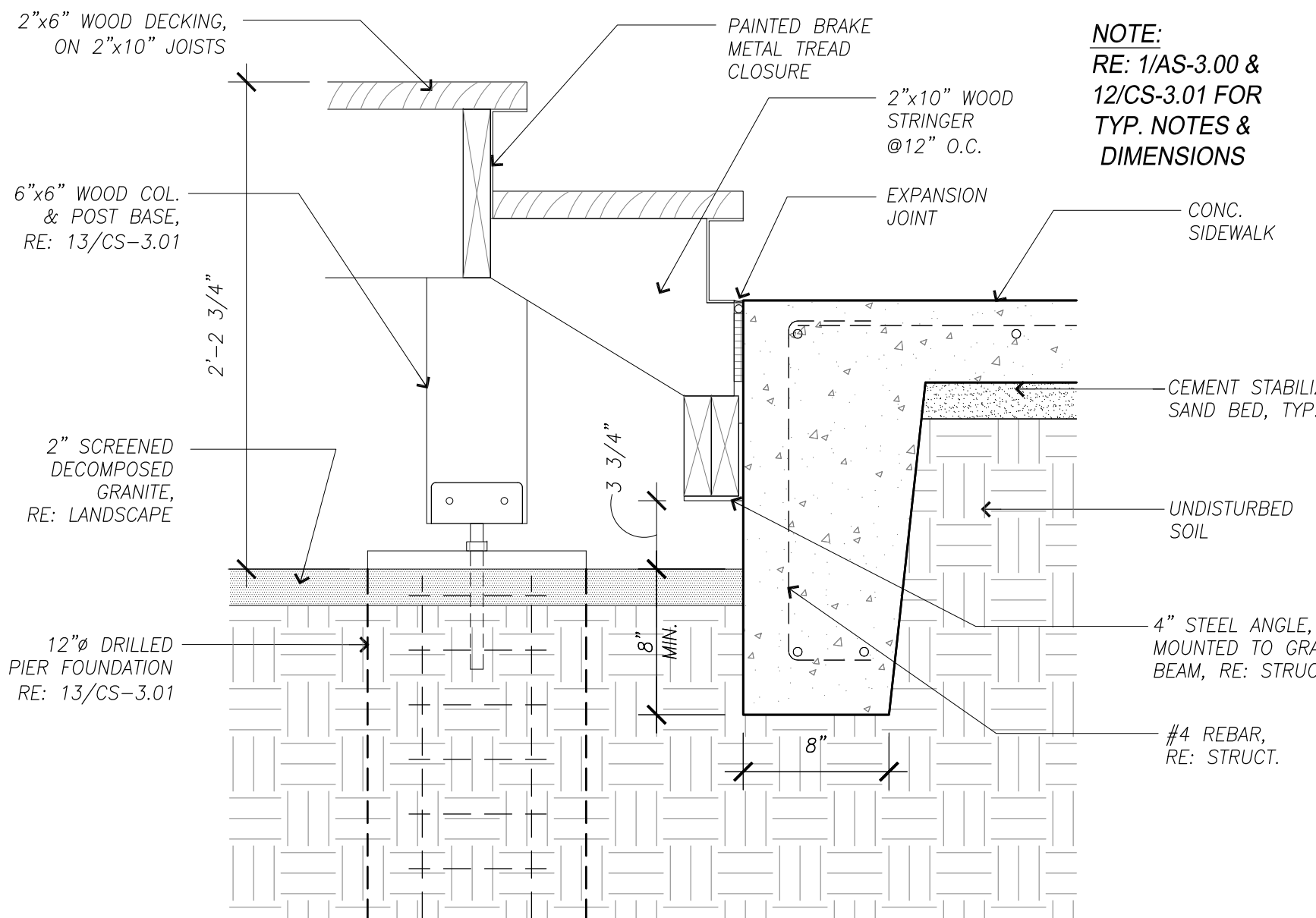
**11 Transformer Enclosure Plan**  
SCALE: 1/12" = 1'-0"



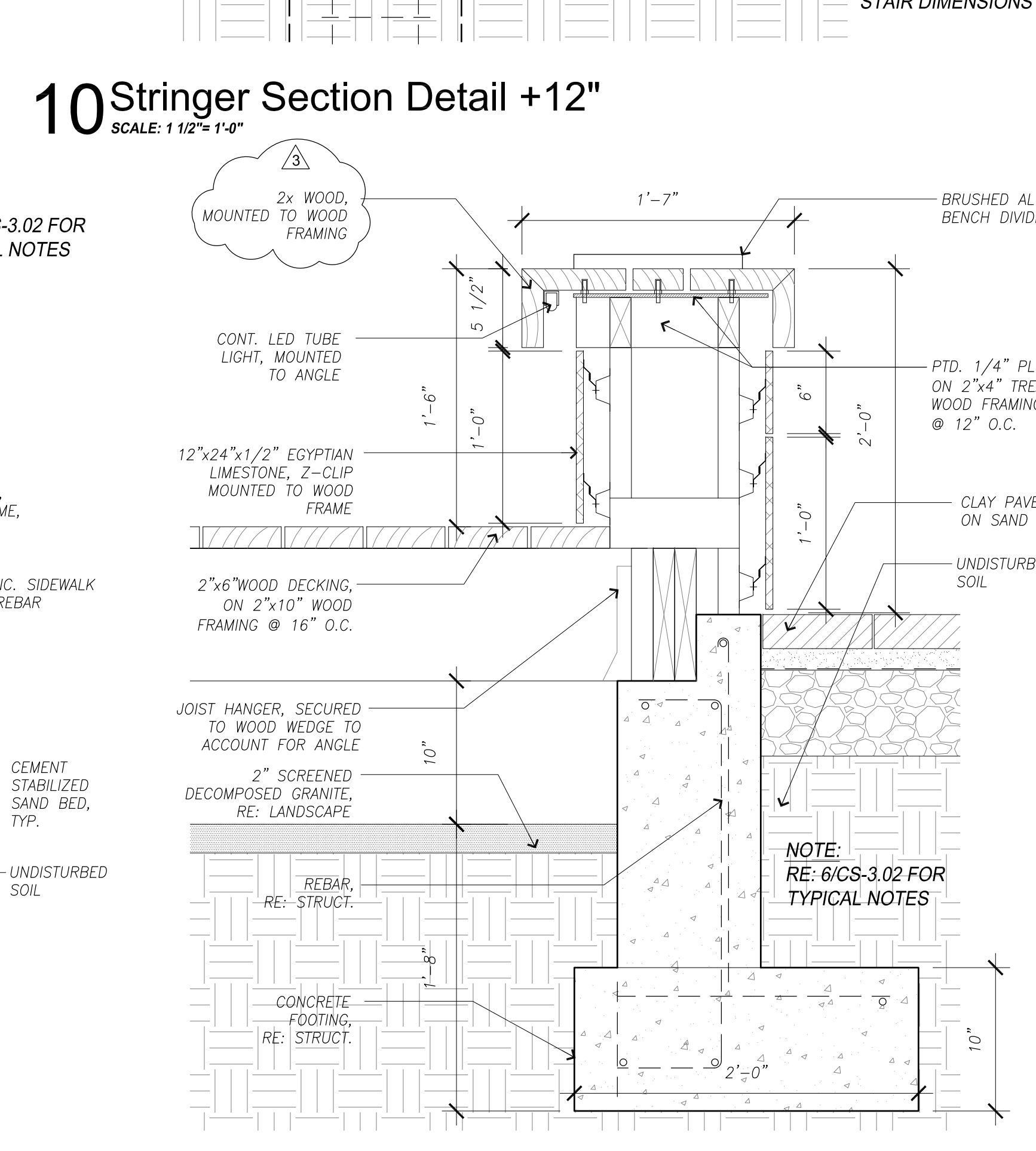
**7 Bench End Detail**  
SCALE: 1/12" = 1'-0"



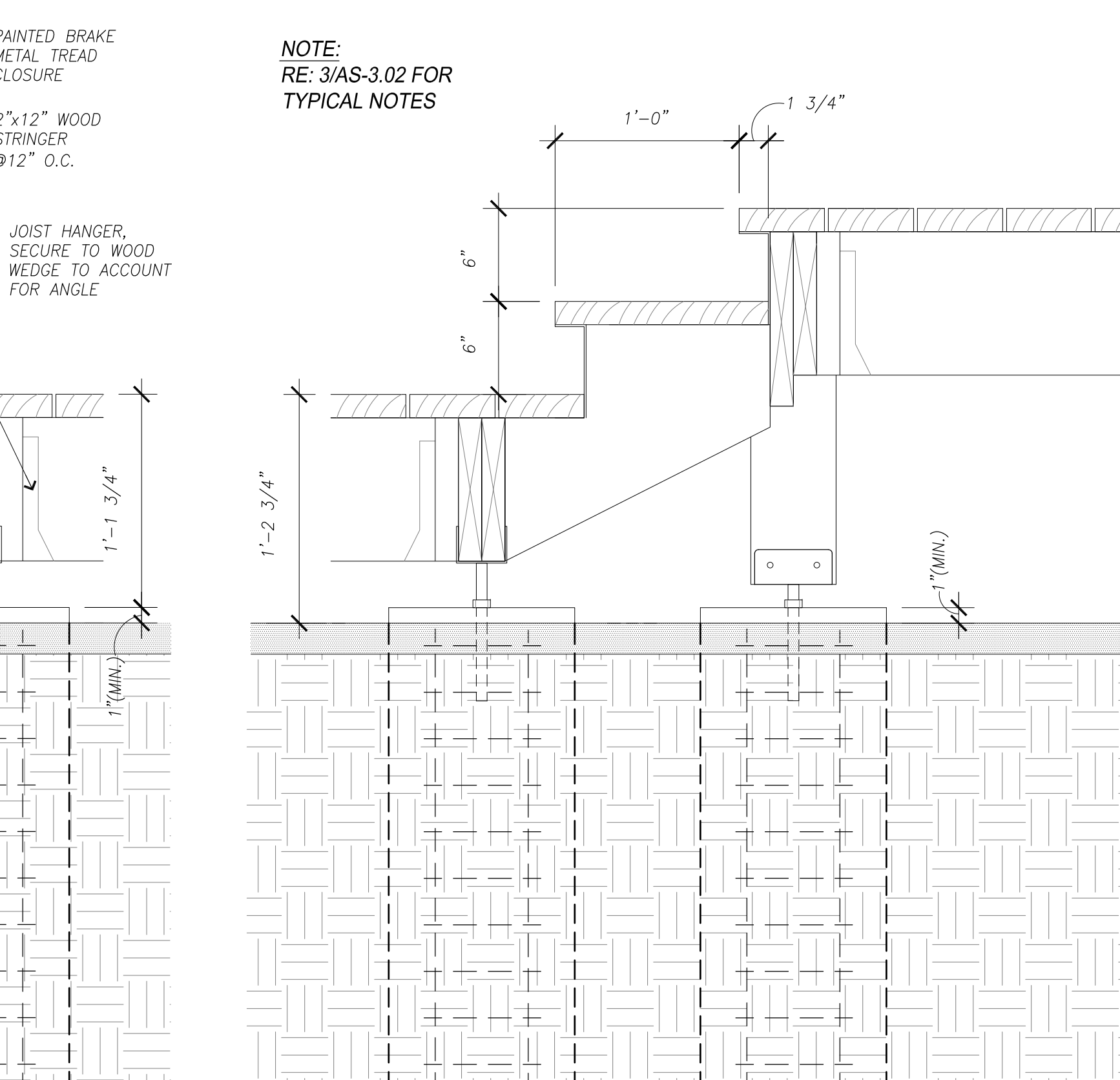
**3 Deck Stair Stringer Section +0"/>+18"**  
SCALE: 1/12" = 1'-0"



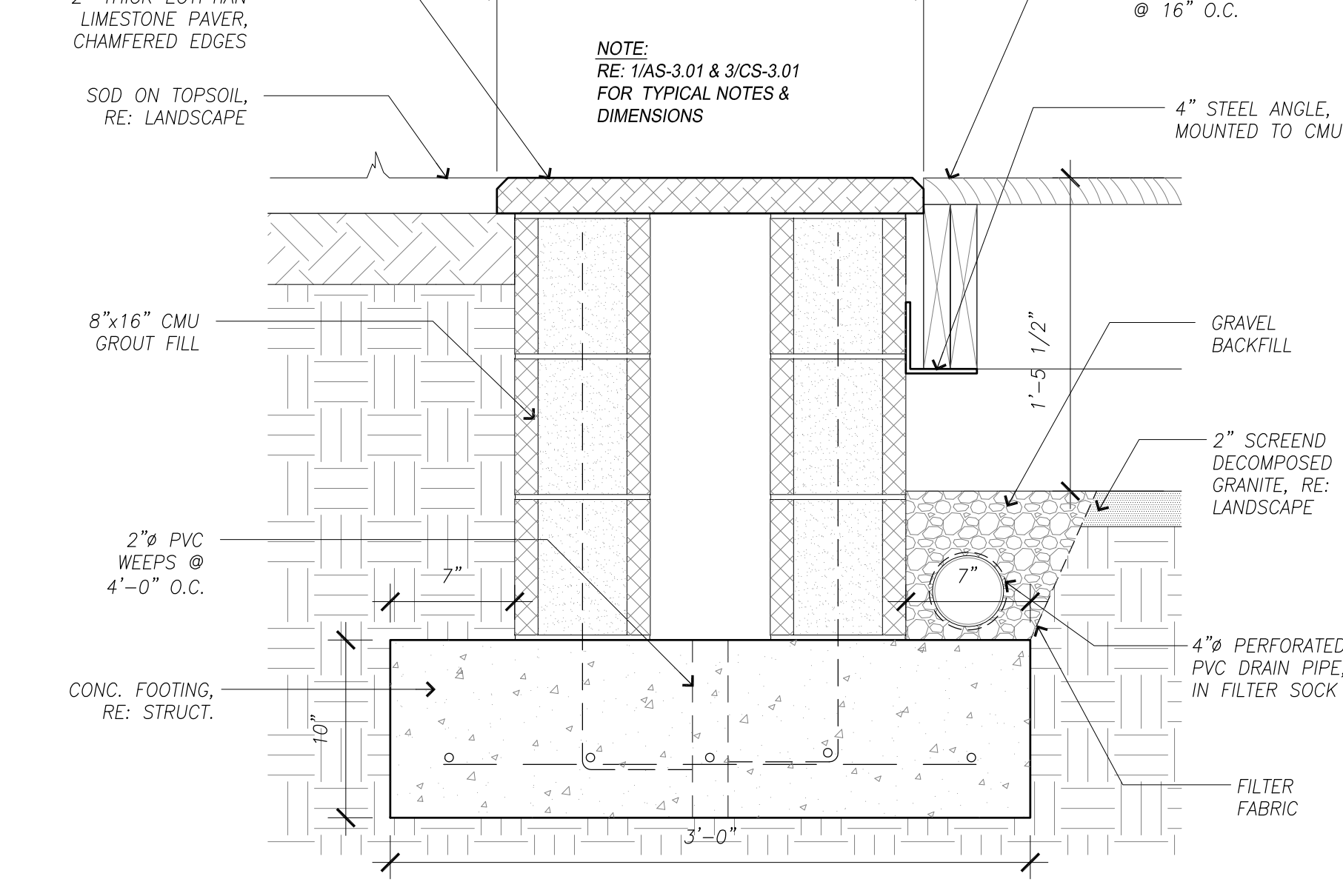
**10 Stringer Section Detail +12"**  
SCALE: 1/12" = 1'-0"



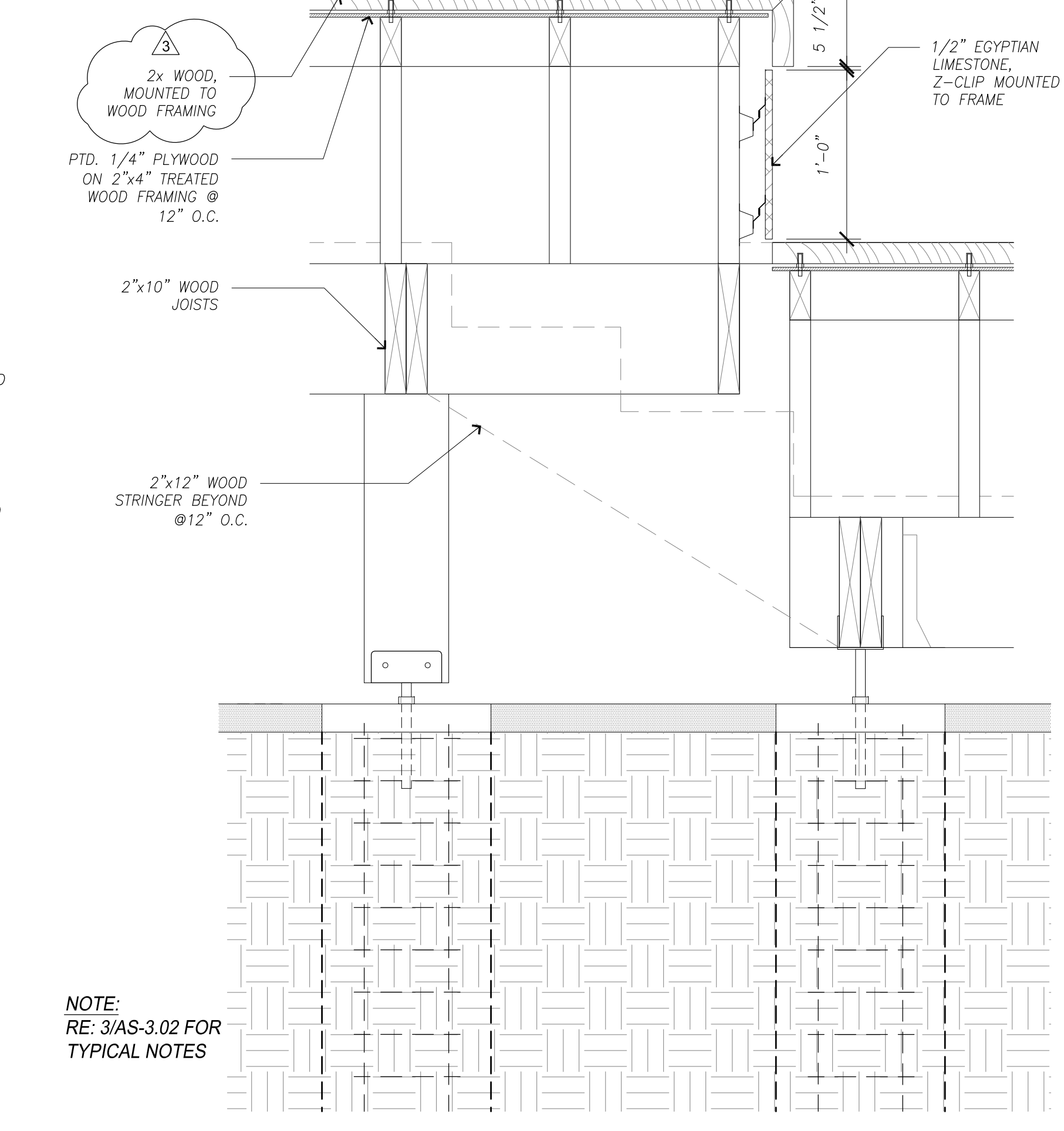
**6 Bench Section +6" Deck/ Sidewalk**  
SCALE: 1/12" = 1'-0"



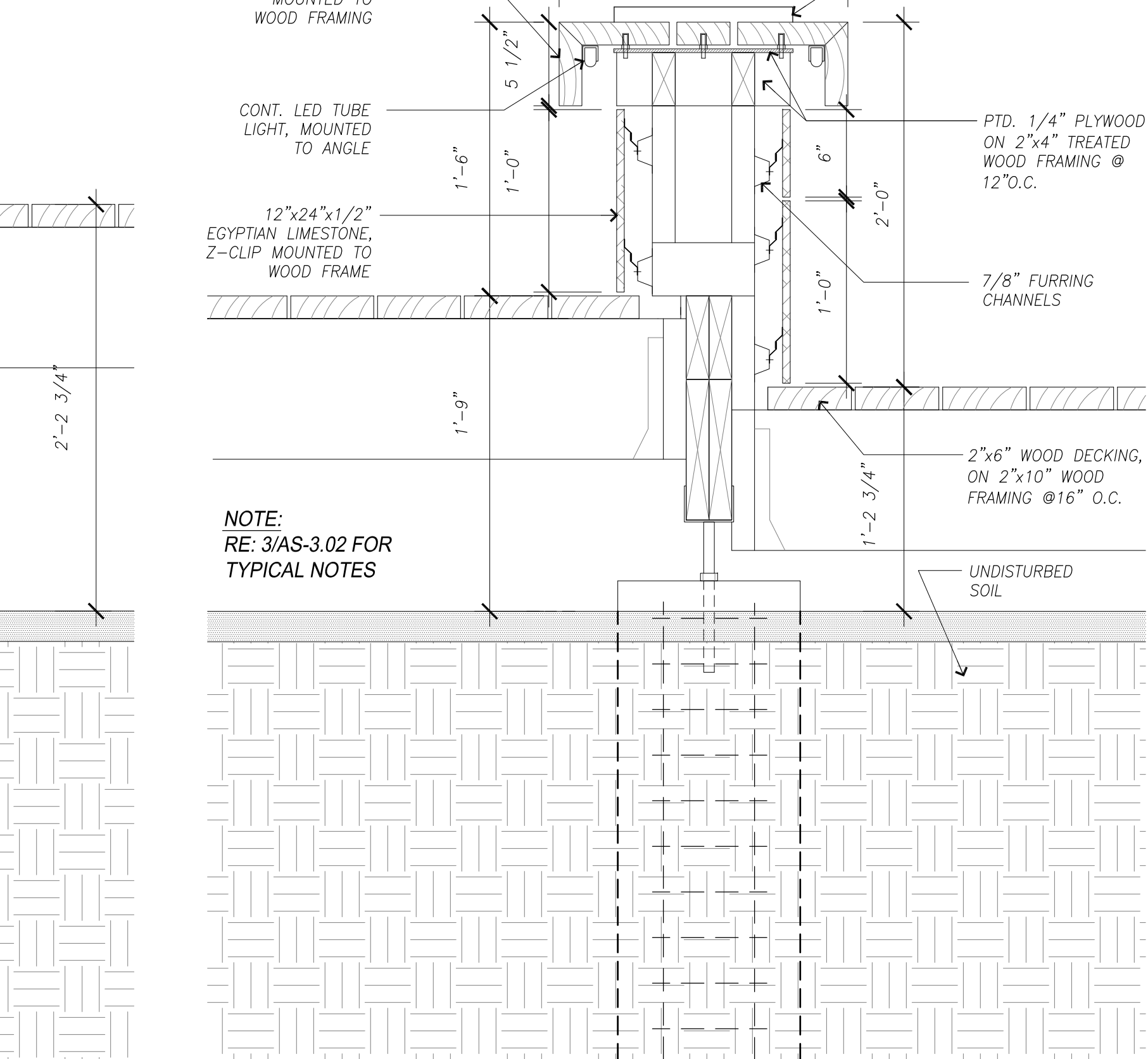
**2 Deck Stair Stringer Section +0"/>+12"**  
SCALE: 1/12" = 1'-0"



**9 Hub Arc Threshold Detail**  
SCALE: 1/12" = 1'-0"



**5 Bench End Detail**  
SCALE: 1/12" = 1'-0"



**1 Bench Section +0"/>+6" Deck**  
SCALE: 1/12" = 1'-0"



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Issue/Revision:

REV	DESCRIPTION	DATE	BY
1	Owner Review	10/13/11	JA
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3	Permit Revisions	07/19/13	JA
4	Permit Revisions	09/20/13	JA
5	Issued for Bid	11/15/13	JA
6	Revisions	01/17/14	RR

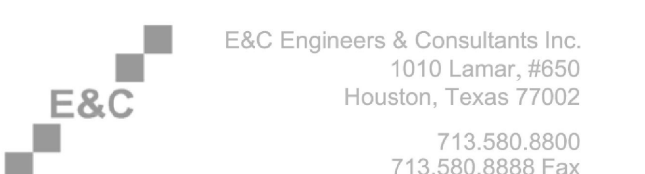


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**Central Campus  
San Jacinto Memorial  
Green Improvements**  
1300 Holman Street  
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Contract No.:	A/E Project No.: 803
Drawn By: JAAP	Date: 05/23/11
Checked By: JS	Date:
Approved By: RR	Date:

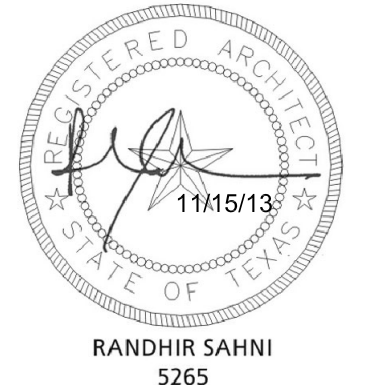
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Site Details

Scale: 3/16" = 1'-0"

**AS-3.02**





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2	Issued For Permit	02/08/13	AP
3	Permit Revisions	11/13/13	JA
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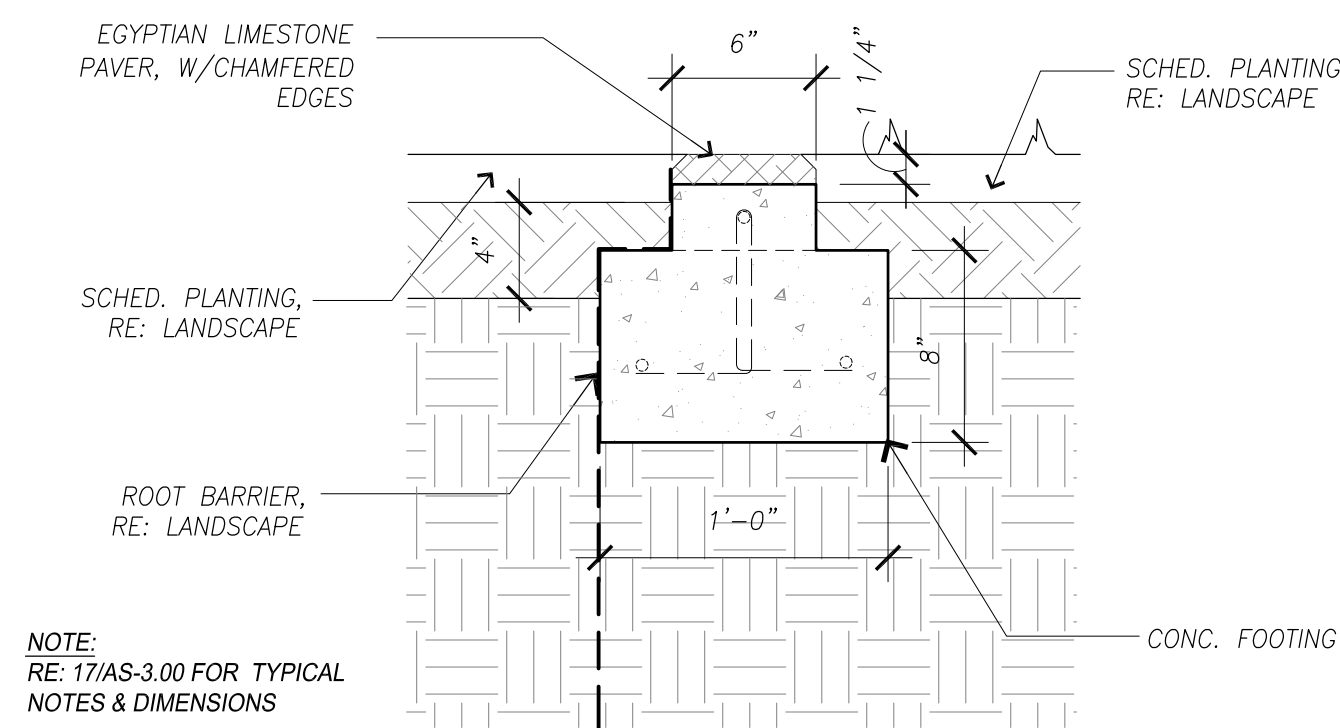
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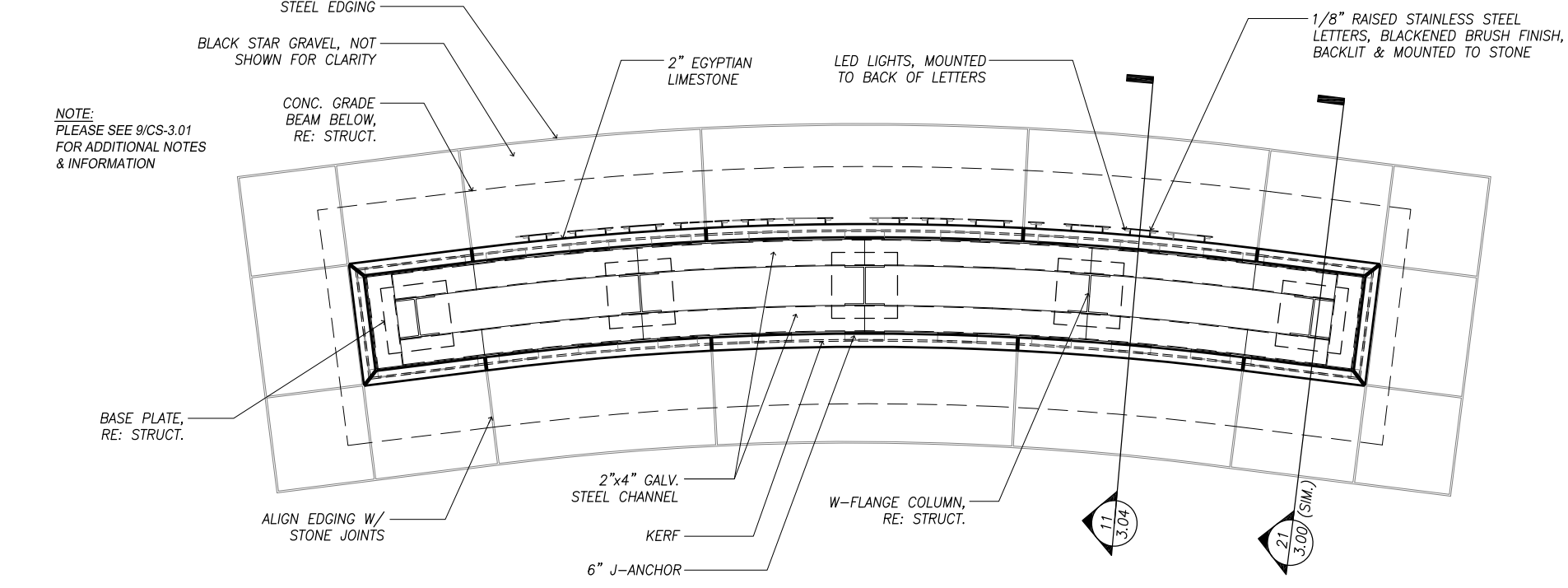
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AS-3.04



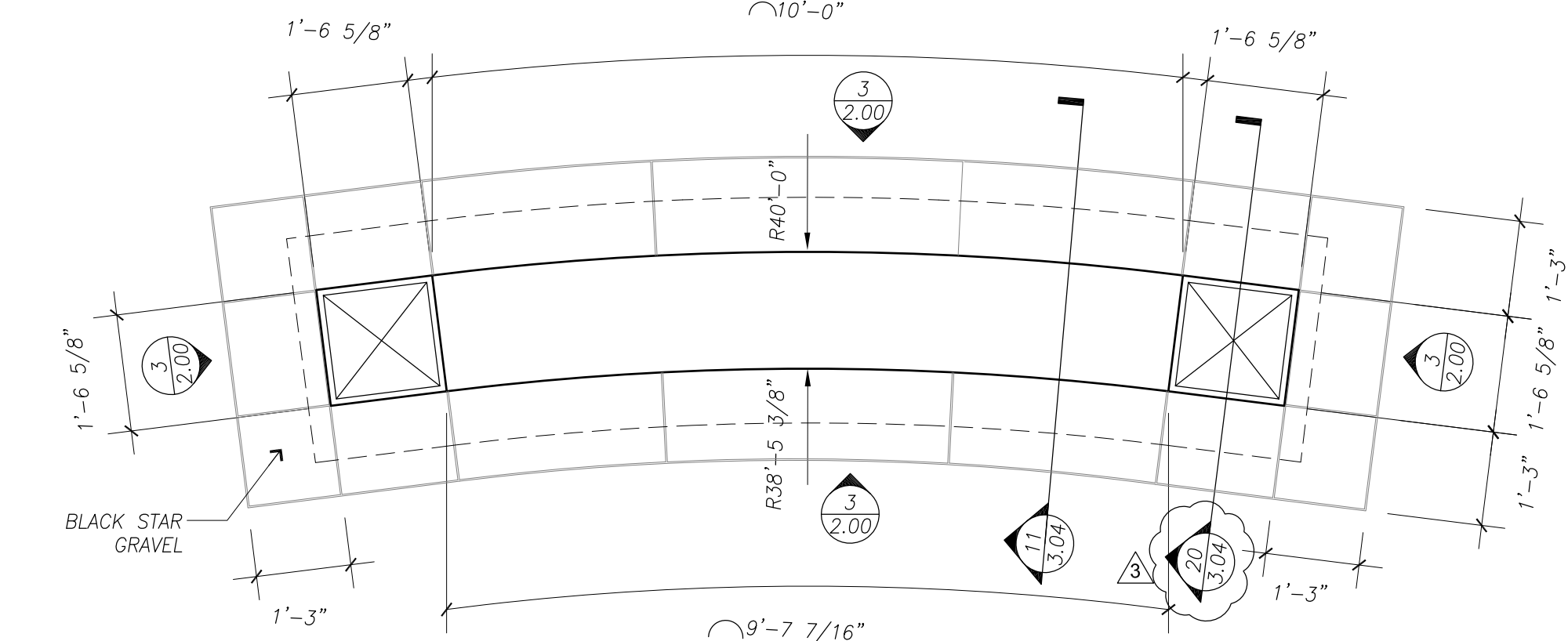
10 Planter Edge Paving Detail  
SCALE: 1 1/2" = 1'-0"

NOTE: RE: 71AS-3.00 FOR TYPICAL NOTES & DIMENSIONS



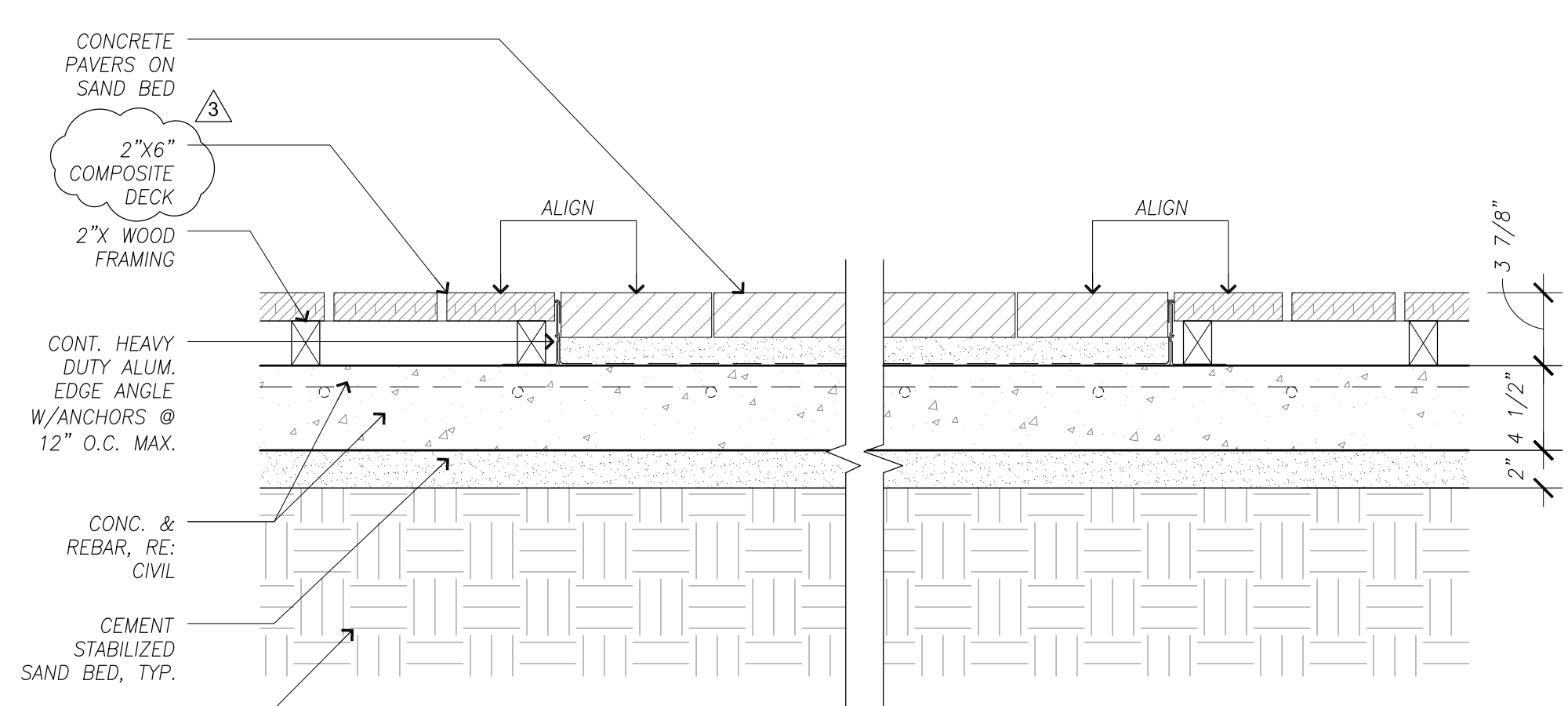
9 Monumental Sign Plan Section  
SCALE: 1/2" = 1'-0"

NOTE: PLEASE SEE 71AS-3.01 FOR ADDITIONAL NOTES & INFORMATION



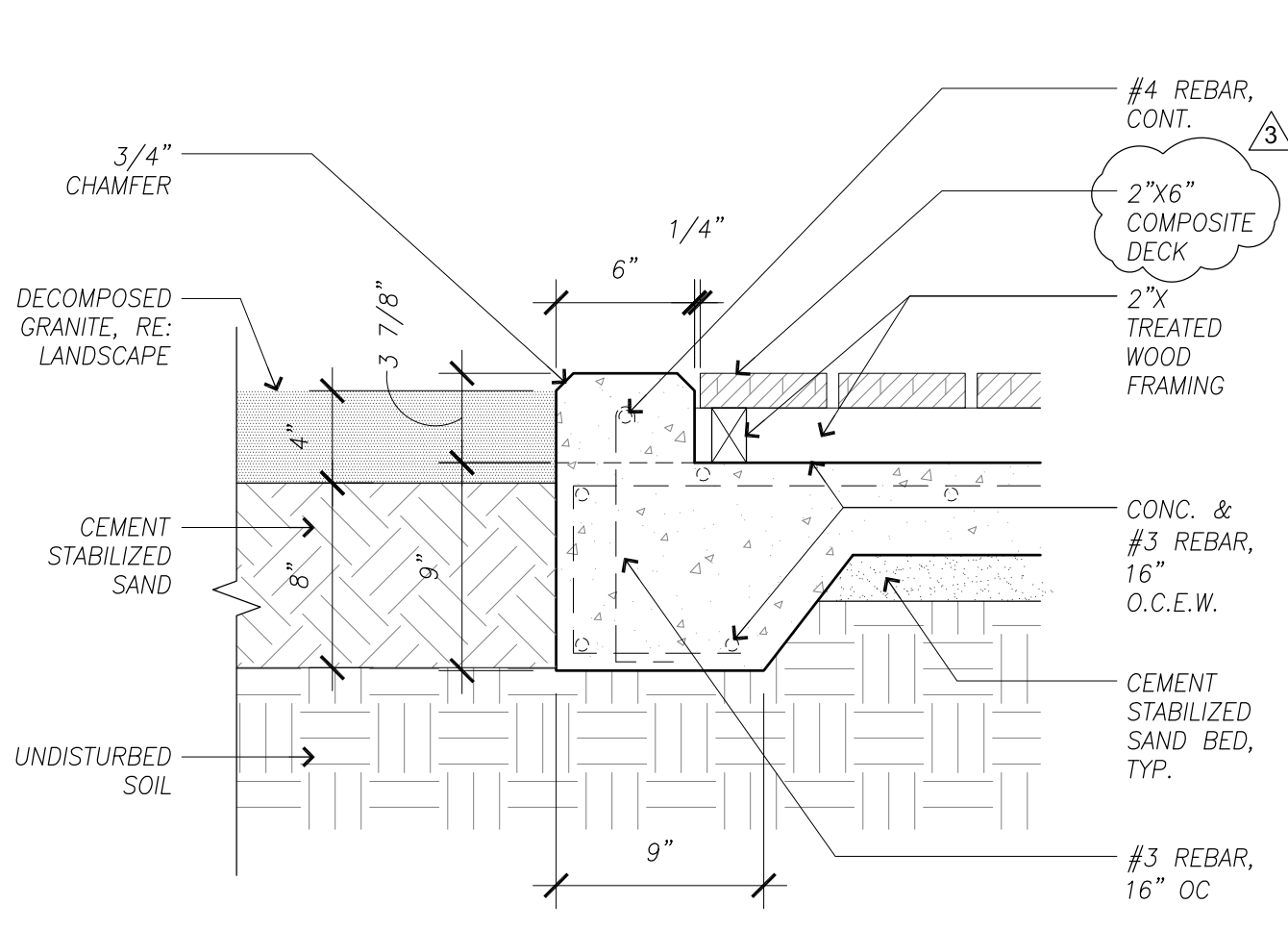
8 Monumental Sign Plan  
SCALE: 1/2" = 1'-0"

NOTE: RE: 71CS-3.01 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



7 Deck Detail  
SCALE: 1 1/2" = 1'-0"

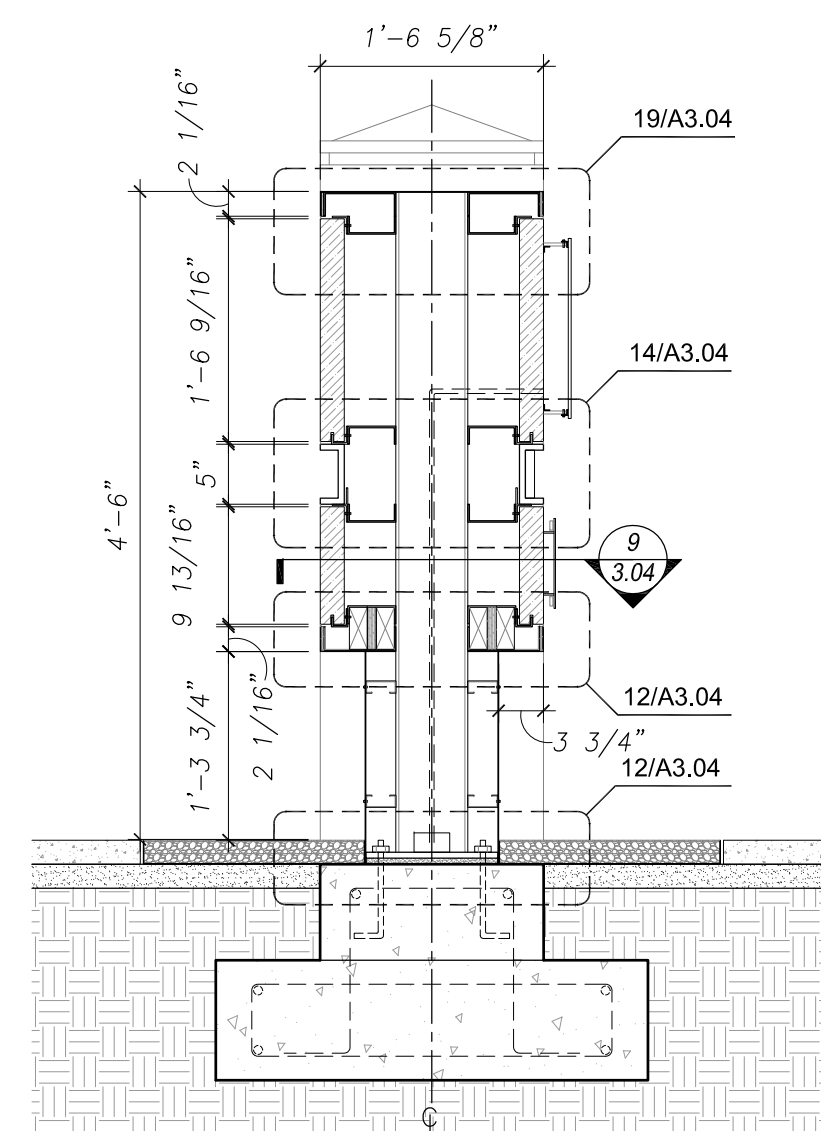
NOTE: RE: 71CS-3.01 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



4 Concrete Curb Detail @ Deck  
SCALE: 1 1/2" = 1'-0"

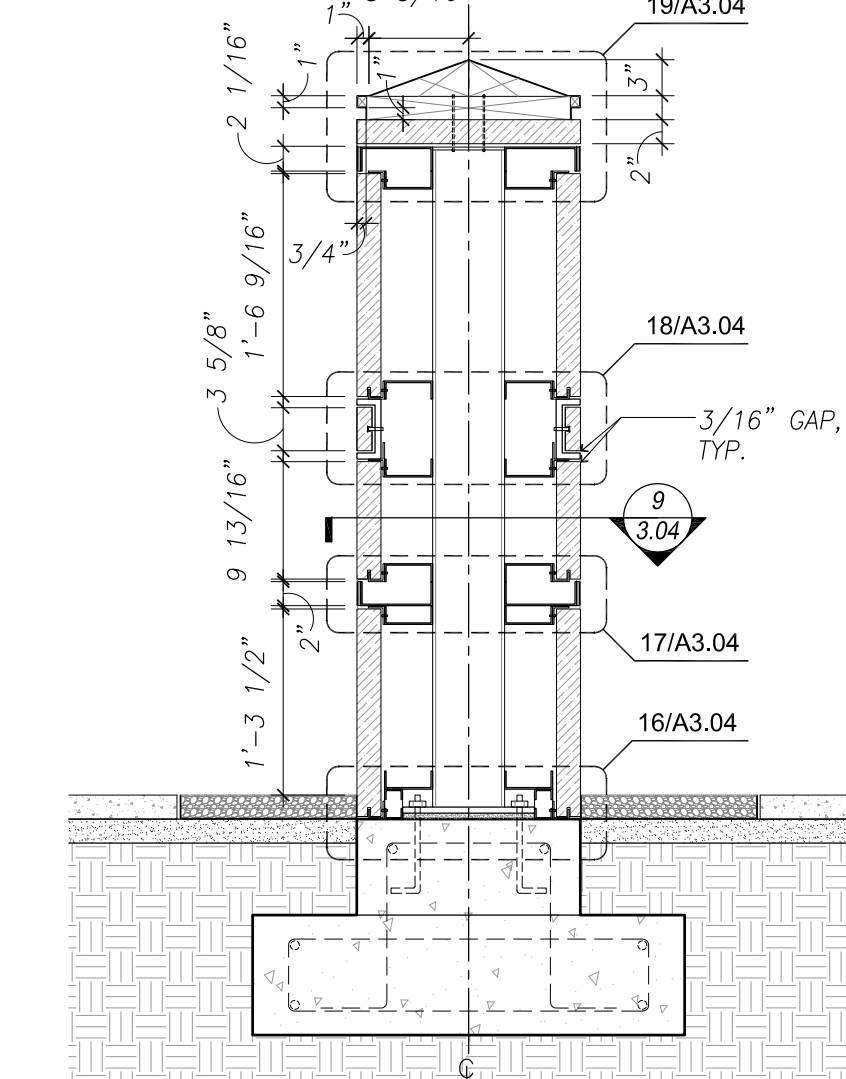
NOTE: RE: 41AS-3.04 FOR TYPICAL NOTES & ADDITIONAL INFORMATION

NOTE:  
SEE CS-1.01 & CS-3.01 FOR  
STRUCTURAL GENERAL  
NOTES & DETAILS



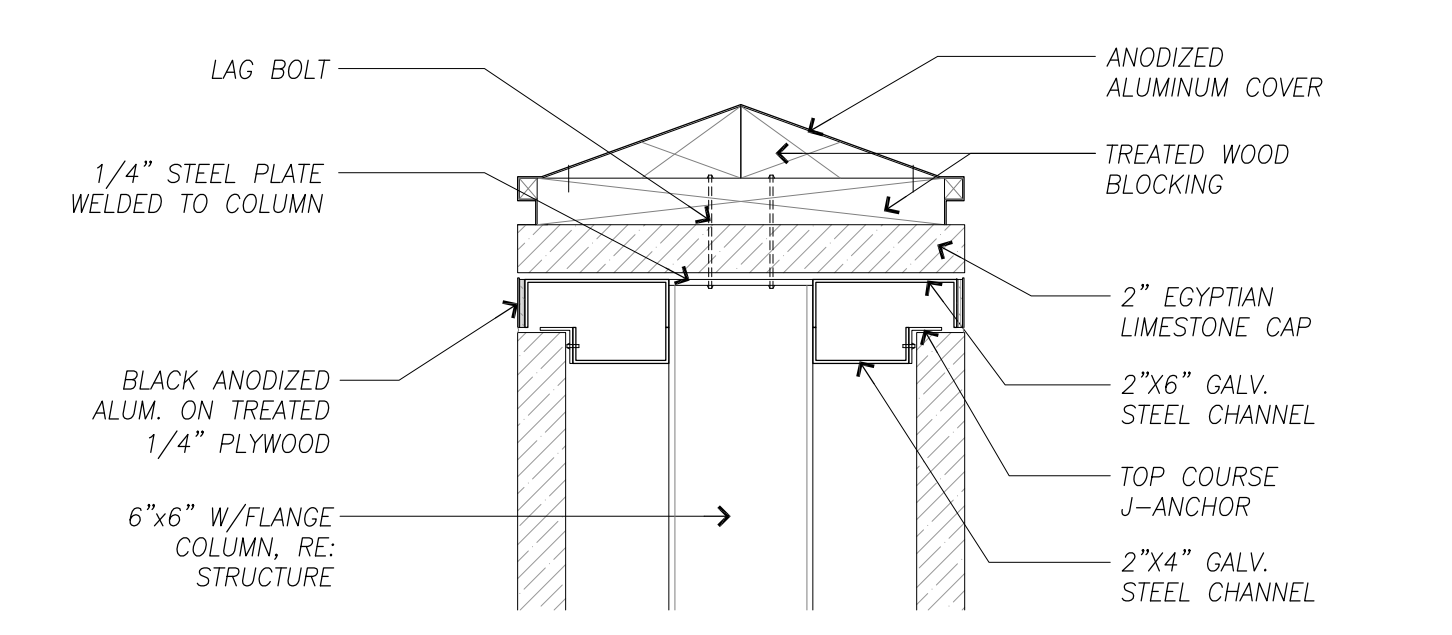
11 Sign Mid Section  
SCALE: 3/4" = 1'-0"

NOTE: RE: 71AS-3.00 FOR TYPICAL NOTES & DIMENSIONS



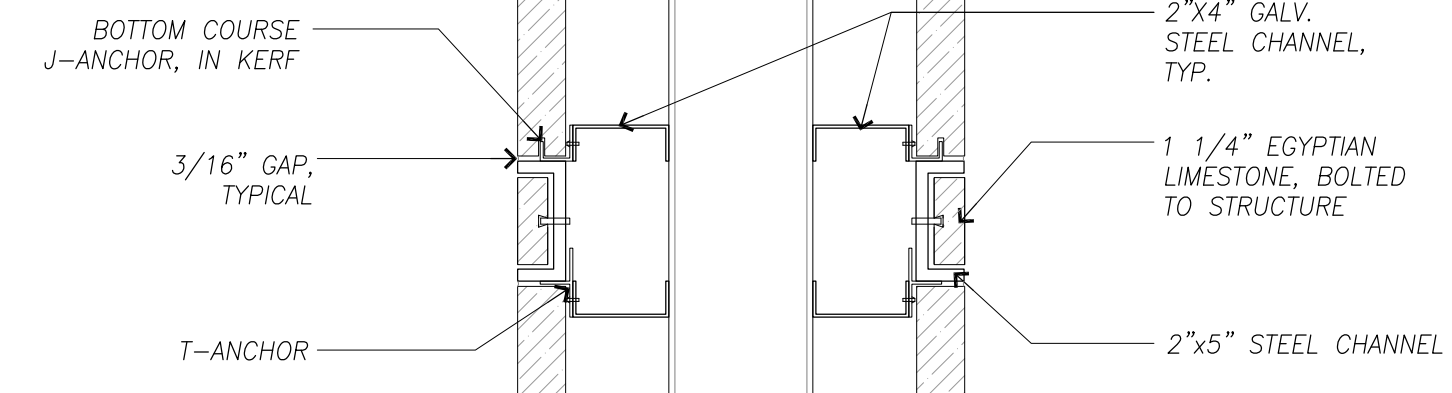
20 Sign End Section  
SCALE: 3/4" = 1'-0"

NOTE: RE: 71CS-3.01 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



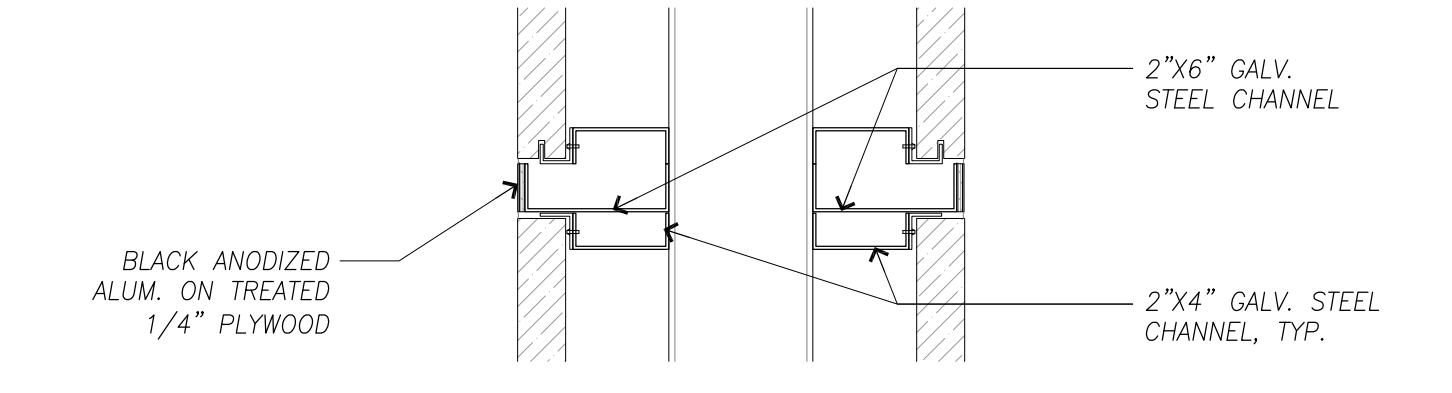
19 Sign Section Detail  
SCALE: 1 1/2" = 1'-0"

NOTE: RE: 71CS-3.01 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



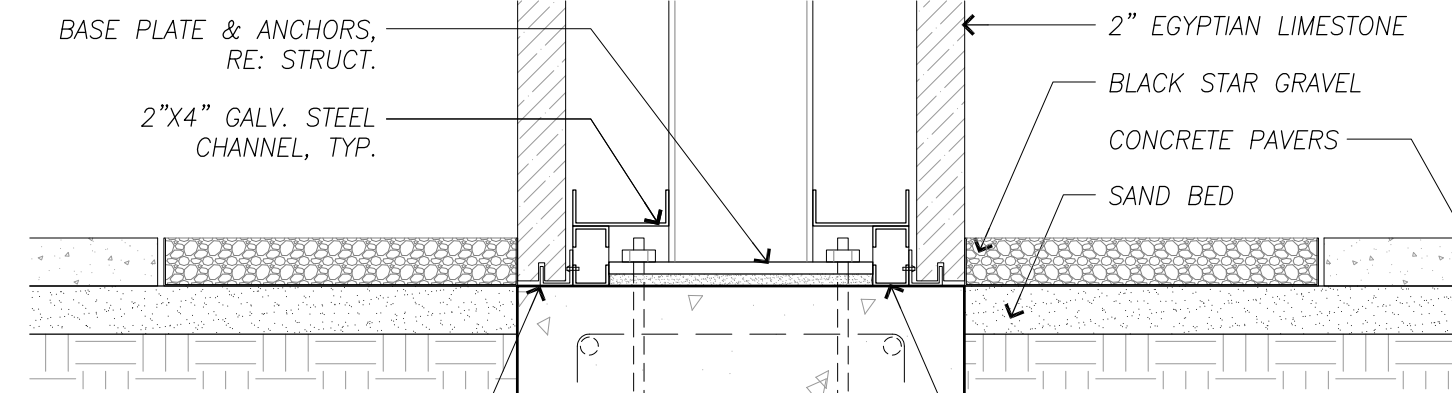
18 Sign Section Detail  
SCALE: 1 1/2" = 1'-0"

NOTE: RE: 71CS-3.01 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



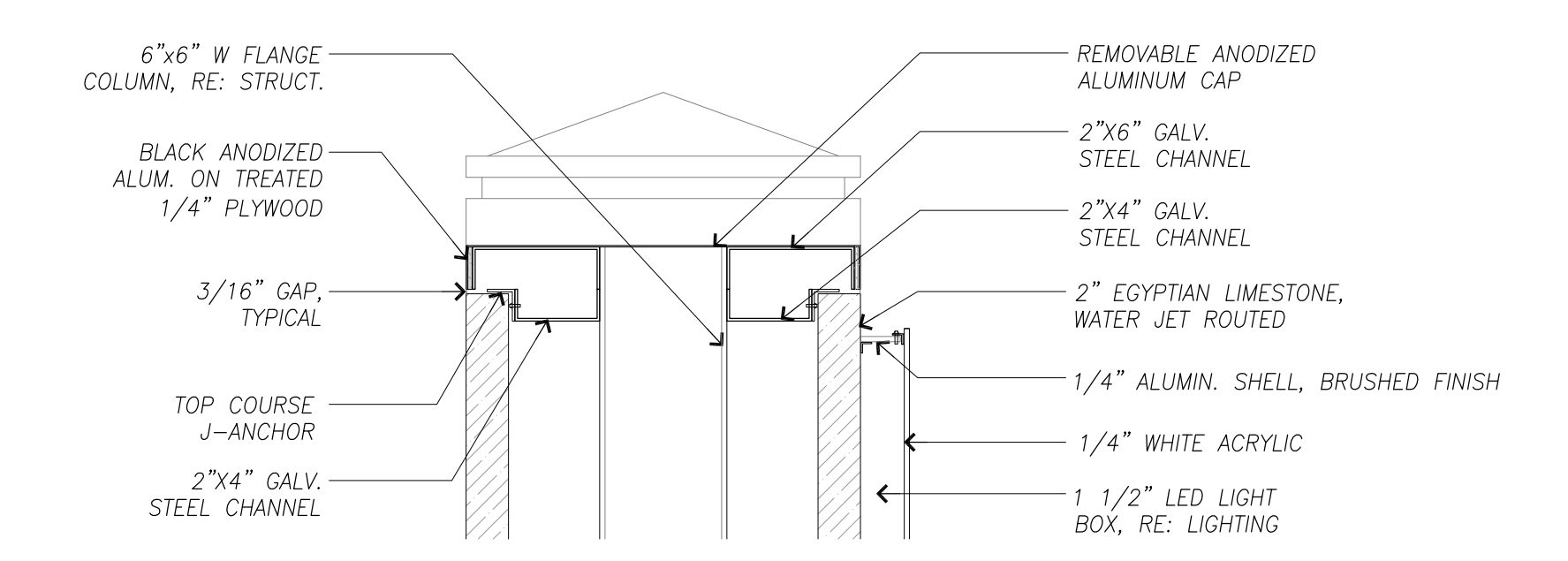
17 Sign Section Detail  
SCALE: 1 1/2" = 1'-0"

NOTE: RE: 71CS-3.01 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



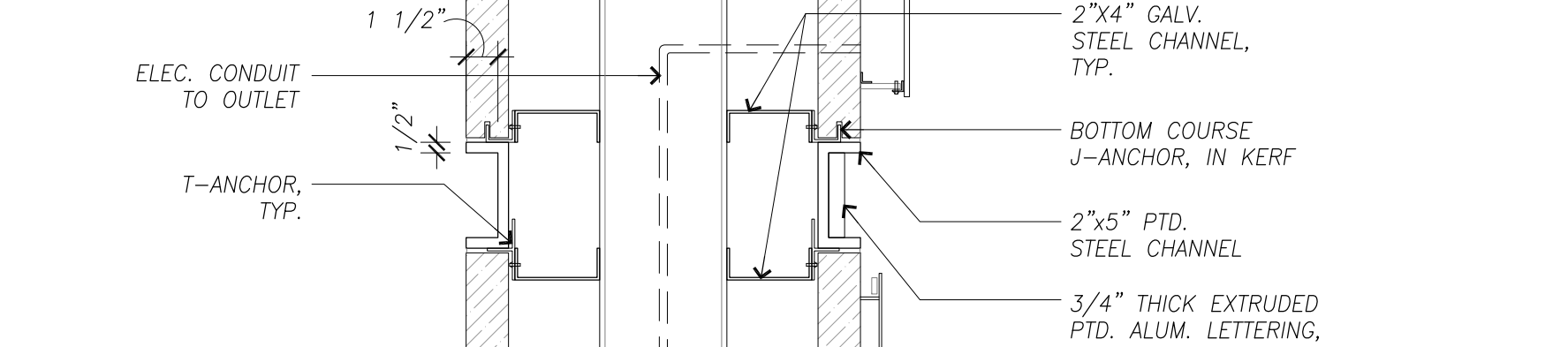
16 Sign Section Detail  
SCALE: 1 1/2" = 1'-0"

NOTE: RE: 71CS-3.01 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



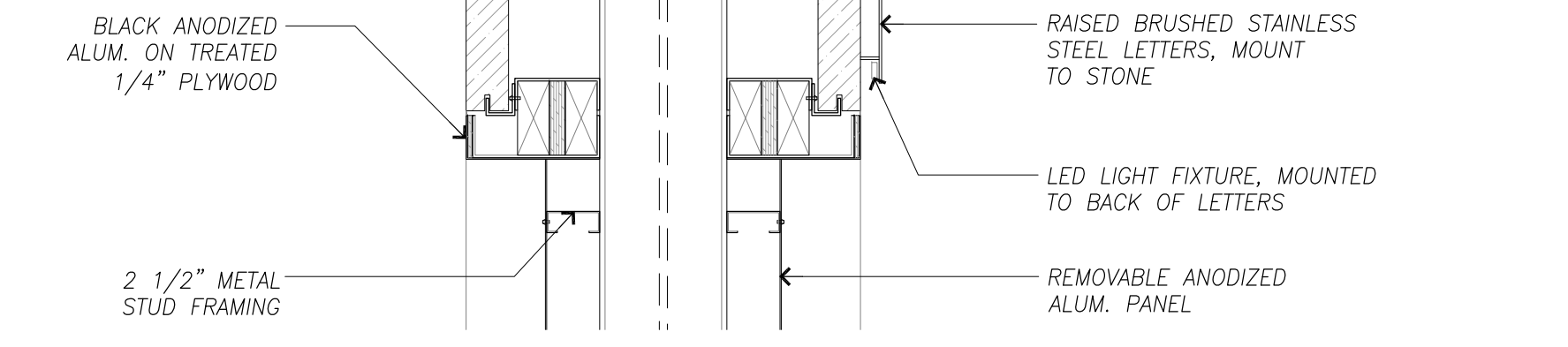
15 Sign Section Detail  
SCALE: 1 1/2" = 1'-0"

NOTE: RE: 71CS-3.01 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



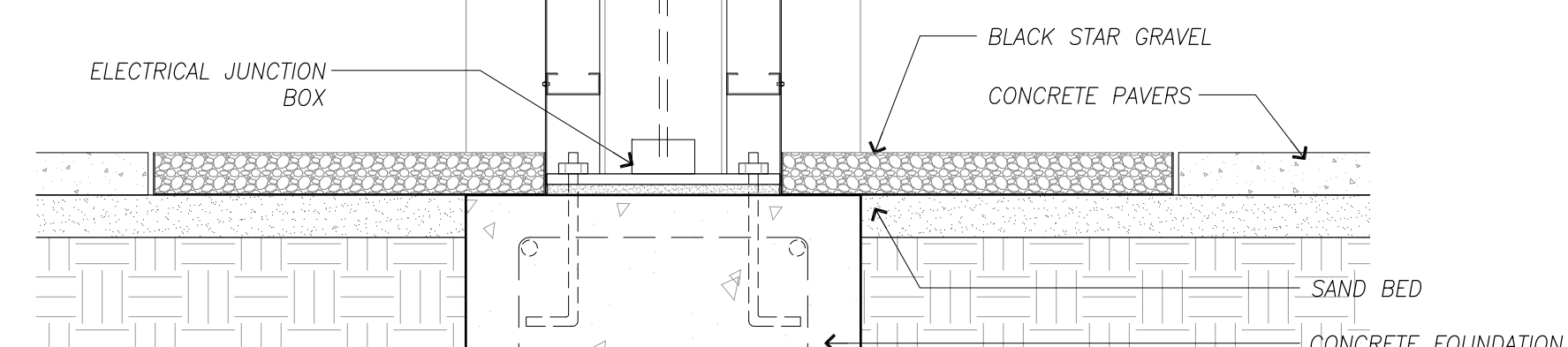
14 Sign Section Detail  
SCALE: 1 1/2" = 1'-0"

NOTE: RE: 71CS-3.01 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



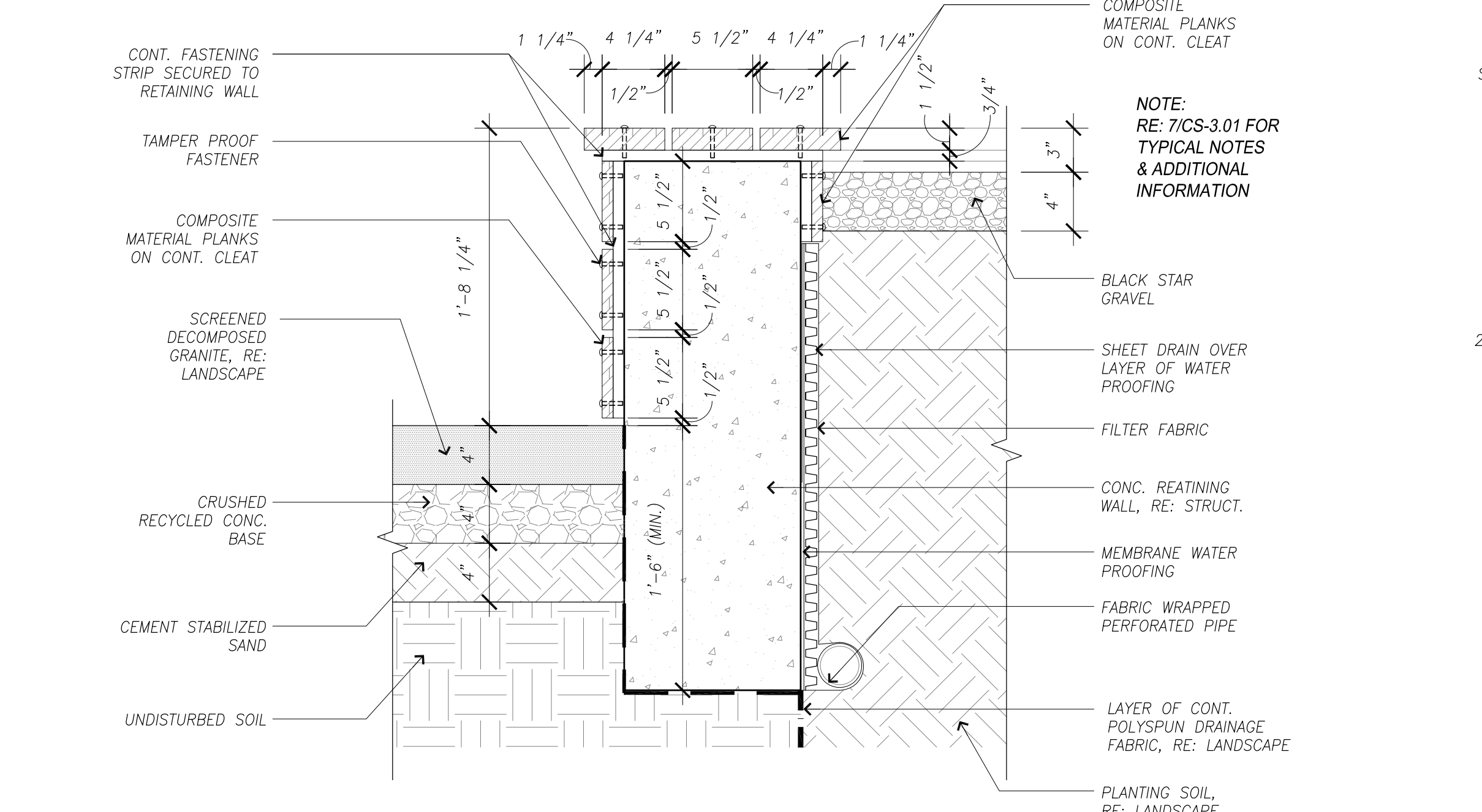
13 Sign Section Detail  
SCALE: 1 1/2" = 1'-0"

NOTE: RE: 71CS-3.01 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



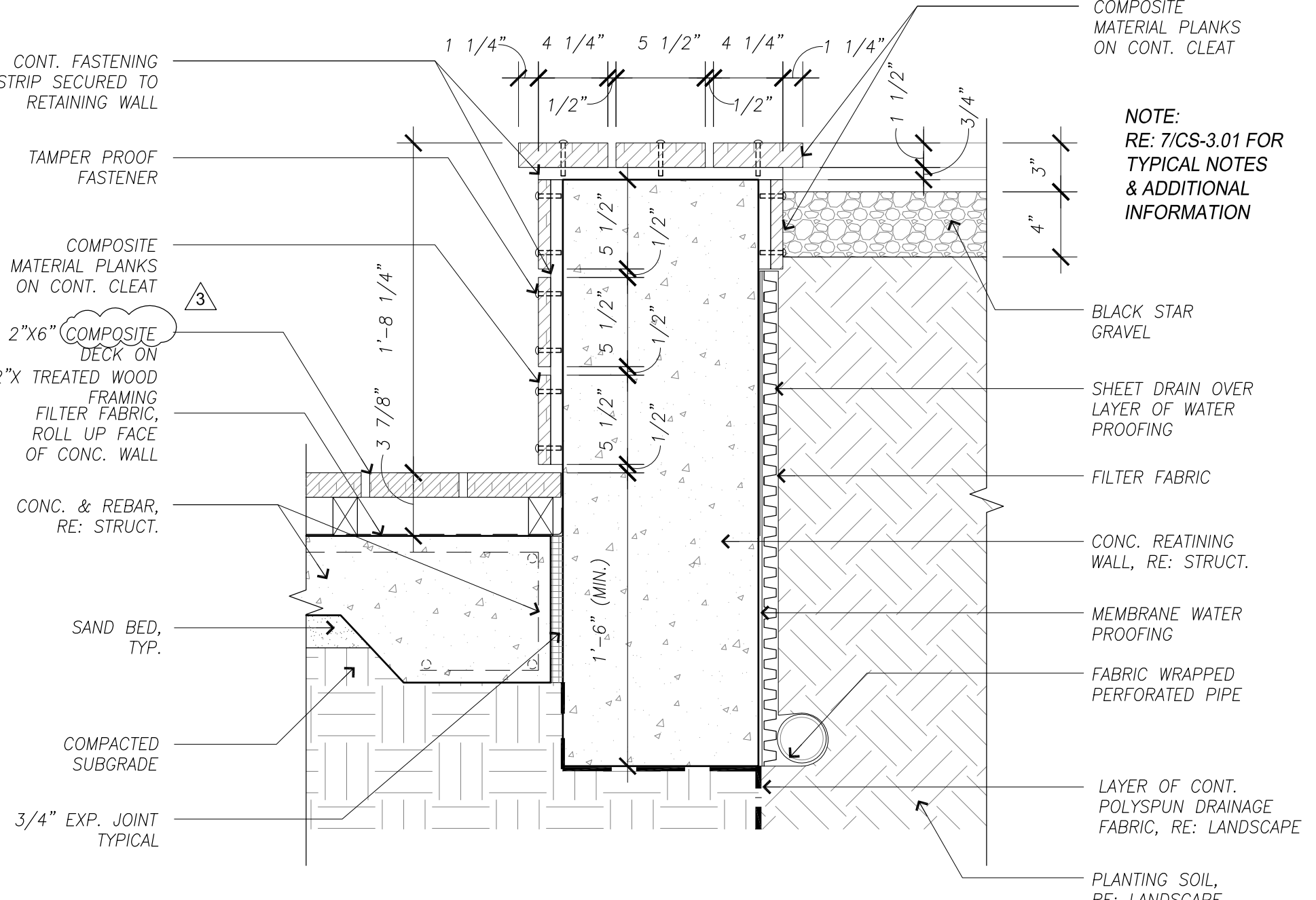
12 Sign Section Detail  
SCALE: 1 1/2" = 1'-0"

NOTE: RE: 71CS-3.01 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



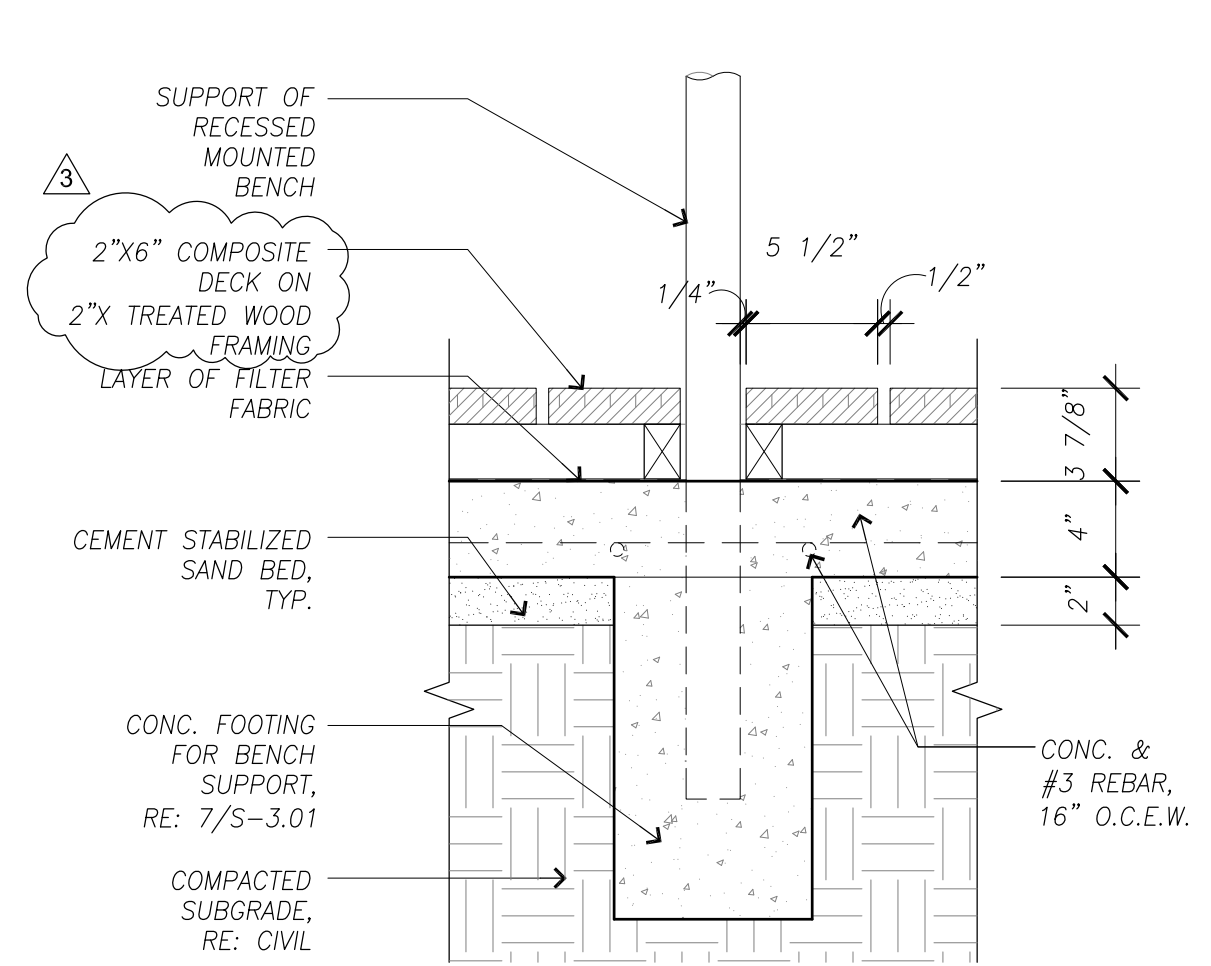
6 Bench Detail @ Decomposed Granite  
SCALE: 1 1/2" = 1'-0"

NOTE: RE: 41AS-3.04 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



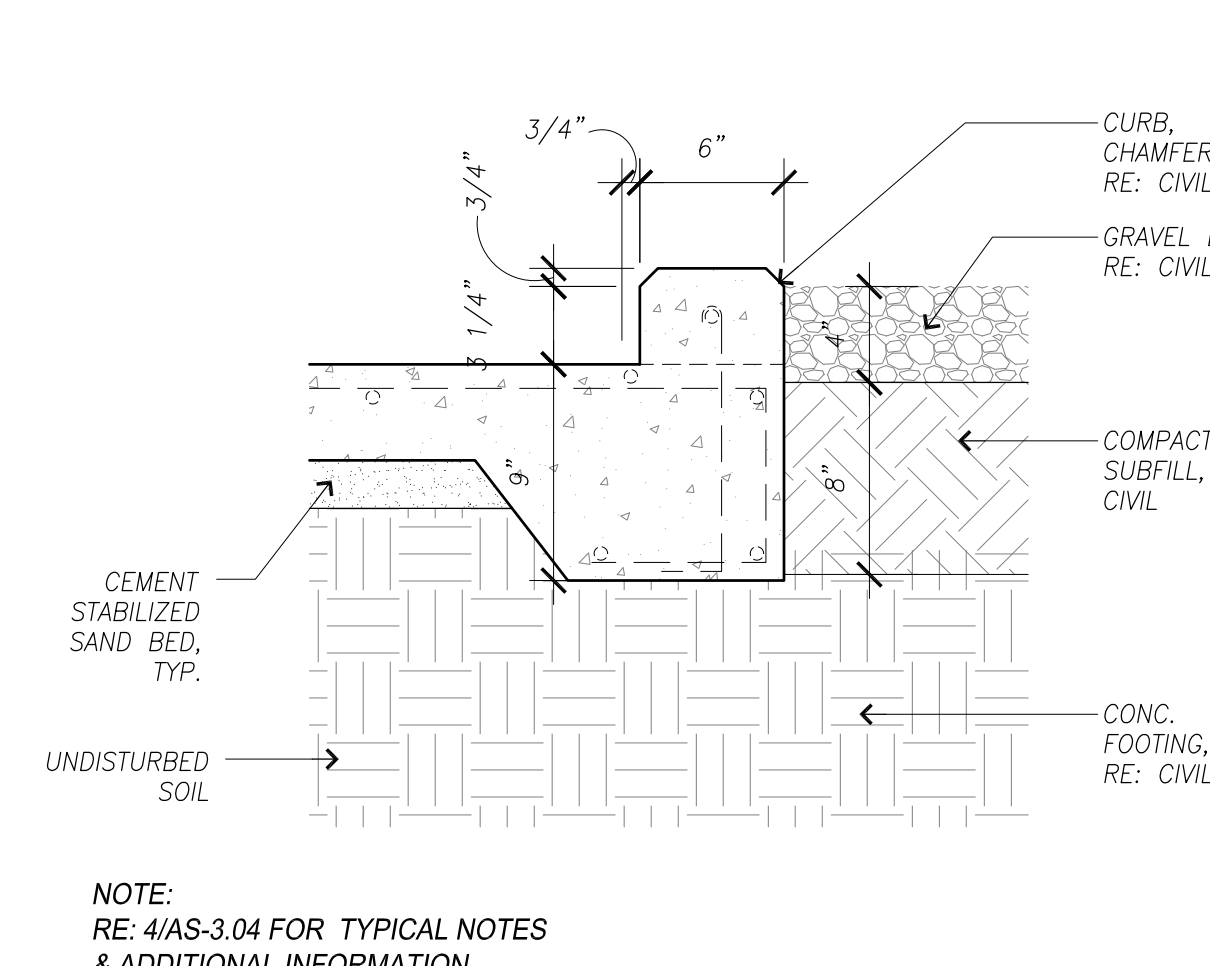
5 Bench Detail @ Deck  
SCALE: 1 1/2" = 1'-0"

NOTE: RE: 41AS-3.04 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



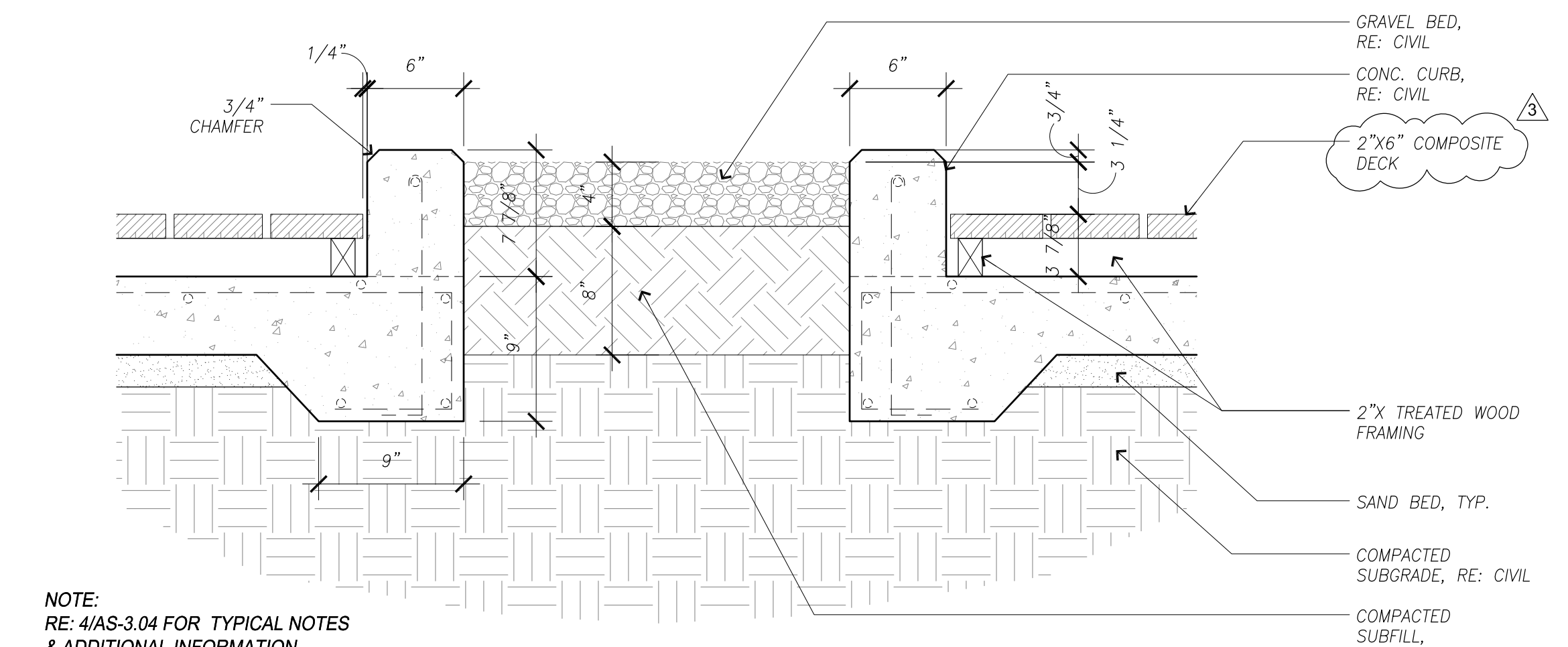
3 Bench Support Detail  
SCALE: 1 1/2" = 1'-0"

NOTE: RE: 41AS-3.04 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



2 Concrete Curb Detail @ Gravel Bed  
SCALE: 1 1/2" = 1'-0"

NOTE: RE: 41AS-3.04 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



1 Gravel Bed Detail  
SCALE: 1 1/2" = 1'-0"

NOTE: RE: 41AS-3.04 FOR TYPICAL NOTES & ADDITIONAL INFORMATION



- GENERAL PLANTING / LANDSCAPE NOTES:**
- TURN ALL EXISTING MULCHED BEDS, INCLUDING TREE RINGS.
  - REMOVE MULCH TO 12 INCHES AWAY FROM ALL TREE TRUNKS.
  - LOWER ALL TREE RING MULCH CIRCLES TO NOT EXCEED 2 INCHES ABOVE ADJACENT GRADE.
  - REMOVE ALL EXISTING TREE STAKES AND GUY WIRES.
  - AMEND SOILS PER SPECIFICATIONS 32 90 00, 2.3A2.2.3C3, AND 2.3E PRIOR TO PROVIDING ANY ADDITIONAL PLANT MATERIALS.
  - PRUNE ALL LEADERS FROM BASE OF EXISTING TREES.
  - TREAT ALL ANT BEDS, RE: SPECIFICATIONS 32 01 90
  - WEED ALL EXISTING PLANTING BEDS WITHIN AREA OF WORK.
  - REFER TO 02/LP-1.01 FOR PLANT SCHEDULE, SHEET LP-1.02 FOR LANDSCAPE DETAILS AND SPECIFICATIONS 32 90 00.
  - LANDSCAPE CONTRACTOR SHALL STAKE LOCATION OF TREES FOR APPROVAL OF ARCHITECT PRIOR TO INSTALLING ALL TREES.
  - LANDSCAPE CONTRACTOR SHALL INDICATE PLANTING BED LAYOUTS WITH SURVEYOR'S PAINT FOR APPROVAL OF LANDSCAPE ARCHITECT PRIOR TO INSTALLING ALL PLANTING BEDS.
  - LANDSCAPE CONTRACTOR SHALL PROVIDE 48 HOUR NOTICE AFTER TREE AND BED LOCATIONS ARE STAKED AND MARKED FOR FIELD APPROVAL. GC WILL BE RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH RELOCATING MATERIALS IF THE OPPORTUNITY TO REVIEW AND APPROVE THE LAYOUTS PRIOR TO INSTALLATION IS NOT PROVIDED.
  - PROVIDE IRRIGATION SYSTEM COORDINATION WITH PLANTING BED AND TREE LAYOUTS. REFER TO IRRIGATION DRAWINGS U-1.01, U-1.02, AND U-1.03
  - LANDSCAPE CONTRACTOR SHALL NOTE THAT THE ONE-YEAR SCHEDULED MAINTENANCE DOES NOT BEGIN UNTIL THE PROVIDED LANDSCAPE AND IRRIGATION MATERIALS ARE ACCEPTED. IN WRITING BY THE LANDSCAPE ARCHITECT, REGARDLESS OF SITE HARDSCAPE SUBSTANTIAL COMPLETION APPROVAL DATES. MAINTENANCE SHALL BE PROVIDED UPON INSTALLATION OF PLANT MATERIALS, BUT SHALL NOT COUNT TOWARDS THE ONE-YEAR MAINTENANCE PERIOD. RE: SECTION 32 01 90.
  - NOT USED.
  - PROVIDE SPRAYING OF COMPOST TEA FOR ALL HYDROMULCH AREAS. RE: SPECIFICATION SECTION 32 92 13 AND PLANTING AREAS PER SPECIFICATION 32 90 00. PROVIDE SPECIFIED FERTILIZERS, ROOT STIMULANTS, BACKFILL MIX AND SOIL AMENDMENTS FOR ALL AREAS AS INDICATED IN SPECIFICATION 32 90 00.

- CONTRACTOR SHALL LOCATE UNDERGROUND UTILITIES PRIOR TO EXCAVATING OR TRENCHING. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING, AS REQUIRED ANY DAMAGED UTILITY AT NO ADDITIONAL COST TO OWNER.
- BED EDGES AND TREE LOCATIONS SHALL BE STAKED FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO ANY BED PREPARATION. BED EDGES SHALL HAVE SMOOTH, WELL DEFINED, EVEN AND CONSISTENT CURVES AS SHOWN ON THE DRAWINGS.
- THE QUANTITIES SHOWN ON THE PLANT SCHEDULE ARE FOR THE CONTRACTOR'S CONVENIENCE; VERIFY ALL QUANTITIES AND REPORT ANY DISCREPANCIES TO THE OWNER'S REP. PRIOR TO ORDERING MAT'L'S. DISCREPANCIES WITH THE PLAN SHALL NOT ENTITLE THE CONTRACTOR TO ADDITIONAL RENUMERATION.
- ALL PLANTS ARE TO BE SPECIMEN QUALITY, FULL POT AND HEAD, SYMMETRICAL FOLIAGE AND BRANCHING STRUCTURE. SHRUBS SHALL BE FULL TO GROUND.
- TREES SHALL HAVE CLEAR TRUNKS A MIN. OF 4 FT. ABOVE THE GROUND, UNLESS SPECIFIED OTHERWISE. PROVIDE SAMPLES OF MATERIALS FOR APPROVAL BY OWNER'S REP. PRIOR TO DELIVERY TO THE SITE. PLANT MATERIALS OF THE SAME SPECIES SHALL BE OBTAINED FROM THE SAME SOURCE. INTENT OF DRAWINGS AND SPECIFICATIONS ARE TO PROVIDE LANDSCAPING WITH PLANTS IN VIGOROUS GROWTH, READY FOR OWNER'S USE. ITEMS NOT SPECIFICALLY INDICATED ON THE DRAWINGS OR SPECIFIED BUT REQUIRED TO CONFORM WITH SUCH INTENT, ARE TO BE CONSIDERED AS PART OF THE WORK.
- ALTERNATE / TRIANGULAR SPACING OF PLANT MATERIALS ARE REQUIRED FOR SHRUBS AND GROUNDCOVER WHERE SHOWN AS "O.C." ON PLANS.
- SLOPE ALL BED AND TURF AREAS FOR POSITIVE DRAINAGE. DRAIN AWAY FROM THE BUILDING AND DRAIN TOWARDS THE INLETS. COORDINATE WITH CIVIL FOR FINAL GRADING REQUIRED.

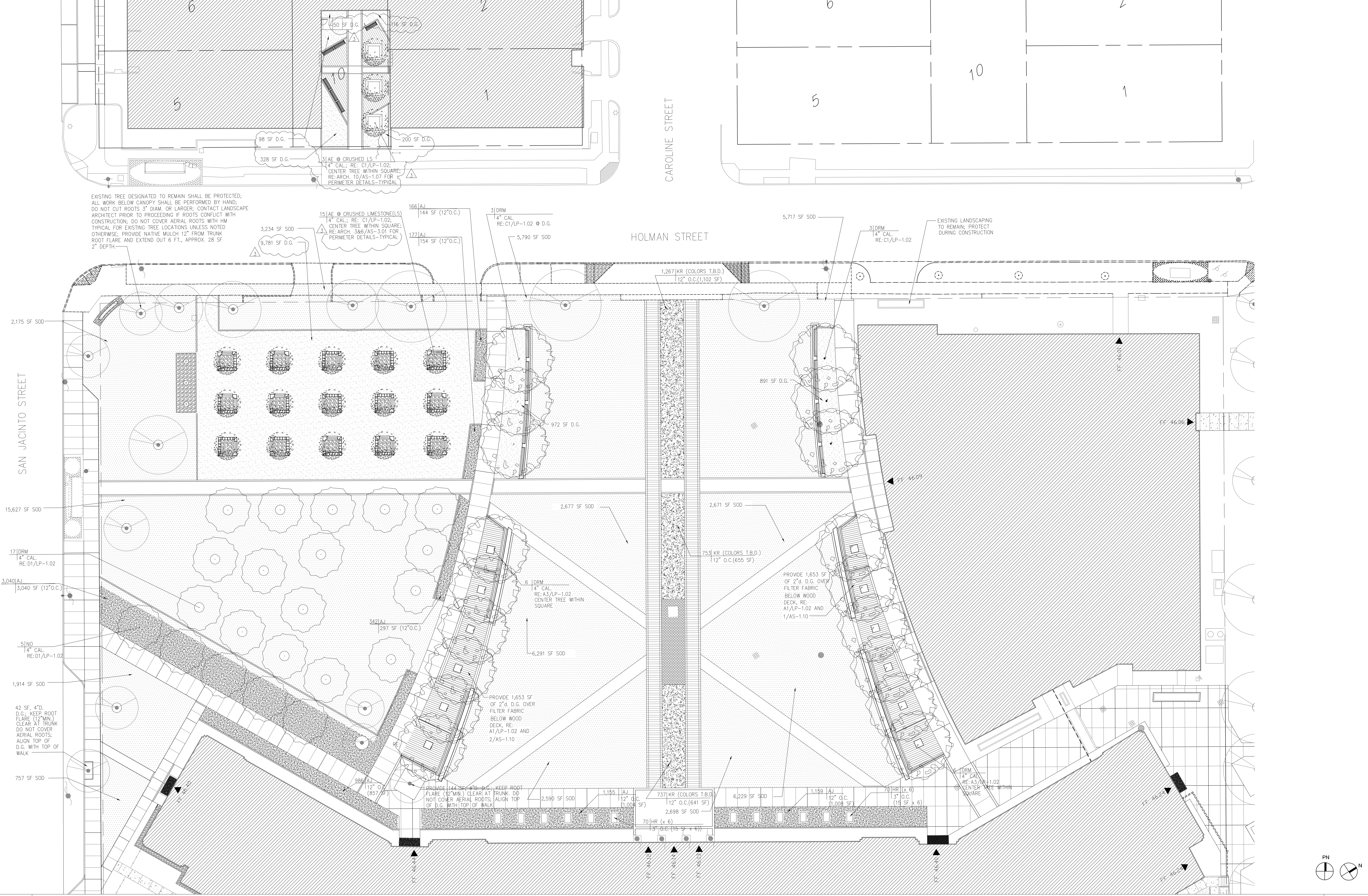
TREES						
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	REMARKS
NO	22	<i>Quercus muhlenbergii</i>	NUTTAL RED OAK	4" CAL/PER, 100 GAL	CONTAINER	15 FT. HT MIN., 8 FT. SPREAD MIN., 7 FT. CLEAR TRUNK
AE	18	<i>Ulmus chinensis</i>	ALLEE ELM	4" CAL/PER, 100 GAL	CONTAINER	15 FT. HT MIN., 8 FT. SPREAD MIN., 7 FT. CLEAR TRUNK
DRM	18	<i>Acer rubrum</i>	DRUMMOND RED MAPLE	4" CAL/PER, 100 GAL	CONTAINER	15 FT. HT MIN., 8 FT. SPREAD MIN., 7 FT. CLEAR TRUNK
GROUNDCOVER						
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	REMARKS
AJ	10,680	<i>Trachelospermum asiaticum</i>	ASIAN JASMINE	1 GAL	CONTAINER	12"-15" HT, 8"-10" SPREAD, FULL TO GROUND, WELL ROOTED.
KR	2,757	<i>Ruellia brittoniana</i> 'Katie', 'White Katie, and <i>Ruellia brittoniana</i> 'Bonita'	KATIE'S RUELLIA-PURPLE, WHITE KATIE RUELLIA, KATIE RUELLIA-BONITA	1 GAL	CONTAINER	12"-15" HT, 8"-10" SPREAD, FULL TO GROUND, WELL ROOTED. PROVIDE IN 3 DIFFERENT COLORS; QUANTITIES OF DIFFERENT COLORS TO BE DETERMINED PRIOR TO ORDERING.
HR	840	<i>Equisetum hyemale</i>	HORSETAIL REED	1 GAL	CONTAINER	12"-15" HT, 8"-10" SPREAD, FULL TO GROUND, WELL ROOTED.
LAWN AREAS						
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	REMARKS
SOD	56,612 SF	<i>Cynodon dactylon</i> 'Celebration'	CELEBRATION BERMUDAGRASS	24x16	SOLID SOD	SOLID SOD PALLETS; LAY BUTT-TIGHT; PROOF-ROLL; SEE 32 90 00 FOR FALL/WINTER APPLICATION INFORMATION.

CONTRACTOR TO ALSO PROVIDE 2 INCH DEPTH, 476 SF NATIVE MULCH FOR TREE RINGS AT NEW TREES, 2 INCH DEPTH, 494 SF NATIVE MULCH FOR EXISTING TREES (DO NOT COVER AERIAL ROOTS), AND PROVIDE 8,931 SF FOR GROUNDCOVER PLANTING BEDS OVER PRO 5 WEED BARRIER; PLANTING BED SQUARE FOOTAGE (SF) IS INDICATED ON PLANS. CONFIRM TREE RING MULCH QUANTITIES (DEPENDS UPON ROOT BALL SIZE) SEE TREE PLANTING DETAILS. REFER TO ARCHITECTURAL DWGS. FOR QTY. TOTALS OF D.G., CRUSHED Limestone AND BLACK STAR GRAVEL.

- GENERAL NOTES:**
- CONTRACTOR SHALL LOCATE UNDERGROUND UTILITIES PRIOR TO EXCAVATING OR TRENCHING. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING, AS REQUIRED ANY DAMAGED UTILITY AT NO ADDITIONAL COST TO OWNER.
  - BED EDGES AND TREE LOCATIONS SHALL BE STAKED FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO ANY BED PREPARATION. BED EDGES SHALL HAVE SMOOTH, WELL DEFINED, EVEN AND CONSISTENT CURVES AS SHOWN ON THE DRAWINGS.
  - THE QUANTITIES SHOWN ON THE PLANT SCHEDULE ARE FOR THE CONTRACTOR'S CONVENIENCE; VERIFY ALL QUANTITIES AND REPORT ANY DISCREPANCIES TO THE OWNER'S REP. PRIOR TO ORDERING MAT'L'S. DISCREPANCIES WITH THE PLAN SHALL NOT ENTITLE THE CONTRACTOR TO ADDITIONAL RENUMERATION.
  - ALL PLANTS ARE TO BE SPECIMEN QUALITY, FULL POT AND HEAD, SYMMETRICAL FOLIAGE AND BRANCHING STRUCTURE. SHRUBS SHALL BE FULL TO GROUND.
  - TREES SHALL HAVE CLEAR TRUNKS A MIN. OF 4 FT. ABOVE THE GROUND, UNLESS SPECIFIED OTHERWISE. PROVIDE SAMPLES OF MATERIALS FOR APPROVAL BY OWNER'S REP. PRIOR TO DELIVERY TO THE SITE. PLANT MATERIALS OF THE SAME SPECIES SHALL BE OBTAINED FROM THE SAME SOURCE. INTENT OF DRAWINGS AND SPECIFICATIONS ARE TO PROVIDE LANDSCAPING WITH PLANTS IN VIGOROUS GROWTH, READY FOR OWNER'S USE. ITEMS NOT SPECIFICALLY INDICATED ON THE DRAWINGS OR SPECIFIED BUT REQUIRED TO CONFORM WITH SUCH INTENT, ARE TO BE CONSIDERED AS PART OF THE WORK.
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  - SLOPE ALL BED AND TURF AREAS FOR POSITIVE DRAINAGE. DRAIN AWAY FROM THE BUILDING AND DRAIN TOWARDS THE INLETS. COORDINATE WITH CIVIL FOR FINAL GRADING REQUIRED.

**D1 LANDSCAPE GENERAL NOTES**  
RE: SAN JACINTO MEMORIAL PLAZA

**D2 PLANT LIST**  
RE: SAN JACINTO MEMORIAL PLAZA



**A1 LANDSCAPE PLAN**  
RE: SAN JACINTO MEMORIAL PLAZA

**HCC**  
Houston Community College

HCC - Construction Department  
3100 Main, 12th Floor  
Houston, Texas, 77002  
Voice: 713.718.5168  
reynaldo.pradia@hccs.edu

**Issue/Revision:**

REV	DESCRIPTION	DATE	BY
1	Owner Review	07/16/12	
2	Issue for Permit	03/21/13	
3	Issued for Bid	11/15/2013	
4	Revision	01/29/2014	

5120 Woodway Dr., Ste. 8010  
Houston, Texas 77056-1723  
P 713.850.1500  
F 713.850.1023  
www.dsinc.com  
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**ESPA CORP**  
ENGINEERS SCIENTISTS PLANNERS & ARCHITECTS  
2150 Provincial Blvd., Bldg. 4, 4413  
Houston, Texas 77054  
713.880.0050 FAX (713) 880-0730  
TIRE FIRM NO. F-020518

**ENVIRONMENTS** inc.  
ARCHITECTURE • INTERIORS • LANDSCAPE • PLANNING  
2150 Provincial Blvd., Bldg. 4, 4413  
Houston, Texas 77054  
281-759-1913 ph 281-759-1723 fx

**MJS Lighting Consultants**  
3118 Richmond Avenue, Suite 100  
Houston, TX 77098  
713-850-1488 Fax 713-521-4505

**E&C** E&C Engineers & Consultants Inc.  
1010 Lamar, #650  
Houston, Texas 77002  
713.580.8600  
713.580.8898 Fax

**ASA Dally**  
STRUCTURAL ENGINEERS  
1155 Dairy Ashford Street, Suite 111  
Houston, TX 77079 1281 531 4401

**Central Campus**  
San Jacinto Memorial  
Green Improvements  
1300 Holman Street  
Houston, TX 77004

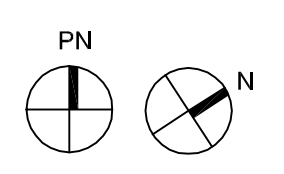
Contract No.:	CLP	A/E Project No.:	
Drawn By:	CLP	Date:	11/12/2013
Checked By:	MSM	Date:	11/12/2013
Approved By:	CLP	Date:	11/12/2013

Ownership of Instruments of Service:  
All reports, plans, specifications, computer files, field data, notes & other documents and instruments prepared for Houston Community College as instruments of service shall become the property of Houston Community College. Houston Community College shall gain all common law, statutory and other reserved rights, including the copyright thereon.

**Landscape Site Plan,  
Plant Schedule, Notes**

Scale: 1" = 20'-0"

**LP-1.01**

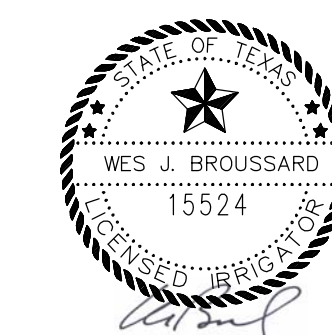


1" = 20'-0"



Houston  
Community  
College

HCC - Construction Department  
3100 Main, 12th Floor  
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△	Revision	01/29/2014	



ENVIRONMENTS & CO  
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281-759-1913 ph 281-759-1723 fx

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3118 Richmond Avenue, Suite 100  
Houston, TX 77098  
713-850-1488 Fax 713-521-4505

E&C Engineers & Consultants Inc.  
1010 Lamar, #650  
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ASA Dally  
STRUCTURAL ENGINEERS  
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Houston, TX 77079 1 281 531 4401

Central Campus  
San Jacinto Memorial  
Green Improvements  
1300 Holman Street  
Houston, TX 77004

Contract No.:	WB	A/E Project No.:	11/12/2013
Drawn By:	CLP	Date:	11/12/2013
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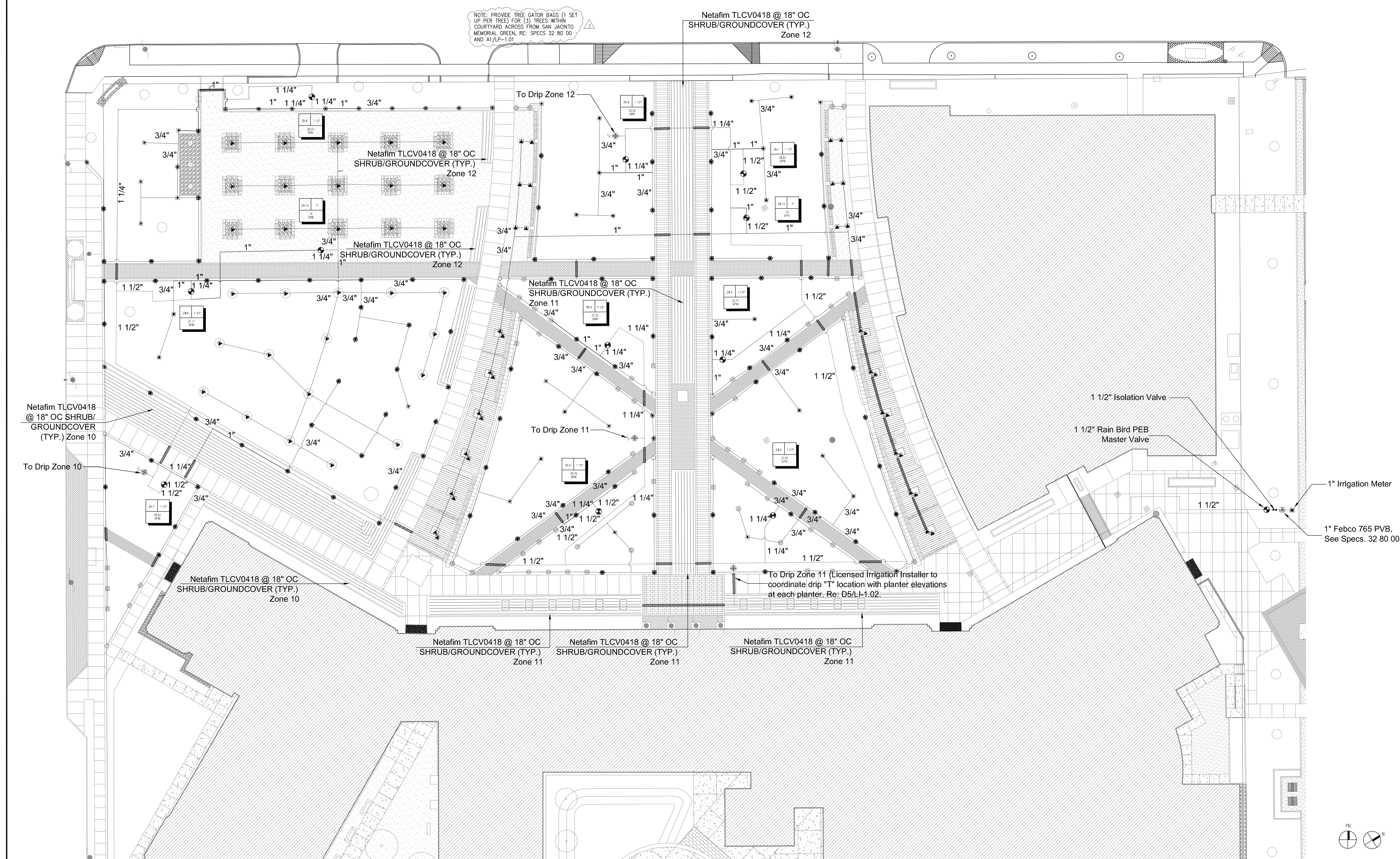
Irrigation Site Plan

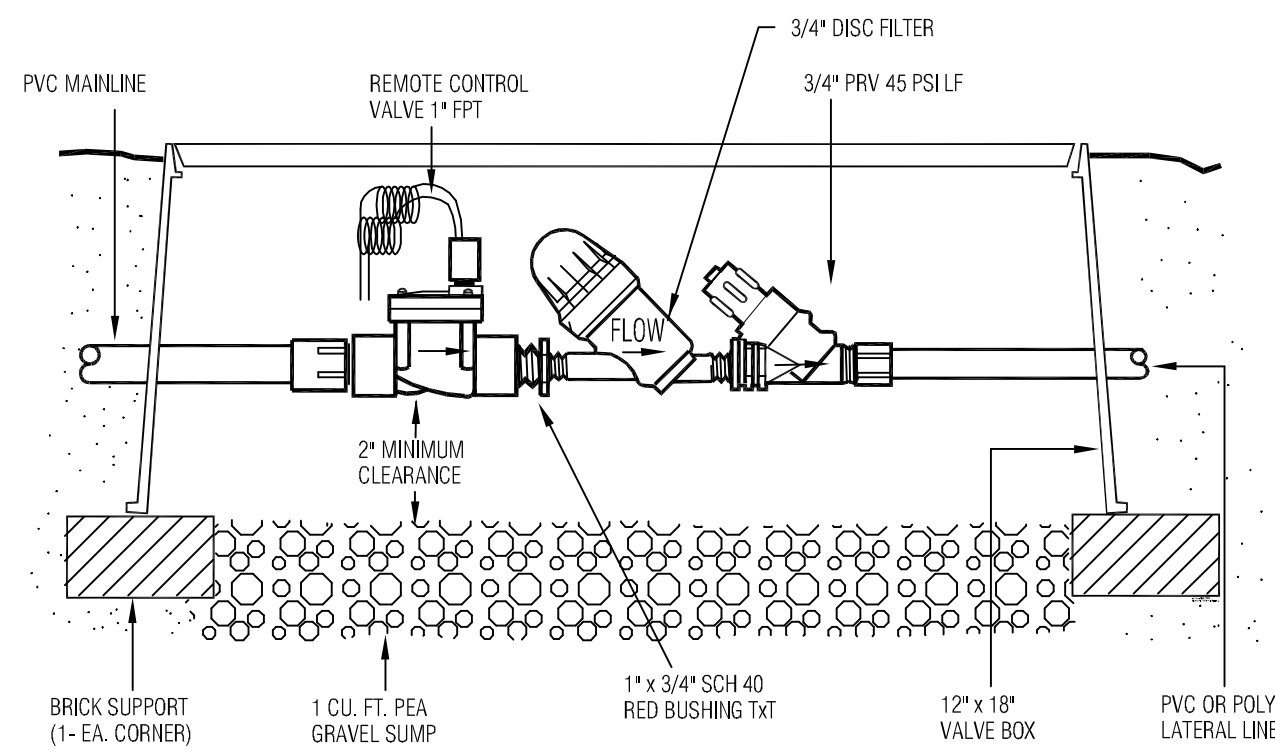
Scale: 1" = 20'-0"

LI-1.01

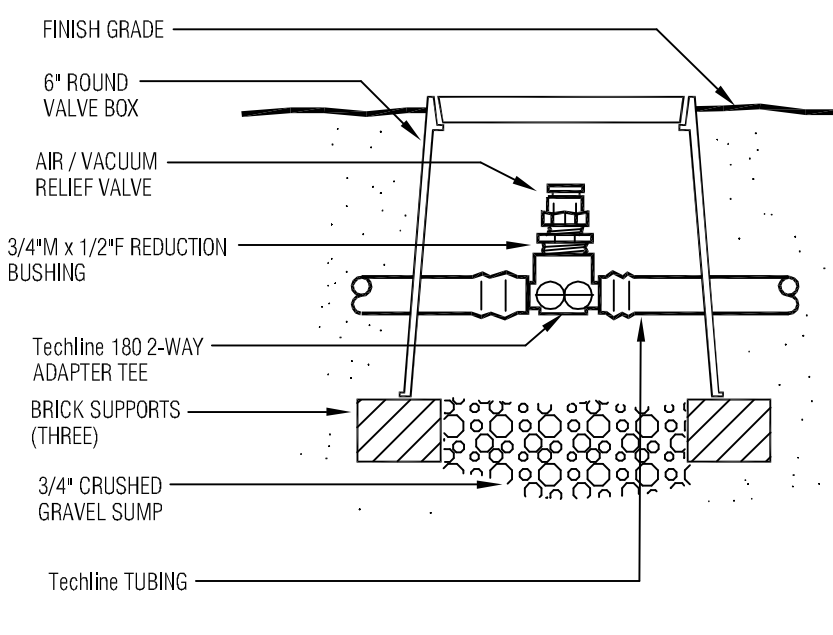
Note:  
The irrigation system for the HCC Central Campus shall connect to the Hunter ACC 99D controller used for the HCC Main Campus (this is the controller provided under the Austin Street Plaza scope of work. Contractor shall make the necessary concessions to utilize this controller, re: A2/LI-1.01 of the Austin Street Plaza Package.

NOTE: PROVIDE TREE GATOR BAGS (1 SET UP PER TREE) FOR (3) TREES WITHIN COURTYARD ACROSS FROM SAN JACINTO MEMORIAL GREEN. RE: SPECS 32 80 00 AND A1/LI-1.01

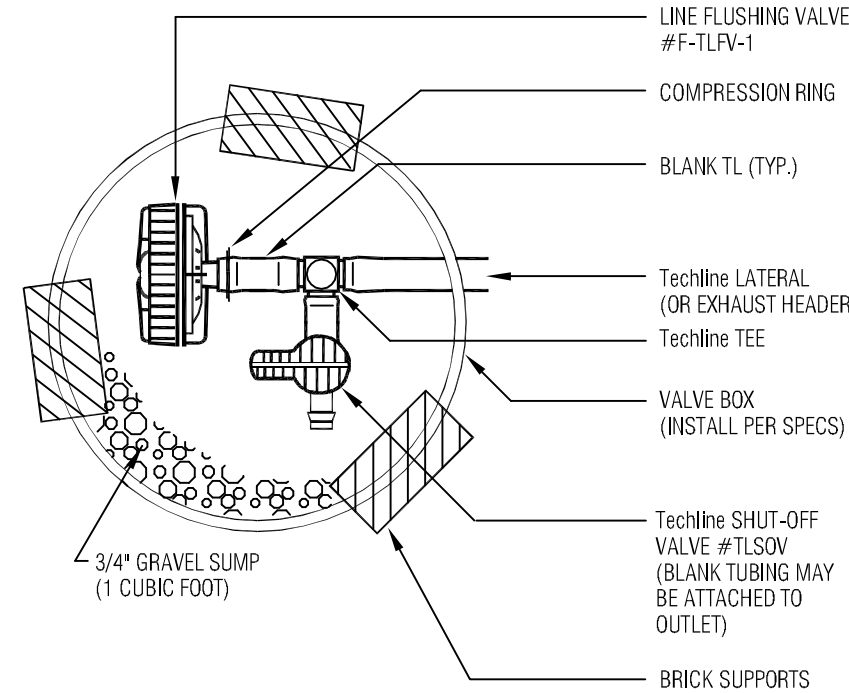




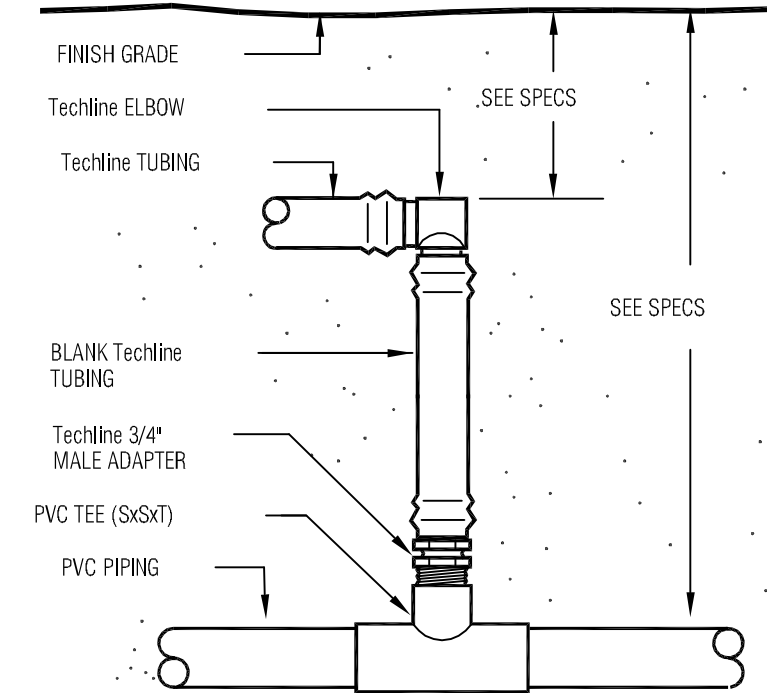
**LOW VOLUME CONTROL ZONE ASSEMBLY**  
P/N LVCZ10075-HF  
3.5 - 17.6 GPM



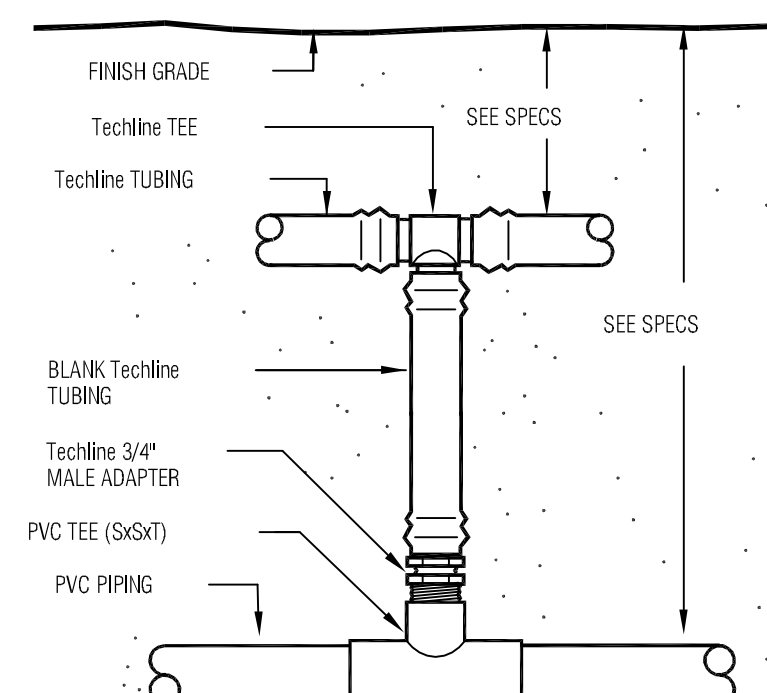
**Techline AIR/VACUUM RELIEF**  
(PLUMBED TO Techline)



**Techline LINE FLUSHING VALVE**  
W/ SHUT-OFF VALVE



**Techline START CONNECTION**  
(PVC TO ELBOW)



**Techline START CONNECTION**  
(PVC TO TEE)

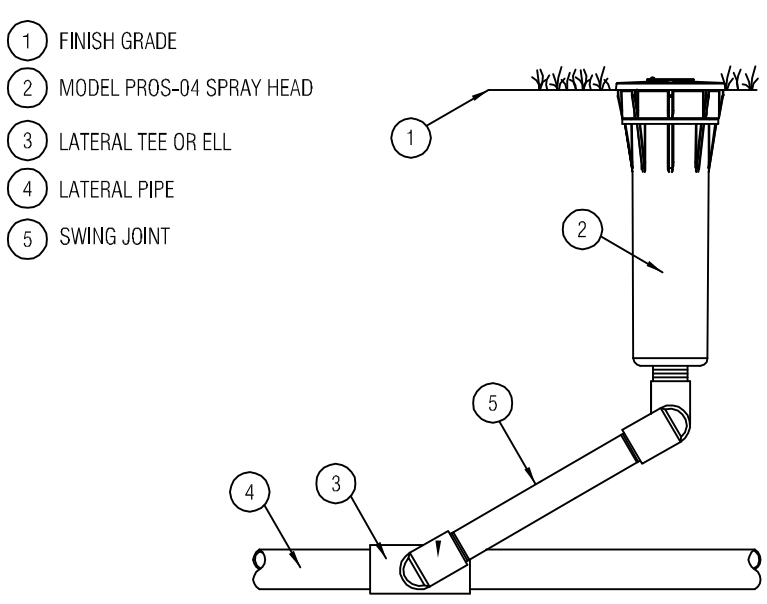
**D1 LOW VOLUME CONTROL ZONE ASSEMBLY**  
RE: SAN, JAC NO SCALE

**D2 AIR / VACUUM RELIEF DTL.**  
RE: SAN, JAC NO SCALE

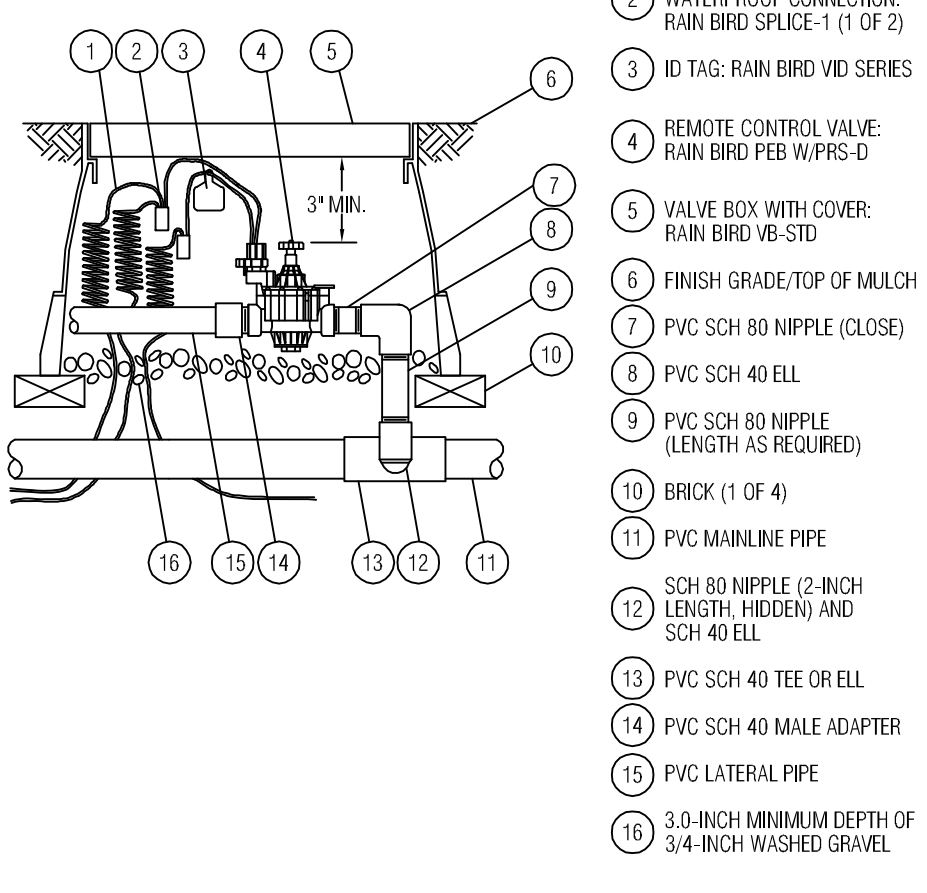
**D3 LINE FLUSHING VALVE DTL.**  
RE: SAN, JAC NO SCALE

**D4 START CONNECTION DTL.**  
RE: SAN, JAC NO SCALE

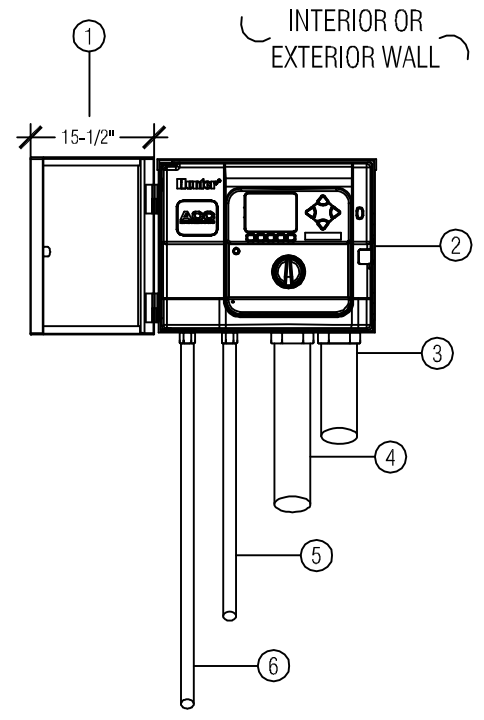
**D5 START CONNECTION DTL.**  
RE: SAN, JAC NO SCALE



**Hunter PROS-04 Spray Head**

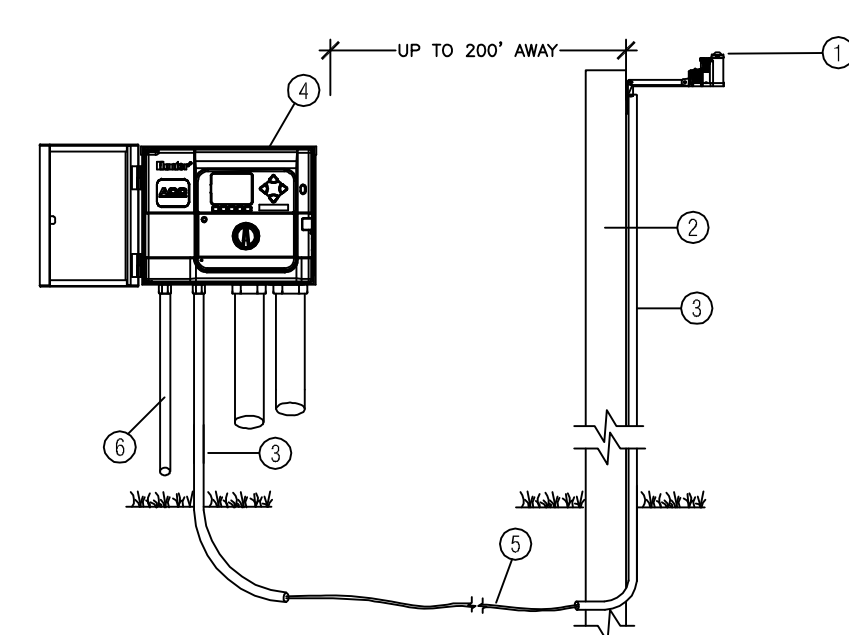


**RAIN BIRD PEB PRS-D SERIES**

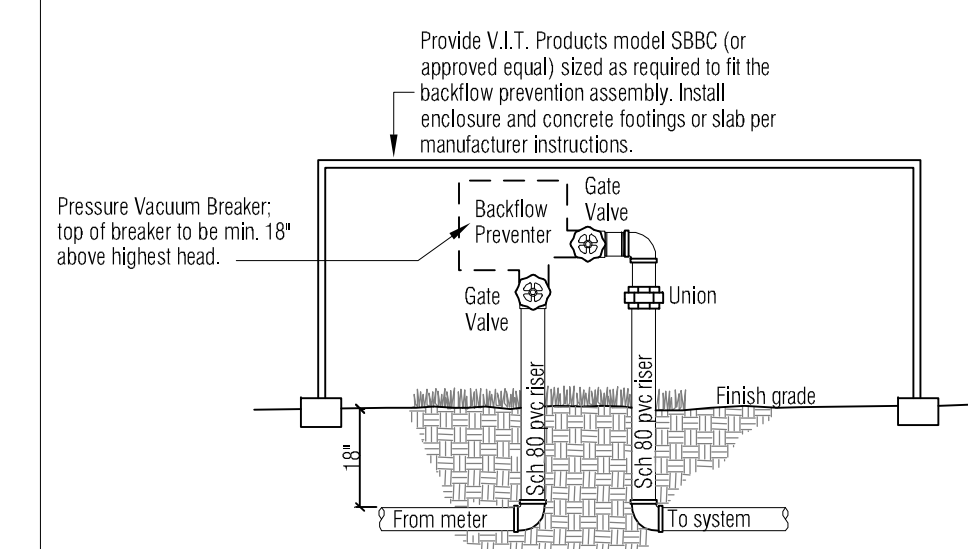


**HUNTER ACC-99D CONTROLLER**  
WALL MOUNT

NOTE: CONTROLLER SHALL BE PROVIDED UNDER THE AUSTIN STREET SCOPE OF WORK. SAN, JAC SYSTEM SHALL CONNECT TO THIS CONTROLLER. RE: A2/L1-01 AUSTIN STREET IMPROVEMENTS PACKAGE.



**HUNTER SOLAR SYNC W/ACC**



**BACKFLOW PREVENTER**  
ABOVE GROUND INSTALLATION

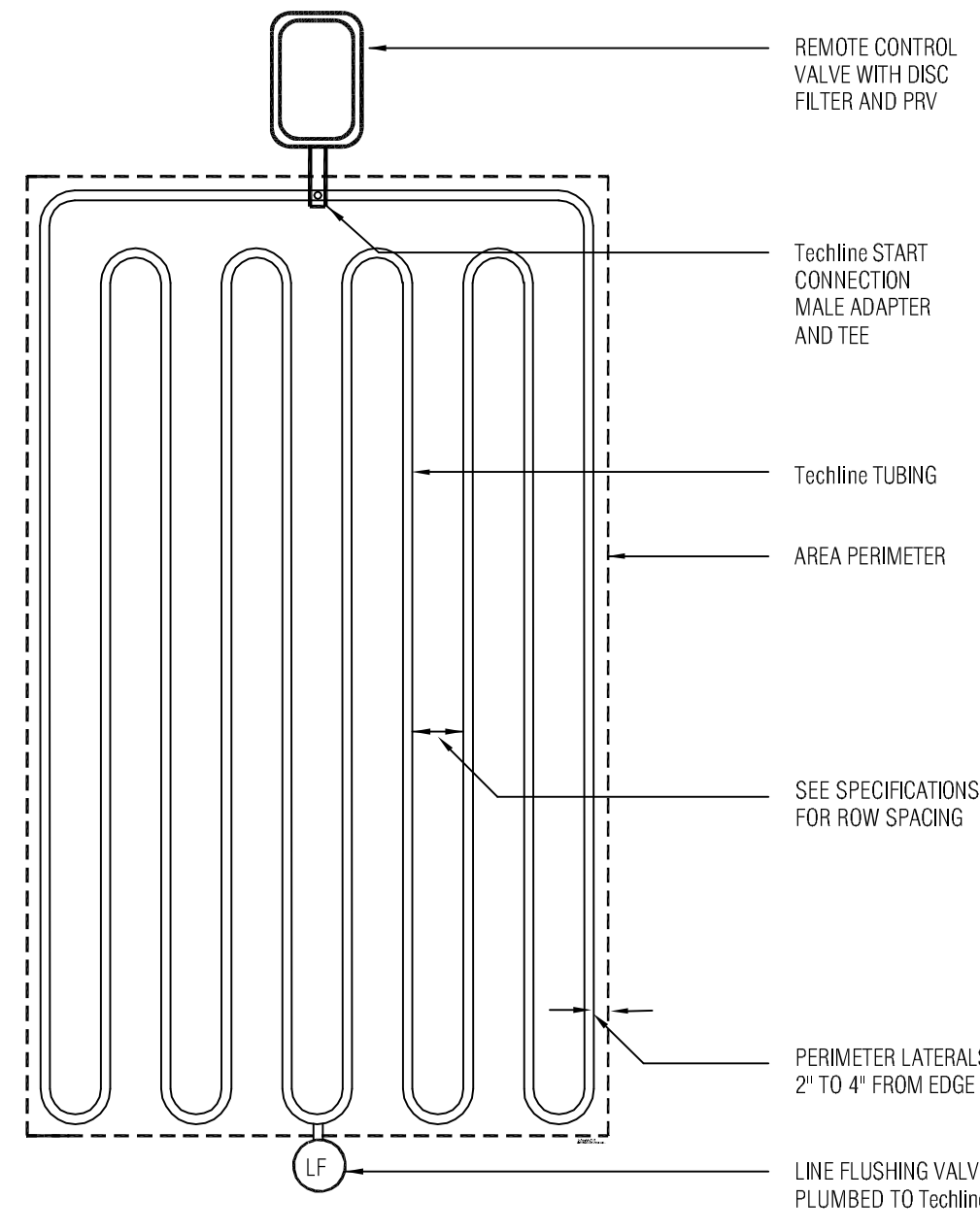
**B1 PROS-04 SPRAY HEAD**  
RE: SAN, JAC NO SCALE

**B2 PEB PRS-D SERIES DTL.**  
RE: SAN, JAC NO SCALE

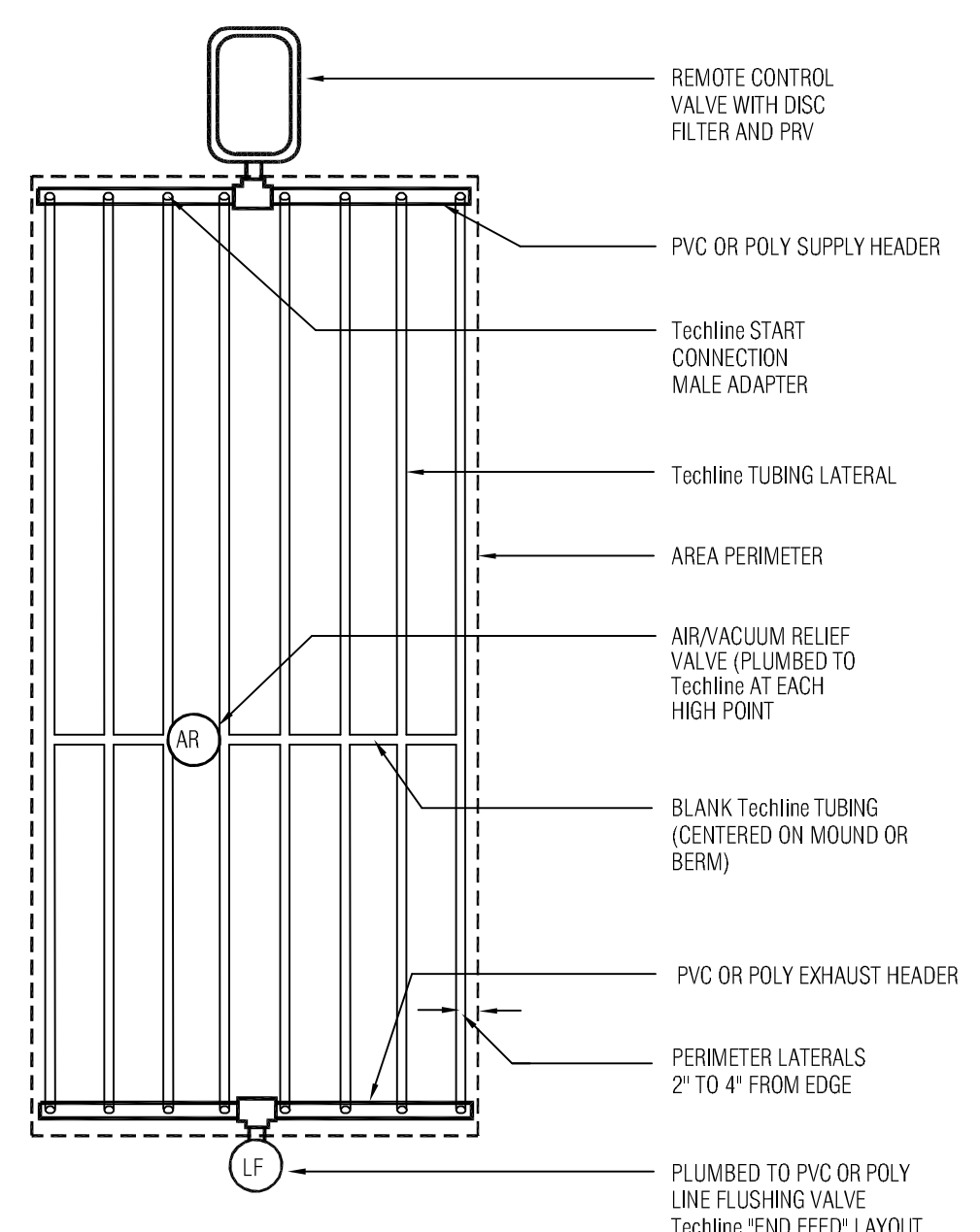
**B3 CONTROLLER DTL.**  
RE: SAN, JAC NO SCALE

**B4 SOLAR SYNC DTL.**  
RE: SAN, JAC NO SCALE

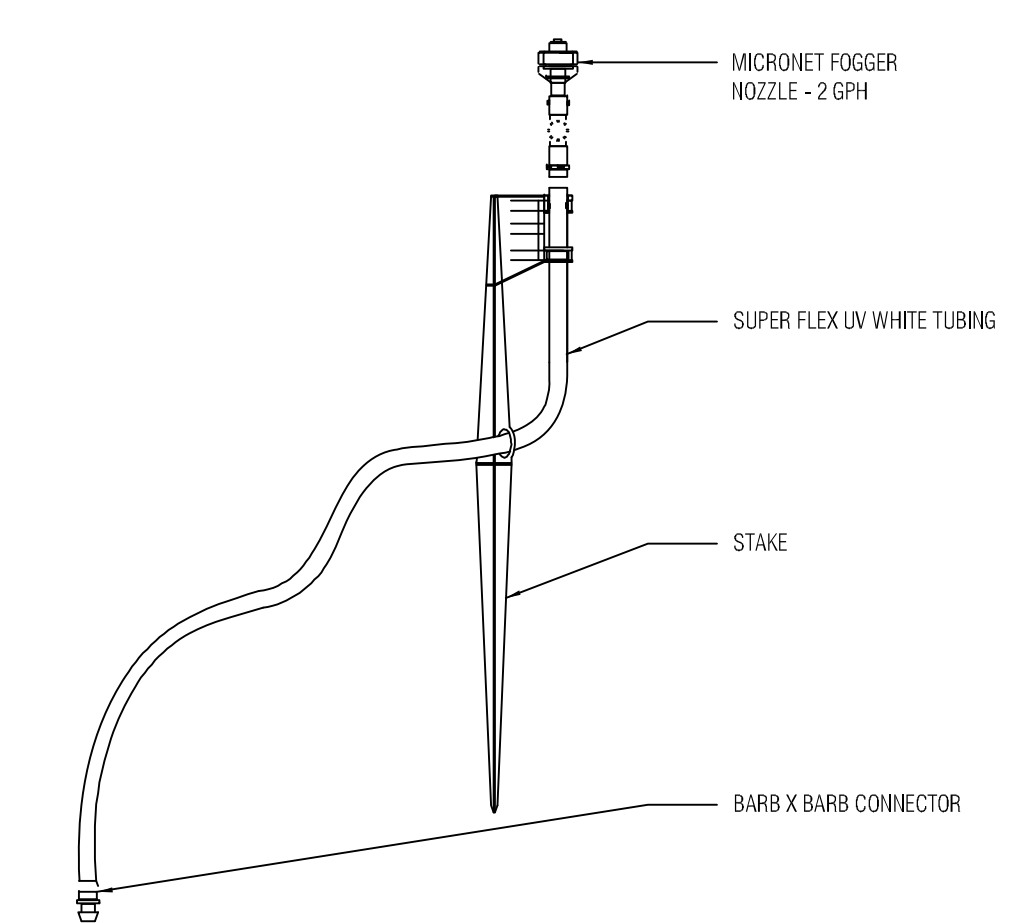
**B5 BACKFLOW PREVENTER**  
RE: SAN, JAC NO SCALE



**Techline LITE END FEED LAYOUT**  
(SHRUB/GROUND COVER LAYOUT)

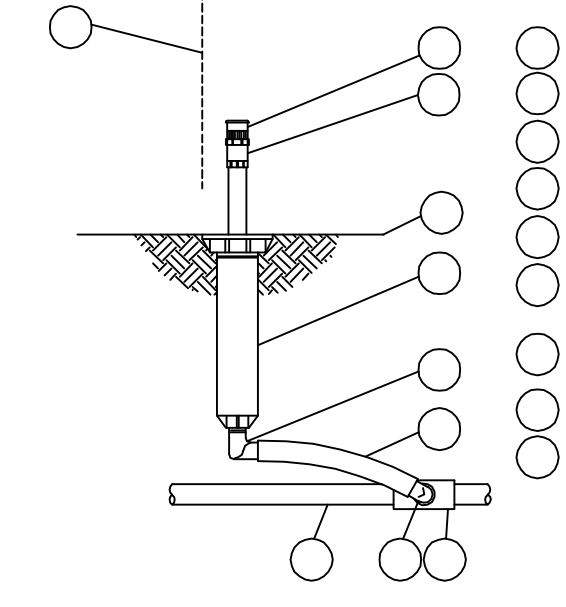


**Techline END FEED LAYOUT**  
(TURF LAYOUT)



**Techline CV OPERATION PRESSURE INDICATOR STAKE**

NOTE:  
1. LOCATE INDICATOR STAKE AT THE FARTHEST AND/OR HIGHEST POINT ON THE ZONE. MUST BE VISIBLE FROM ROADWAY.



**RAINBIRD 1402 BUBBLER ON 1804 BODY DETAIL**

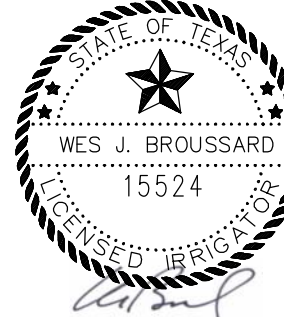
**A1 LITE END FEED LAYOUT**  
RE: SAN, JAC NO SCALE

**A2 END FEED LAYOUT**  
RE: SAN, JAC NO SCALE

**A3 CV OPERATION DTL.**  
RE: SAN, JAC NO SCALE

**A5 BUBBLER DETAIL**  
RE: SAN, JAC NO SCALE

**Houston Community College**  
HCC - Construction Department  
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**Issue/Revision:**

REV	DESCRIPTION	DATE	BY
1	Owner Review	07/16/12	
2	Issue for Permit	03/21/13	
3	Issued for Bid	11/15/2013	
4	Revision	01/29/2014	

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**Central Campus**  
San Jacinto Memorial  
Green Improvements  
1300 Holman Street  
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Contract No.:	A/E Project No.:
Drawn By: WB	Date: 11/12/2013
Checked By: CLP	Date: 11/12/2013
Approved By: CLP	Date: 11/12/2013

Ownership of Instruments of Service:  
All reports, plans, specifications, computer files, field data, notes & other documents and instruments prepared for Houston Community College as instruments of service shall become the property of Houston Community College. Houston Community College shall gain all common law, statutory and other reserved rights, including the copyright thereto.

**Irrigation Details**

Scale: AS SHOWN

**LI-1.02**

**IRRIGATION GENERAL NOTES**

1. ALL REQUIRED LANDSCAPE AREAS SHALL BE IRRIGATED PER APPLICABLE LOCAL ORDINANCES AND TCEQ REGULATIONS.

2. DRIP IRRIGATION SHALL BE PLACED 2" - 4" FROM EDGE OF PLANTING BED OR AS PER MANUFACTURER RECOMMENDATIONS.

3. ANY QUANTITIES SHOWN ARE APPROXIMATE. VERIFY QUANTITIES AND PROVIDE ALL LABOR, MATERIALS, AND DEVICES NECESSARY TO COMPLETE THE IRRIGATION SYSTEM.

4. THE LAYOUT SHOWN IS DIAGRAMMATIC. DO NOT PLACE LINES OR DEVICES NEAR TREE ROOT SYSTEMS OR IN PAVEMENT AREAS, OR AREAS THAT CONFLICT WITH PROPER INSTALLATION AND FUNCTION OF THE SYSTEM.

**5. SITE CONDITIONS:**

a. VERIFY AND MARK THE LOCATION OF ALL ON-SITE UTILITIES REQUIRED BY THE IRRIGATION SYSTEM.

b. VERIFY AND MARK THE LOCATION OF ALL BURIED CABLES, CONDUITS, PIPING, ETC. PRIOR TO TRENCHING OR DIGGING. Call (800) DIG-TESS per Texas Utilities Code Title 5 Chapter 251 UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY.

c. ADJUST THE DESIGN AS NECESSARY, TOGETHER WITH THE LANDSCAPE ARCHITECT, LICENSED IRRIGATOR OR THEIR REPRESENTATIVE, TO SUIT SITE CONDITIONS, ELEVATIONS AND GRADES BEFORE PROCEEDING WITH WORK.

d. PROTECT FROM DAMAGE AS NECESSARY, EXISTING PROPERTY, EXISTING LANDSCAPE FEATURES, PLANT MATERIAL, STRUCTURES, THIS WORK IN PROGRESS, AND THE WORK OF OTHER TRADES.

6. PROVIDE CHRISTY (OR EQUIVALENT) PROFESSIONAL GRADE VALVE BOXES LARGE ENOUGH TO ACCOMMODATE VALVES AND OTHER DEVICES SHOWN IN THE DETAILS. BOX EXTENSIONS MAY BE REQUIRED. GROUND BOXES SHALL BE CONSTRUCTED OF MATERIALS SUFFICIENT IN STRENGTH TO ACCEPT LOADS (PEDESTRIAN OR VEHICULAR) REQUIRED BASED ON ACTUAL INSTALLATION LOCATION.

7. PRESSURE REGULATING COMPONENT(S) SHALL BE REQUIRED WHERE STATIC PRESSURE EXCEEDS MANUFACTURER'S RECOMMENDED OPERATING RANGE.

8. OBTAIN ALL PERMITS AND LICENSES APPLICABLE PRIOR TO THE START OF WORK.

9. SEE DETAILS FOR OTHER REQUIRED MATERIALS AND DEVICES.

**10. PIPING AND VALVES:**

a. MAINLINE IRRIGATION SYSTEM PIPING SHALL BE CLASS 200 PVC PIPE. LATERAL IRRIGATION SYSTEM PIPING SHALL BE CLASS 200 PVC PIPE.

b. ALL PIPES AND ELECTRICAL BUNDLES PASSING BENEATH DRIVEWAYS OR PAVED AREAS MUST BE SLEEVED WITH PVC SCH 40 PVC PIPE WITH SOLVENT WELDED JOINTS. SLEEVE DIAMETER MUST EQUAL TWICE THAT OF THE PIPE OR SIZED AS SHOWN ON PLANS.

11. SEE DRIPPERLINE CALCULATIONS FOR DRIP IRRIGATION NOTES.

**HYDRAULIC CALCULATIONS**

Run Set: 1-9

**Water Source 1**

Description: HCC-Main  
Type: Meter  
Static Pressure: 55 (psi)  
Service Line: 0.141 (psi)  
Meter Loss: 1.954 (psi)

**Mean System**

Static Pressure: 55 (psi)  
Service Line Loss: 0.141 (psi)  
Meter Loss: 1.954 (psi)  
Backflow Loss: 4.0 (psi)  
Master Valve Loss: 3.754 (psi)  
Filter Loss: 0 (psi)

**Zone 1-9 @ 18.77 (GPM)**

Mainline Loss: 7.75 (psi)  
Valve Loss: 3.75 (psi)  
Filter Loss: 0 (psi)  
Lateral Loss: 2.25 (psi)  
Elevation: 0 (psi)  
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 53.62 (psi)  
Residual Pressure: 1.38 (psi)

**WATER SOURCE INFORMATION**

HCC-Main

**Water Meter Information**

Meter Size: 1 inch meter  
Static Pressure: 55  
Change in Elevation: 0

**Service Line Information**

Pipe Category: Type K Copper  
Pipe Size: Type K Copper 1"  
Length: 15  
Velocity: 12

**Recommendations**

Maximum Recommended Flow: 29.08  
Available Working Pressure: 55

CONTRACTOR SHALL FIELD VERIFY AVAILABLE PRESSURE PRIOR TO DEVELOPING SHOP DRAWINGS

The irrigation system was designed to an assumed 55 psi available onsite. The contractor shall make the necessary adjustments to the design based upon the actual water pressure to comply with local ordinances and TCEQ regulations.

**Individual Zone Data**

Zone Assignment	1-1	1-2	1-3	1-4	1-5
WTF	100%	100%	100%	100%	100%
Area (sq ft)	6148.5	6797.03	6786.64	6011.86	8024.1
Original Flow (GPM)	28.85	24.77	27.53	26.53	27.53
WTF Flow (GPM)	28.85	24.77	27.53	26.53	27.53
Average Precip (in/hr)	0.4638	0.3975	0.4337	0.4693	0.4392

Zone Assignment	1-6	1-7	1-8	1-9
WTF	100%	100%	100%	100%
Area (sq ft)	7003.54	9895.22	8687.91	7856.64
Original Flow (GPM)	28.76	28.42	27.17	28.43
WTF Flow (GPM)	28.76	28.42	27.17	28.43
Average Precip (in/hr)	0.4493	0.3451	0.364	0.3493

**Total Area Calculations**

Area (sq ft)	59460.78	Mean Precip (in/hr)	0.4007
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**DRIPPERLINE CALCULATIONS**

Zone Name: Zone 10 (Shrub)

**Netafim Recommendations**

Dripper Flow Rate: 0.4 GPH  
Dripper Spacing in Techline® CV: 18"  
Techline® CV Row (lateral) Spacing: 18" - 24"  
Application Rate (in/hr): 0.29 - 0.21  
Time to Apply 1/4" (minutes): 52 - 71

**Your Selections**

Dripper Flow Rate: 0.4 GPH  
Dripper Spacing in Techline® CV: 18"  
Techline® CV (lateral) Spacing: 18"

**Calculated Results:**

Techline® CV Part Number: TLCV4-18xx

Feet of Techline® CV: 2514

Total GPM of the Zone: 11.17

Application Rate (in/hr): 0.29

Time to Apply 1/4" (minutes): 53 minutes

Number of Drippers in the Zone: 1677

Maximum Length of a Lateral in Feet: 1158

Number of Staples Required: 839

Part Number for the Staples is: TLS6

PROVIDE PRV: PRV075HF45V2K

PROVIDE Filter (choose appropriate one for condition): DF075-120, DF075-140, DFV075-120, DFV075-140

Number of Flush Valve(s): To maintain the integrity of the Techline® CV Check Valve feature, use a TLS0V or TLFIB in lieu of automatic line flushing valves  
Number of Flush Valves is based on flow. The piping layout you choose may require additional flush valves.

Supply and Exhaust Header Pipe Sizing: 1" polyethylene or 1" PVC

Zone Name: Zone 11 (Shrub)

**Netafim Recommendations**

Dripper Flow Rate: 0.4 GPH  
Dripper Spacing in Techline® CV: 18"  
Techline® CV Row (lateral) Spacing: 18" - 24"  
Application Rate (in/hr): 0.29 - 0.21  
Time to Apply 1/4" (minutes): 52 - 71

**Your Selections**

Dripper Flow Rate: 0.4 GPH  
Dripper Spacing in Techline® CV: 18"  
Techline® CV (lateral) Spacing: 18"

**Calculated Results:**

Techline® CV Part Number: TLCV4-18xx

Feet of Techline® CV: 2151

Total GPM of the Zone: 9.56

Application Rate (in/hr): 0.29

Time to Apply 1/4" (minutes): 53 minutes

Number of Drippers in the Zone: 1435

Maximum Length of a Lateral in Feet: 1158

Number of Staples Required: 718

Part Number for the Staples is: TLS6

PROVIDE PRV: PRV075HF45V2K

PROVIDE Filter (choose appropriate one for condition): DF075-120, DF075-140, DFV075-120, DFV075-140

Number of Flush Valve(s): To maintain the integrity of the Techline® CV Check Valve feature, use a TLS0V or TLFIB in lieu of automatic line flushing valves  
Number of Flush Valves is based on flow. The piping layout you choose may require additional flush valves.

Supply and Exhaust Header Pipe Sizing: 1" polyethylene or 3/4" PVC

Zone Name: Zone 12 (Shrub)

**Netafim Recommendations**

Dripper Flow Rate: 0.4 GPH  
Dripper Spacing in Techline® CV: 18"  
Techline® CV Row (lateral) Spacing: 18" - 24"  
Application Rate (in/hr): 0.29 - 0.21  
Time to Apply 1/4" (minutes): 52 - 71

**Your Selections**

Dripper Flow Rate: 0.4 GPH  
Dripper Spacing in Techline® CV: 18"  
Techline® CV (lateral) Spacing: 18"

**Calculated Results:**

Techline® CV Part Number: TLCV4-18xx

Feet of Techline® CV: 1302

Total GPM of the Zone: 5.79

Application Rate (in/hr): 0.29

Time to Apply 1/4" (minutes): 53 minutes

Number of Drippers in the Zone: 869

Maximum Length of a Lateral in Feet: 1158

Number of Staples Required: 435

Part Number for the Staples is: TLS6

PROVIDE PRV: PRV075HF45V2K

PROVIDE Filter (choose appropriate one for condition): DF075-120, DF075-140, DFV075-120, DFV075-140

Number of Flush Valve(s): To maintain the integrity of the Techline® CV Check Valve feature, use a TLS0V or TLFIB in lieu of automatic line flushing valves  
Number of Flush Valves is based on flow. The piping layout you choose may require additional flush valves.

Supply and Exhaust Header Pipe Sizing: 3/4" polyethylene or PVC

Zone Name: Zone 13 (Shrub)

**Netafim Recommendations**

Dripper Flow Rate: 0.4 GPH  
Dripper Spacing in Techline® CV: 18"  
Techline® CV Row (lateral) Spacing: 18" - 24"  
Application Rate (in/hr): 0.29 - 0.21  
Time to Apply 1/4" (minutes): 52 - 71

**Your Selections**

Dripper Flow Rate: 0.4 GPH  
Dripper Spacing in Techline® CV: 18"  
Techline® CV (lateral) Spacing: 18"

**Calculated Results:**

Techline® CV Part Number: TLCV4-18xx

Feet of Techline® CV: 1972

Total GPM of the Zone: 8.76

Application Rate (in/hr): 0.29

Time to Apply 1/4" (minutes): 53 minutes

Number of Drippers in the Zone: 1315

Maximum Length of a Lateral in Feet: 1158

Number of Staples Required: 658

Part Number for the Staples is: TLS6

PROVIDE PRV: PRV075HF45V2K

PROVIDE Filter (choose appropriate one for condition): DF075-120, DF075-140, DFV075-120, DFV075-140

Number of Flush Valve(s): To maintain the integrity of the Techline® CV Check Valve feature, use a TLS0V or TLFIB in lieu of automatic line flushing valves  
Number of Flush Valves is based on flow. The piping layout you choose may require additional flush valves.

Supply and Exhaust Header Pipe Sizing: 1" polyethylene or 3/4" PVC

**DRIP IRRIGATION NOTES**

1. DRIPPERLINE ZONES WITH A FLOW GREATER THAN 17.6 GPM SHALL UTILIZE A 1 1/2" PRESSURE REGULATING VALVE. DRIPPERLINE ZONES WITH A FLOW EQUAL TO 17.6 GPM OR LESS SHALL BE AS NOTED ON THE PLANS OR ACCORDING TO MANUFACTURER SPECIFICATIONS.

2. ALL DRIPPERLINE ZONES SHALL BE EQUIPPED WITH A NETAFIM DISC FILTER SYSTEM SIZED ACCORDING TO MANUFACTURER SPECIFICATIONS.

3. DRIP ZONE 11 IS DEDICATED TO PLANTING AREAS IN FRONT OF MAIN BUILDING. LANDSCAPE IRRIGATION INSTALLER TO ENSURE THAT DRIP TUBING IS COORDINATED WITH ELEVATIONS OF THE INDIVIDUAL PLANTING AREAS LOCATED WITHIN THE LARGER PLANTING AREA IN FRONT OF THE MAIN BUILDING.

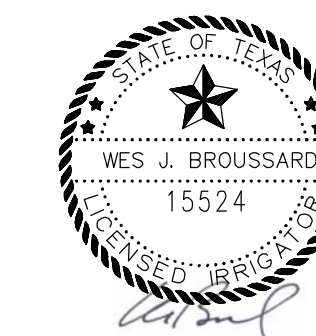
**Irrigation Legend**

Symbol	Description
	Hunter MP1000 180° - PROS-04
	Hunter MP1000 90° - PROS-04
	Hunter MPCorner 45° - PROS-04
	Hunter MP1000 360° - PROS-04
	Hunter MP2000 135° - PROS-04
	Hunter MP2000 180° - PROS-04
	Hunter MP2000 270° - PROS-04
	Hunter MP2000 360° - PROS-04
	Hunter MP2000 90° - PROS-04
	Hunter MP3000 180° - PROS-04
	Hunter MP3000 360° - PROS-04
	Hunter MP3000 90° - PROS-04
	Febco 765 - 1" PVB
	Netafim High Flow Kit w/Control Valve
	Rain Bird PEB
	Hunter ACC-99D, RE: B3/L11.02
	Nibco 1 1/4" isolation valve
	Hunter Solar Sync
	1 inch meter
	Lateral - Class 200 sized per plan
	Mainline - Class 200 sized per plan
	TLCV4-18
	Schedule 40 Sleeving 4" Minimum



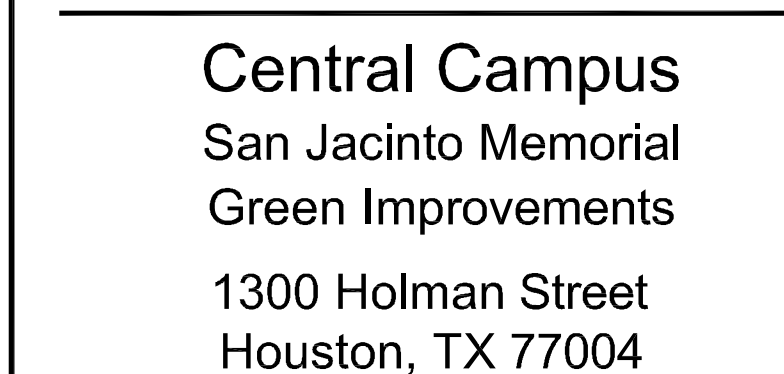
**Houston  
Community  
College**

HCC - Construction Department  
3100 Main, 12th Floor  
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reynaldo.pradia@hccs.edu



**Issue/Revision:**

REV	DESCRIPTION	DATE	BY
1	Owner Review	07/16/12	
2	Issue for Permit	03/21/13	
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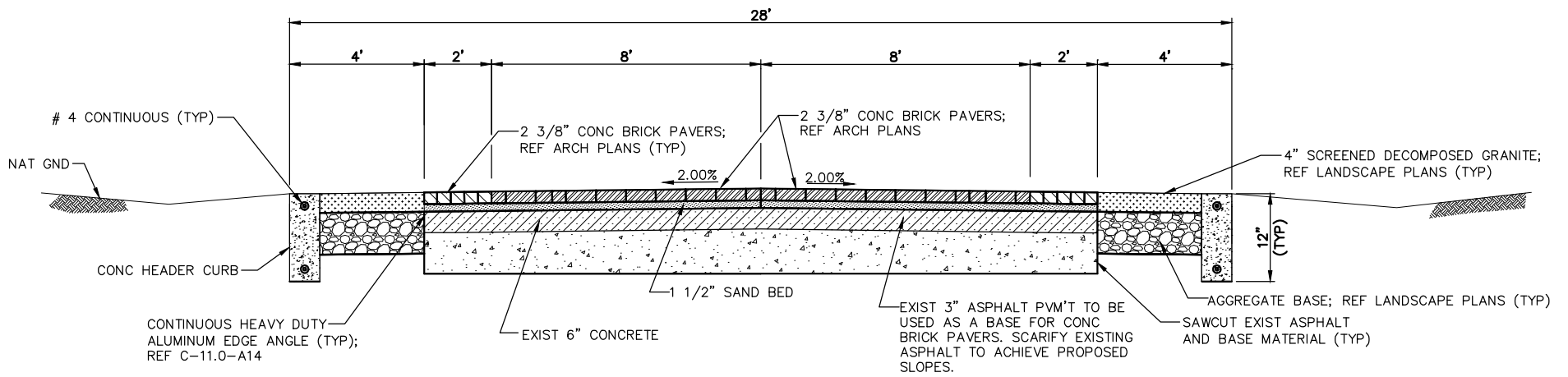
Contract No.:	A/E Project No.:
Drawn By: WB	Date: 11/12/2013
Checked By: CLP	Date: 11/12/2013
Approved By: CLP	Date: 11/12/2013

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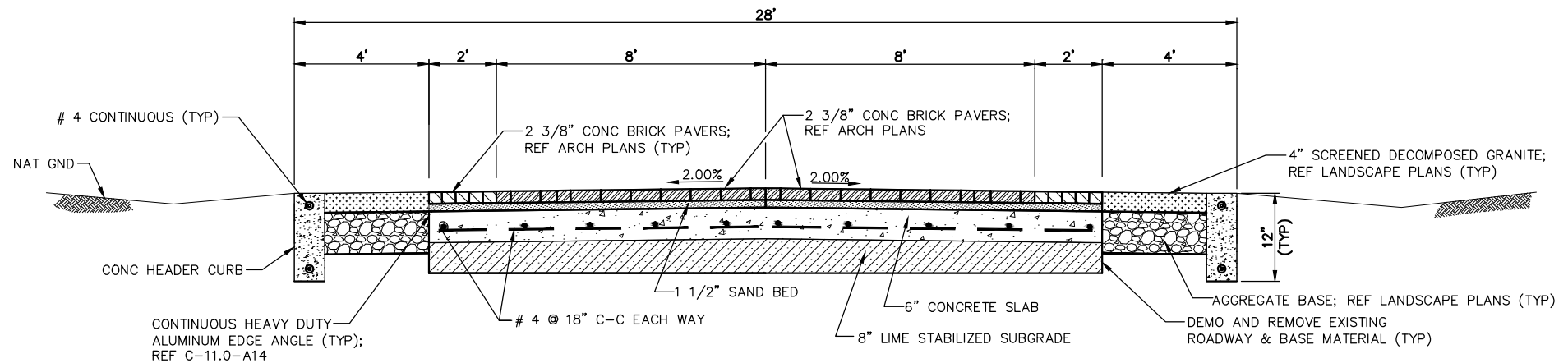
**Irrigation Legend  
and Notes**

Scale: AS SHOWN

**LI-1.03**



TYPICAL SECTION



ALTERNATE



HOUSTON COMMUNITY COLLEGE SYSTEM  
CENTRAL CAMPUS

Description: PLAZA PEDESTRIAN PAVER DETAIL		Sht No. 1 OF 1	Detail No. SKC-2
Scale: N.T.S.	Drawn By: ESPA Checked By: WVW Date: 1/17/2014	ESPA Project No: 2166-024	