

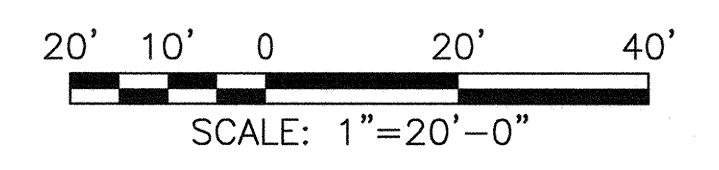
- SHEET NOTES:**
1. REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
  2. REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
  3. REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
  4. THE WORK AT THIS LOCATION INCLUDES R/C ALL (E) LANDSCAPE IRRIGATION COMPONENTS ON THE (E) MEDIAN ISLAND(S) WITHIN THE DWG MATCHLINES. IRRIGATION COMPONENTS INCLUDE ALL GS AND PVC PIPING, VALVES AND VALVE BOXES, QUICK COUPLERS, SPRINKLERS, CONTROLLER(S), CONDUIT AND WIRING. REFER TO LANDSCAPE DWGS FOR (E) PLANTS AND TREES TO BE REMOVED AS PART OF THIS CONTRACT. REFER TO RELATED DRAWINGS IN THE CONTRACT PACKAGE FOR LAYOUTS OF (E) PLANTING AREAS.
  5. ALL WORK IS NEW AND SHALL BE FURNISHED/INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFICALLY REFERRED TO AS EXISTING AND TO REMAIN IN PLACE.

MATCHLINE - SEE DWG LI-108

MATCHLINE - SEE DWG LI-110

**PLAN**

**LOCATION NO. 09 - NEW WORK**  
SCALE: 1" = 20'-0"

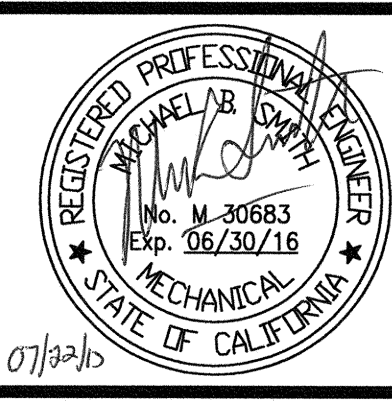


NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 17:08, BY: leeno				

REFERENCE INFORMATION  
& FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE:  
M SMITH 07/2015

DRAWN: DATE:  
AH/MM 07/2015

CHECKED: DATE:  
M CHEE 07/2015

APPROVED  
JUL 23 2015

SECTION MANAGER DATE:  
7/24/15

DEPUTY DIVISION MANAGER DATE:  
7/27/15

DIVISION MANAGER DATE:

SCALE:  
1"=20'-0"

SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**

**LANDSCAPE IRRIGATION SYSTEMS - NEW WORK**  
**LOCATION NO. 09 - PLAN**

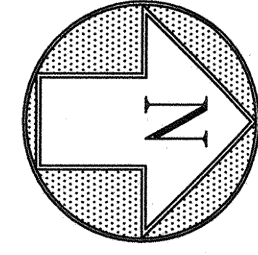
JOB ORDER NO.  
2106J

DRAWING NO.  
LI-109

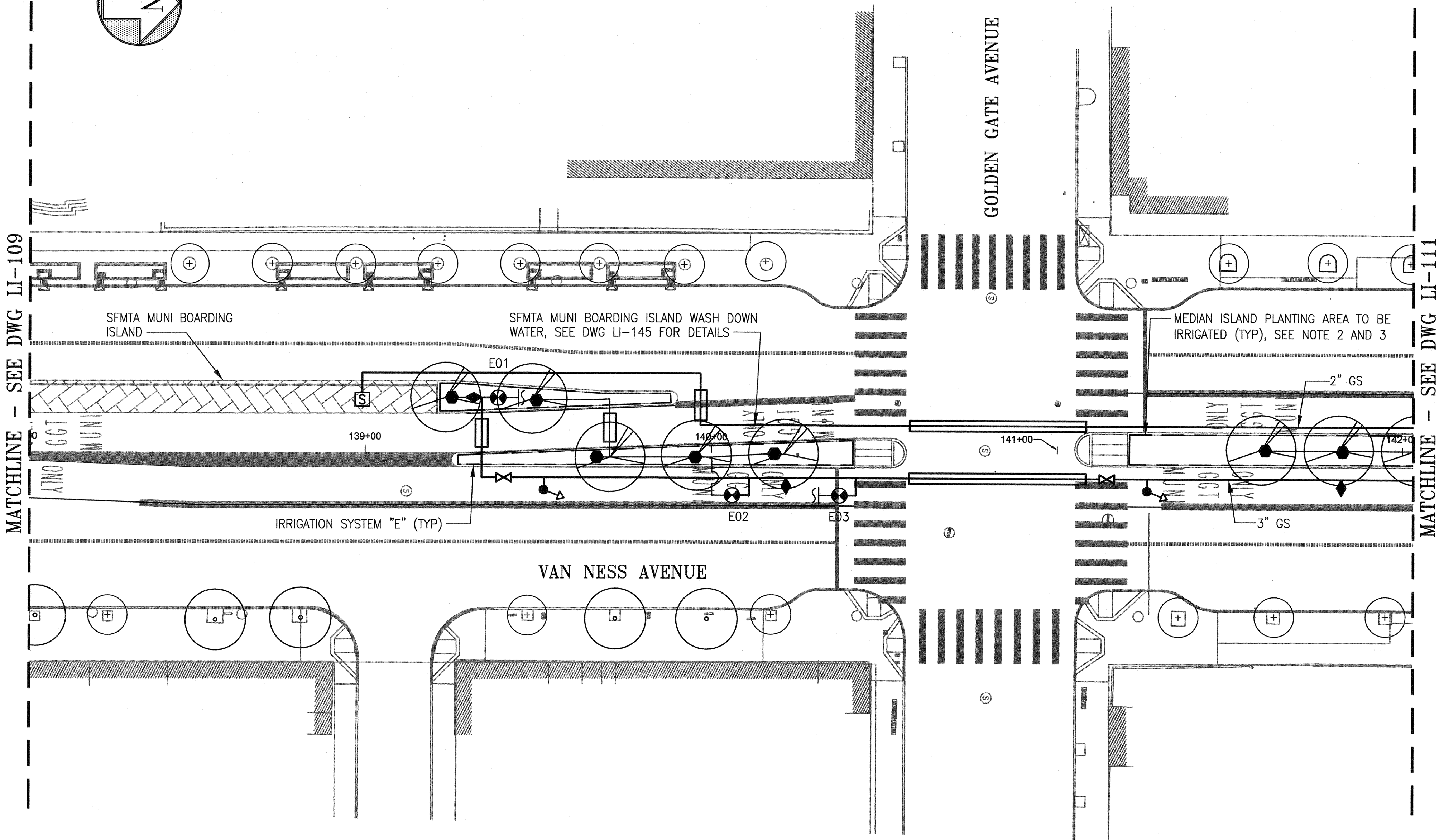
FILE NO.  
102,629

REV. NO.  
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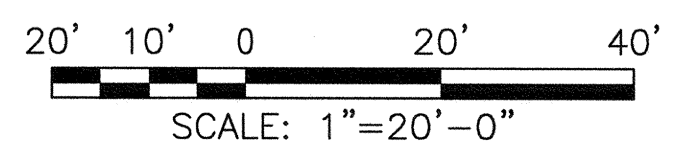


- SHEET NOTES:**
1. REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
  2. REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
  3. REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
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**PLAN**

**LOCATION NO. 10 - NEW WORK**  
 SCALE: 1" = 20'-0"



NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 18:46, BY: leano				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
 CITY AND COUNTY OF SAN FRANCISCO



DESIGNED: DATE: M SMITH 07/2015  
 DRAWN: DATE: AH/MM 07/2015  
 CHECKED: DATE: M CHEE 07/2015

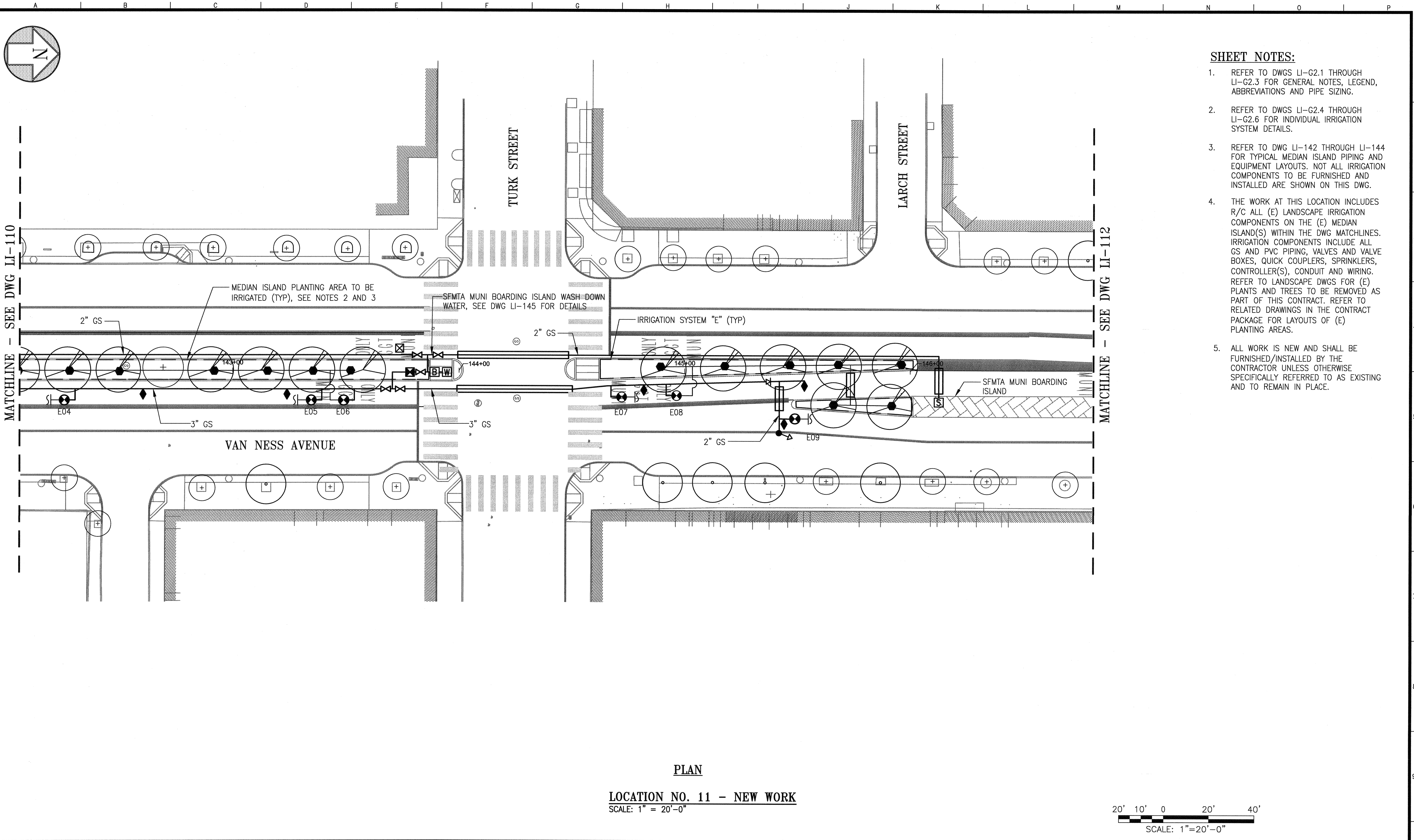
APPROVED: DATE: JUL 23 2015  
 SECTION MANAGER: DATE: 7/24/15  
 DEPUTY DIVISION MANAGER: DATE: 7/21/15  
 DIVISION MANAGER: DATE:

SCALE: 1"=20'-0"  
 SHEET OF SHEETS

MUNI BUS RAPID TRANSIT SYSTEM  
 VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT  
 LANDSCAPE IRRIGATION SYSTEMS - NEW WORK  
 LOCATION NO. 10 - PLAN

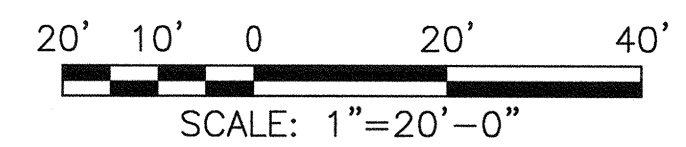
JOB ORDER NO. 2106J  
 DRAWING NO. LI-110  
 FILE NO. 102,630  
 REV. NO. 0

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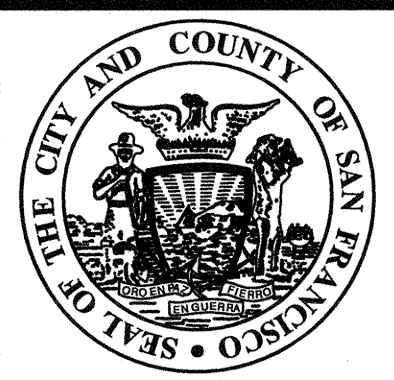
- SHEET NOTES:**
- REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
  - REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
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**PLAN**  
**LOCATION NO. 11 - NEW WORK**  
 SCALE: 1" = 20'-0"



NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 17:14, BY: leeno				

REFERENCE INFORMATION  
& FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
 CITY AND COUNTY OF SAN FRANCISCO



DESIGNED: DATE:  
 M SMITH 07/2015

DRAWN: DATE:  
 AH/MM 07/2015

CHECKED: DATE:  
 M CHEE 07/2015

APPROVED  
 JUL 23 2015

SECTION MANAGER DATE:  
 7/24/15

DEPUTY DIVISION MANAGER DATE:  
 7/27/15

DIVISION MANAGER DATE:

SCALE:  
 1"=20'-0"

SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**

**LANDSCAPE IRRIGATION SYSTEMS - NEW WORK**  
**LOCATION NO. 11 - PLAN**

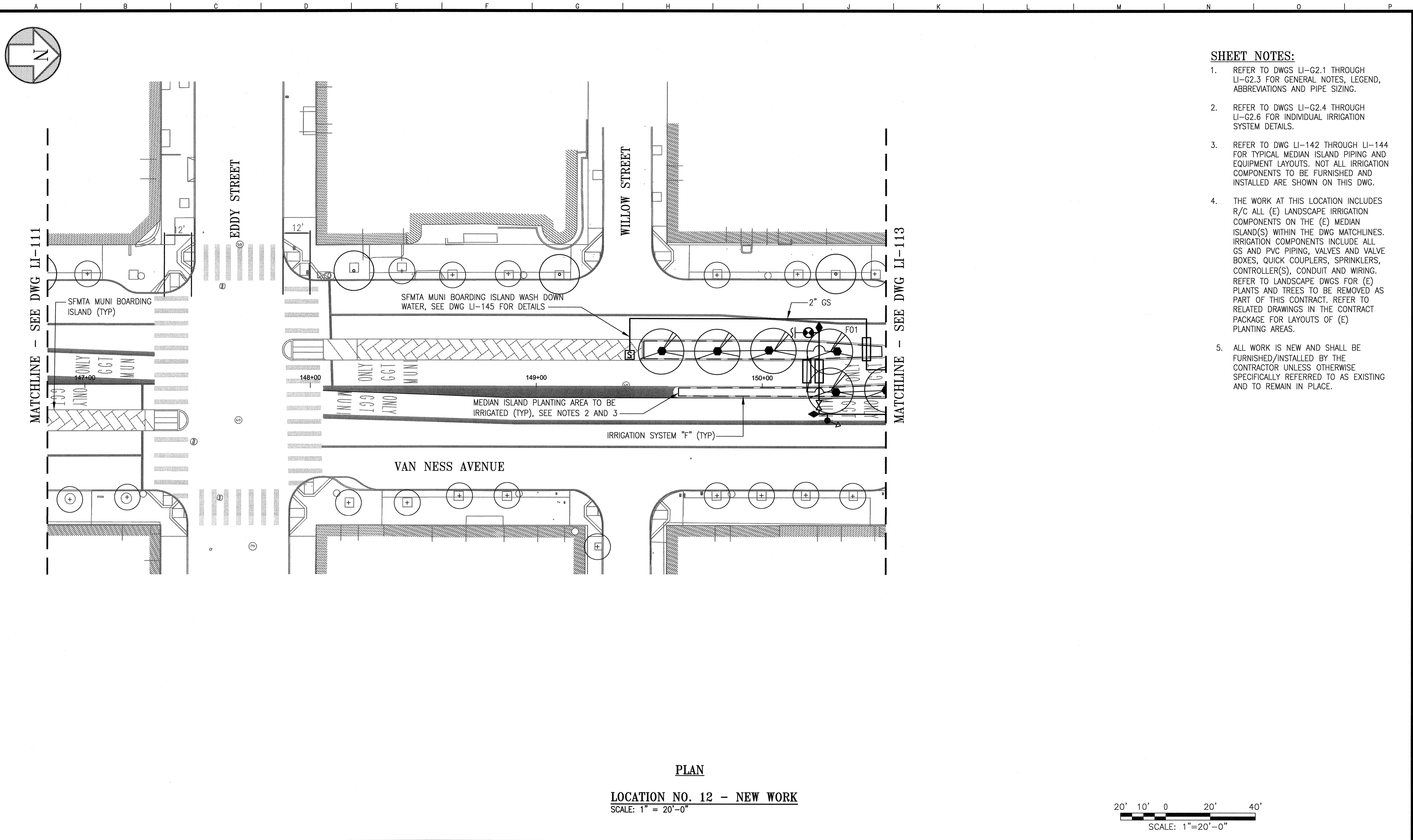
JOB ORDER NO.  
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DRAWING NO.  
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FILE NO.  
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REV. NO.  
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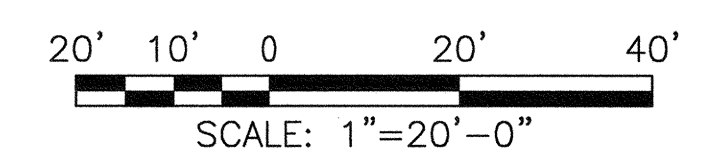
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 Plot Time: Wed, 22 Jul 2015 - 5:15pm  
 Measurement Units are English



- SHEET NOTES:**
1. REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
  2. REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
  3. REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
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**PLAN**

**LOCATION NO. 12 - NEW WORK**  
 SCALE: 1" = 20'-0"



NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 17:54, BY: leeno				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE: M SMITH 07/2015  
 DRAWN: DATE: AH/MM 07/2015  
 CHECKED: DATE: M CHEE 07/2015

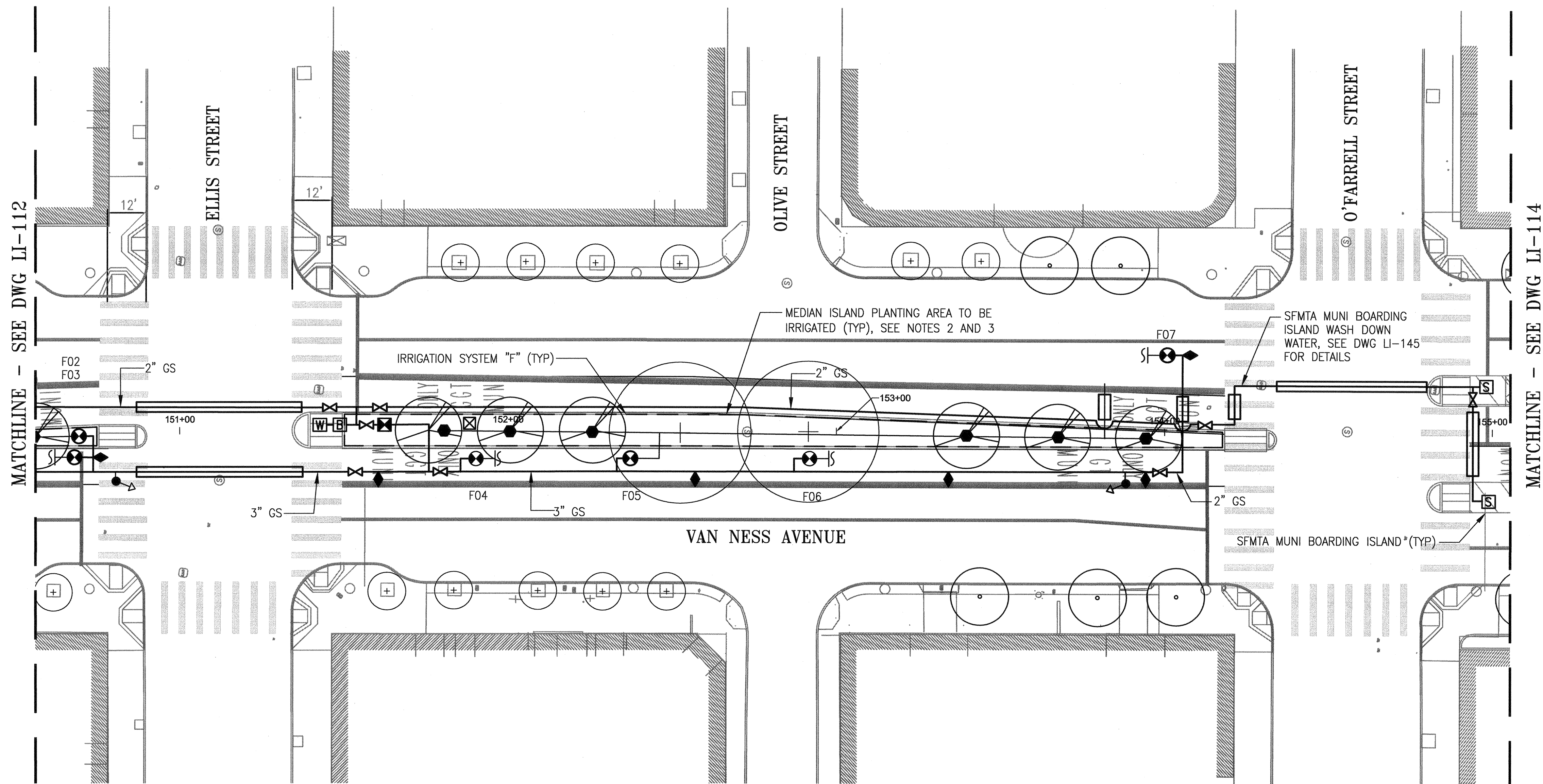
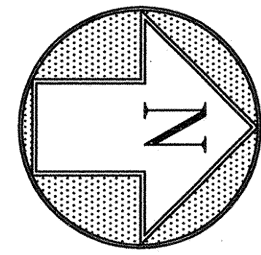
APPROVED: DATE: JUL 23 2015  
 SECTION MANAGER: DATE: 7/24/15  
 DEPUTY DIVISION MANAGER: DATE: 7/27/15  
 DIVISION MANAGER: DATE:

SCALE: 1"=20'-0"  
 SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**  
**LANDSCAPE IRRIGATION SYSTEMS - NEW WORK**  
**LOCATION NO. 12 - PLAN**

JOB ORDER NO. 2106J  
 DRAWING NO. LI-112  
 FILE NO. 102,632  
 REV. NO. 0

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 Measurement Units are English



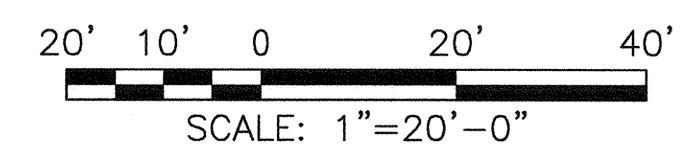
- SHEET NOTES:**
1. REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
  2. REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
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MATCHLINE - SEE DWG LI-112

MATCHLINE - SEE DWG LI-114

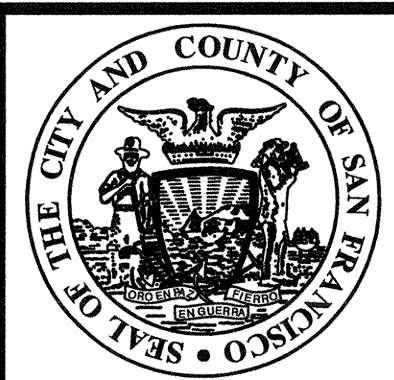
**PLAN**

**LOCATION NO. 13 - NEW WORK**  
SCALE: 1" = 20'-0"



NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 17:54, BY: leeno				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**

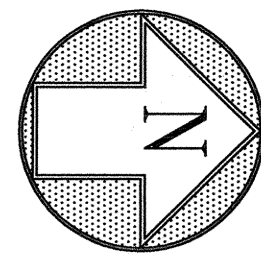


DESIGNED: DATE:	APPROVED	SCALE:
M SMITH 07/2015	<i>Mark</i> JUL 23 2015	1"=20'-0"
DRAWN: DATE:	SECTION MANAGER DATE:	SHEET OF SHEETS
AH/MM 07/2015	<i>D. D.</i> 7/24/15	
CHECKED: DATE:	DEPUTY DIVISION MANAGER DATE:	
M CHEE 07/2015	<i>M. Chee</i> 7/27/15	
	DIVISION MANAGER DATE:	

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**  
**LANDSCAPE IRRIGATION SYSTEMS - NEW WORK**  
**LOCATION NO. 13 - PLAN**

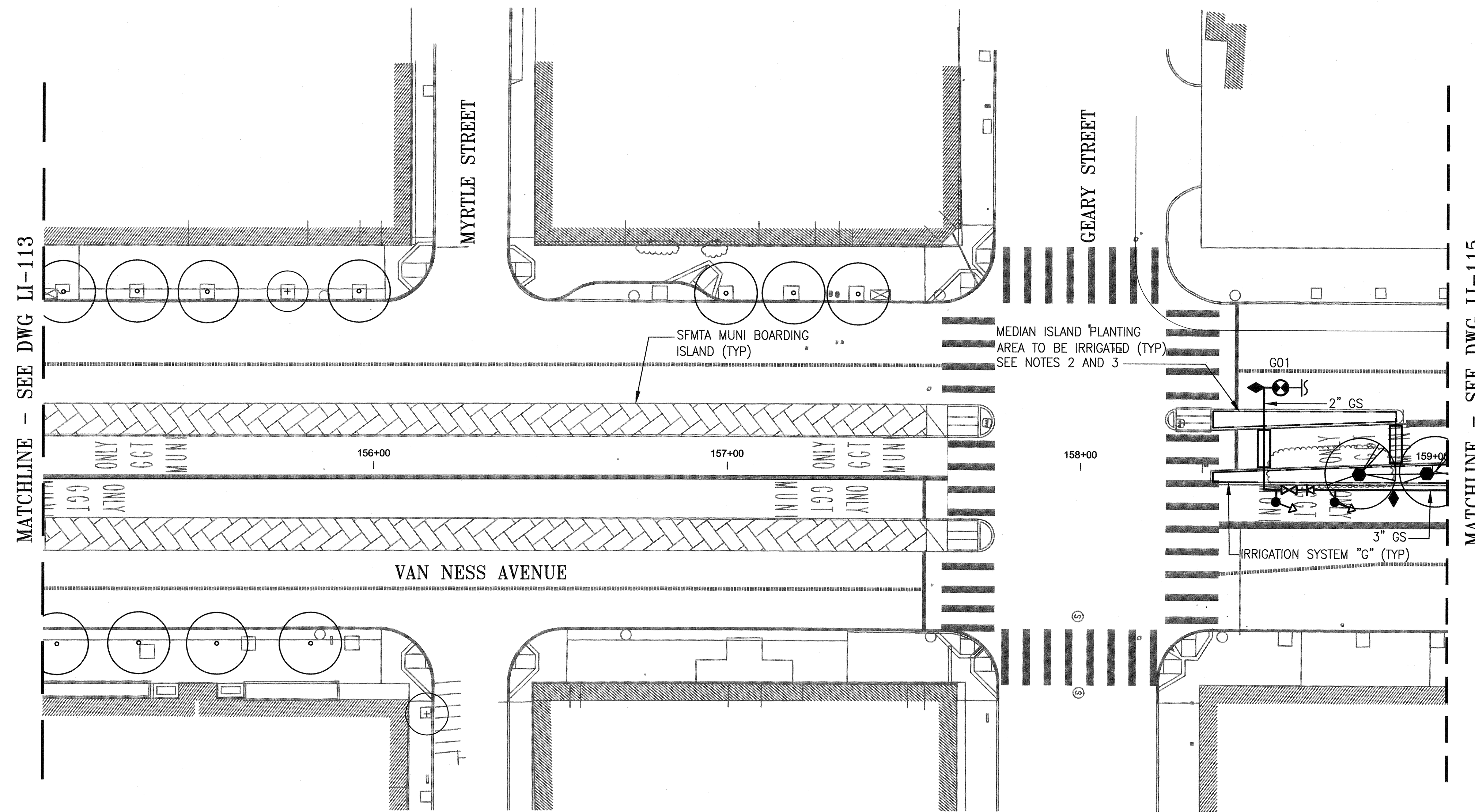
JOB ORDER NO.	2106J
DRAWING NO.	LI-113
FILE NO.	102,633
REV. NO.	0

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 Plot Time: Wed, 22 Jul 2015 5:56pm



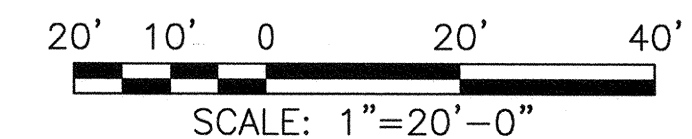
**SHEET NOTES:**

1. REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
2. REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
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**PLAN**

**LOCATION NO. 14 - NEW WORK**  
SCALE: 1" = 20'-0"



NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/23/15 10:14, BY: leeno				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE:  
M SMITH 07/2015

DRAWN: DATE:  
AH/MM 07/2015

CHECKED: DATE:  
M CHEE 07/2015

APPROVED  
 JUL 23 2015

SECTION MANAGER DATE:  
7/24/15

DEPUTY DIVISION MANAGER DATE:  
7/27/15

DIVISION MANAGER DATE:

SCALE:  
1"=20'-0"

SHEET OF SHEETS

MUNI BUS RAPID TRANSIT SYSTEM  
 VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT

LANDSCAPE IRRIGATION SYSTEMS - NEW WORK  
 LOCATION NO. 14 - PLAN

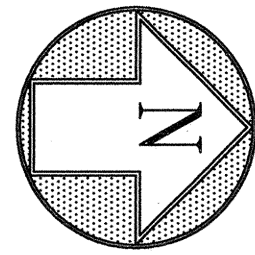
JOB ORDER NO.  
2106J

DRAWING NO.  
LI-114

FILE NO.  
102,634

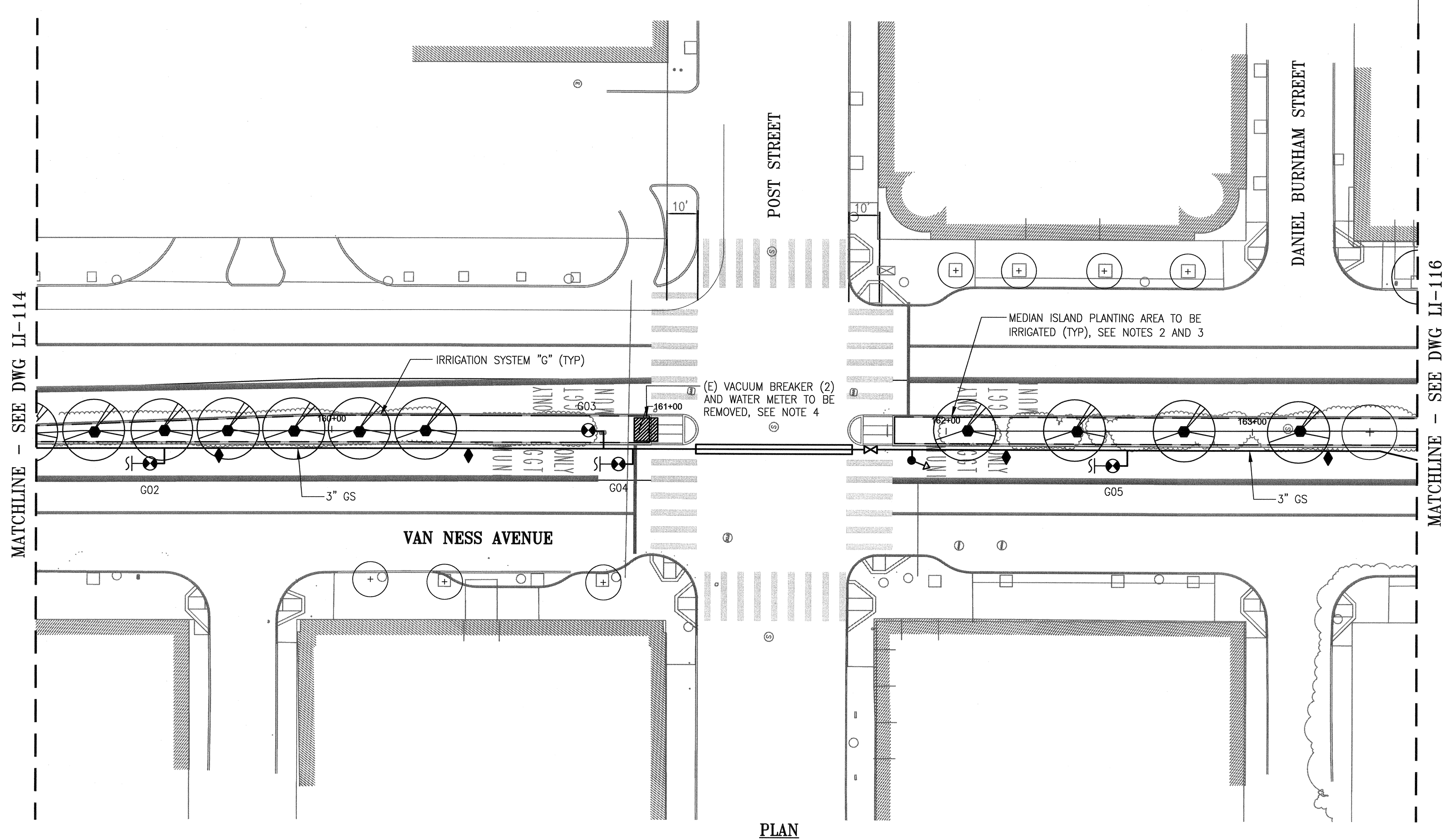
REV. NO.  
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 Measurement Units are English

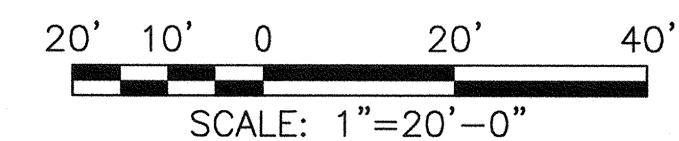


**SHEET NOTES:**

1. REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
2. REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
3. REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
4. THE WORK AT THIS LOCATION INCLUDES R/C ALL (E) LANDSCAPE IRRIGATION COMPONENTS ON THE (E) MEDIAN ISLAND(S) WITHIN THE DWG MATCHLINES. IRRIGATION COMPONENTS INCLUDE ALL GS AND PVC PIPING, VALVES AND VALVE BOXES, QUICK COUPLERS, SPRINKLERS, CONTROLLER(S), CONDUIT AND WIRING. REFER TO LANDSCAPE DWGS FOR (E) PLANTS AND TREES TO BE REMOVED AS PART OF THIS CONTRACT. REFER TO RELATED DRAWINGS IN THE CONTRACT PACKAGE FOR LAYOUTS OF (E) PLANTING AREAS.
5. ALL WORK IS NEW AND SHALL BE FURNISHED/INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFICALLY REFERRED TO AS EXISTING AND TO REMAIN IN PLACE.

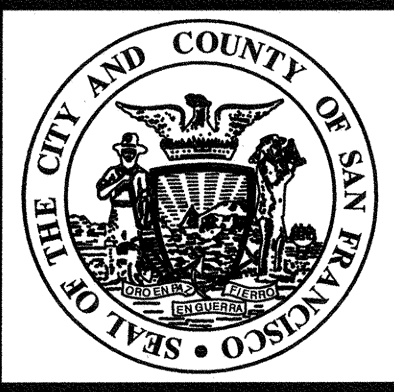


**LOCATION NO. 15 - NEW WORK**  
SCALE: 1" = 20'-0"

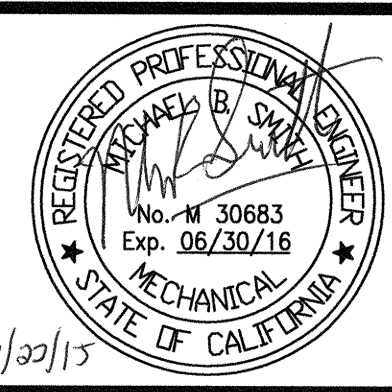


NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 18:07, BY: Ieeno				

REFERENCE INFORMATION  
& FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE:  
M SMITH 07/2015  
DRAWN: DATE:  
AH/MM 07/2015  
CHECKED: DATE:  
M CHEE 07/2015

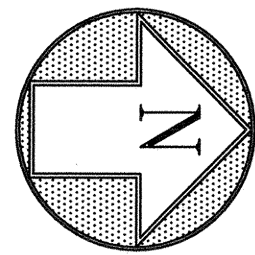
APPROVED  
JUL 23 2015  
SECTION MANAGER  
7/24/15  
DEPUTY DIVISION MANAGER  
7/27/15  
DIVISION MANAGER

SCALE:  
1"=20'-0"  
SHEET OF SHEETS

MUNI BUS RAPID TRANSIT SYSTEM  
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT  
LANDSCAPE IRRIGATION SYSTEMS - NEW WORK  
LOCATION NO. 15 - PLAN

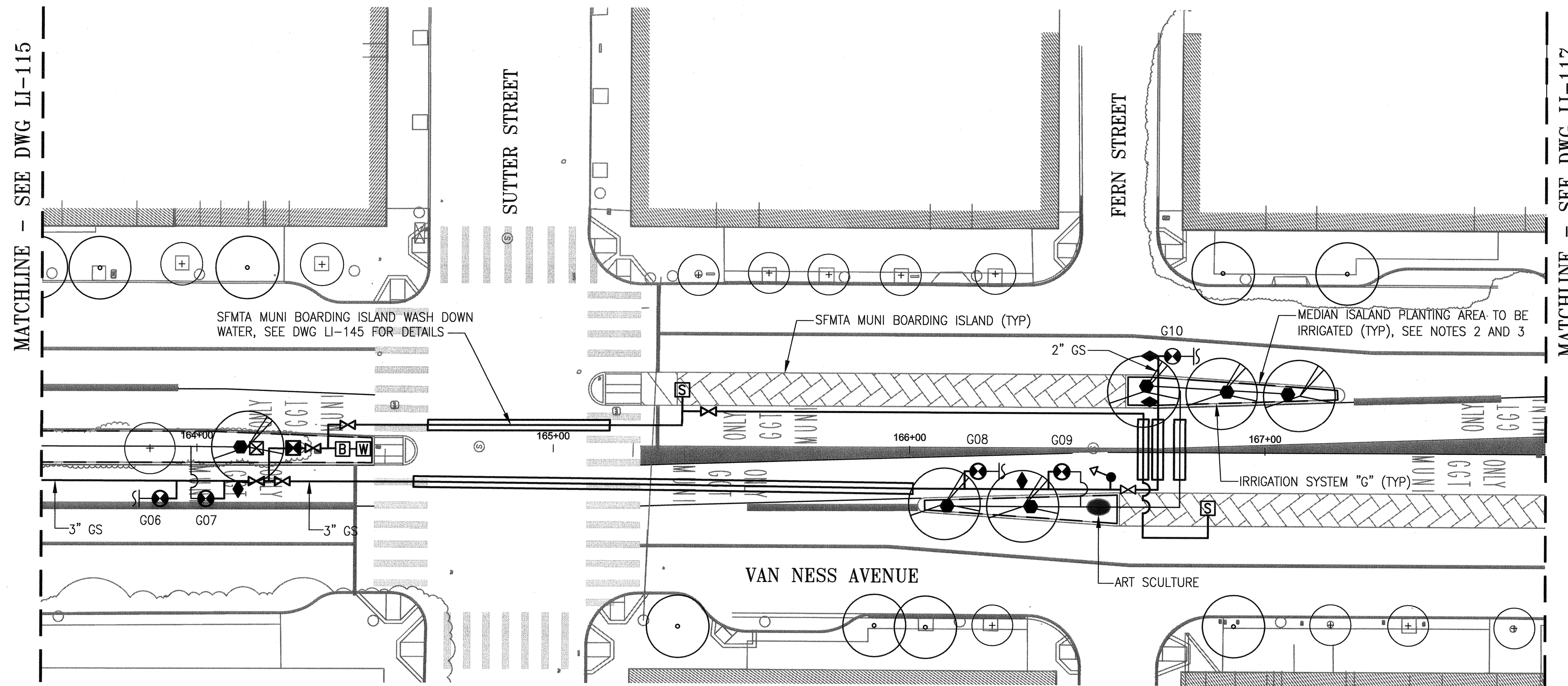
JOB ORDER NO.  
2106J  
DRAWING NO.  
LI-115  
FILE NO.  
102,635  
REV. NO.  
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 Measurement Units are English  
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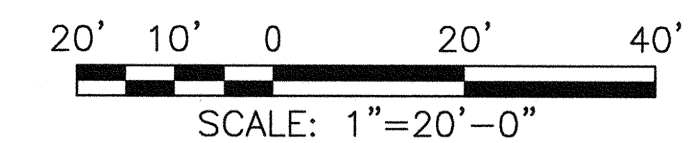
**SHEET NOTES:**

1. REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
2. REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
3. REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
4. THE WORK AT THIS LOCATION INCLUDES R/C ALL (E) LANDSCAPE IRRIGATION COMPONENTS ON THE (E) MEDIAN ISLAND(S) WITHIN THE DWG MATCHLINES. IRRIGATION COMPONENTS INCLUDE ALL GS AND PVC PIPING, VALVES AND VALVE BOXES, QUICK COUPLERS, SPRINKLERS, CONTROLLER(S), CONDUIT AND WIRING. REFER TO LANDSCAPE DWGS FOR (E) PLANTS AND TREES TO BE REMOVED AS PART OF THIS CONTRACT. REFER TO RELATED DRAWINGS IN THE CONTRACT PACKAGE FOR LAYOUTS OF (E) PLANTING AREAS.
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**PLAN**

**LOCATION NO. 16 - NEW WORK**  
SCALE: 1" = 20'-0"



NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 18:07, BY: leeno				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE:	M SMITH 07/2015
DRAWN: DATE:	AH/MM 07/2015
CHECKED: DATE:	M CHEE 07/2015

APPROVED	DATE:
<i>[Signature]</i>	JUL 23 2015
SECTION MANAGER	DATE:
<i>[Signature]</i>	7/24/15
DEPUTY DIVISION MANAGER	DATE:
<i>[Signature]</i>	7/24/15
DIVISION MANAGER	DATE:

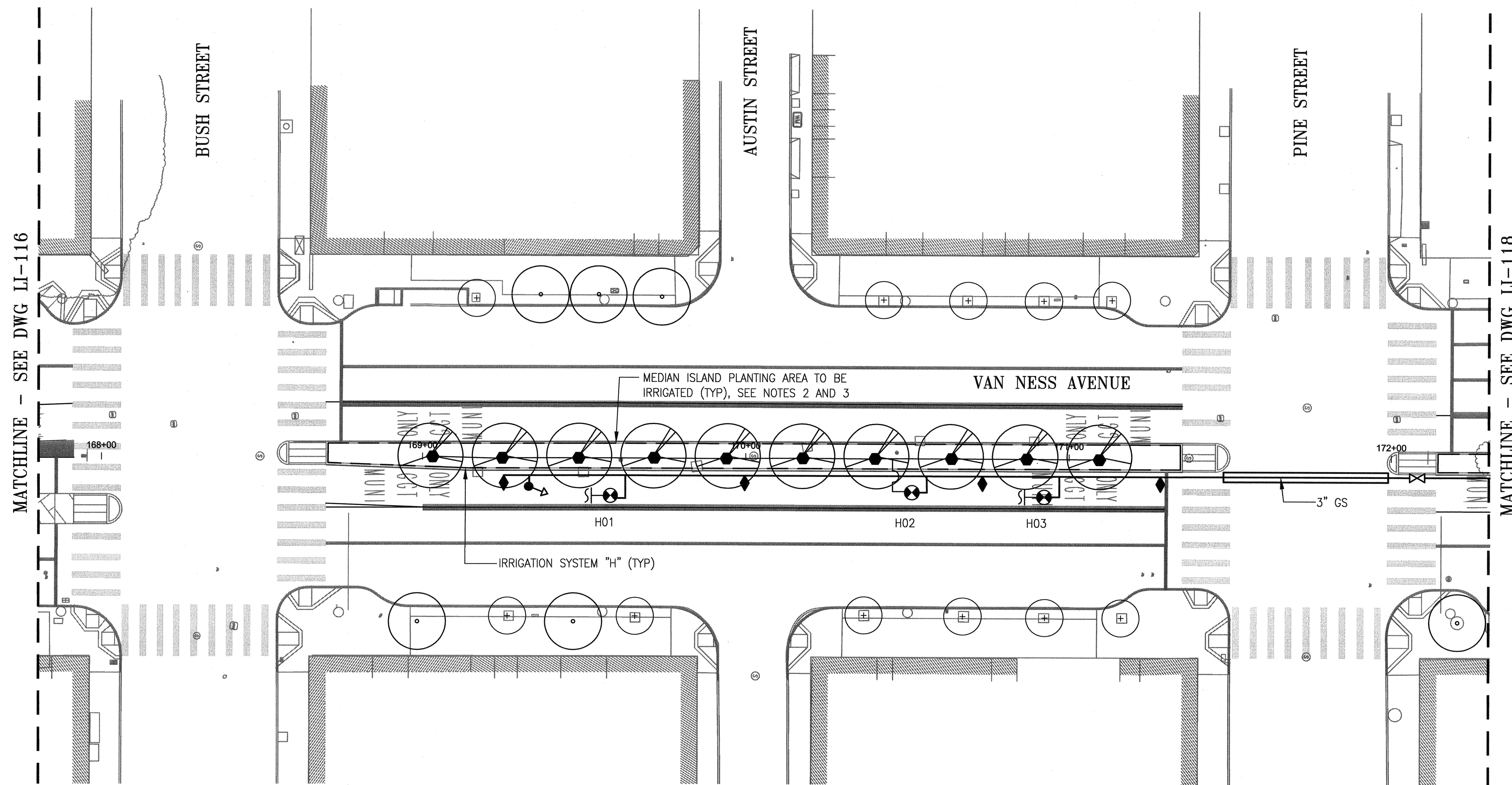
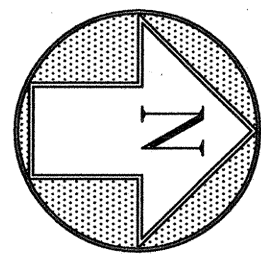
SCALE:	1"=20'-0"
SHEET OF SHEETS	

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
LANDSCAPE IRRIGATION SYSTEMS - NEW WORK
LOCATION NO. 16 - PLAN

JOB ORDER NO.	2106J
DRAWING NO.	LI-116
FILE NO.	102,636
REV. NO.	0

Drawing Path: V:\2106J\_VANNESS\_BRT\_MISSION\_LOMBARD\2\_Design\Working\Drawings\EME\Irrigation-Current\2106J\_LI116.dwg; User: leeno; Date: 7/22/15 18:07; Plot Time: Wed, 22 Jul 2015 6:13pm  
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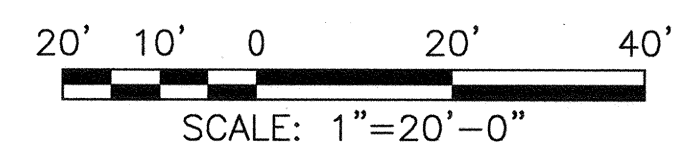
- SHEET NOTES:**
1. REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
  2. REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
  3. REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
  4. THE WORK AT THIS LOCATION INCLUDES R/C ALL (E) LANDSCAPE IRRIGATION COMPONENTS ON THE (E) MEDIAN ISLAND(S) WITHIN THE DWG MATCHLINES. IRRIGATION COMPONENTS INCLUDE ALL GS AND PVC PIPING, VALVES AND VALVE BOXES, QUICK COUPLERS, SPRINKLERS, CONTROLLER(S), CONDUIT AND WIRING. REFER TO LANDSCAPE DWGS FOR (E) PLANTS AND TREES TO BE REMOVED AS PART OF THIS CONTRACT. REFER TO RELATED DRAWINGS IN THE CONTRACT PACKAGE FOR LAYOUTS OF (E) PLANTING AREAS.
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MATCHLINE - SEE DWG LI-116

MATCHLINE - SEE DWG LI-118

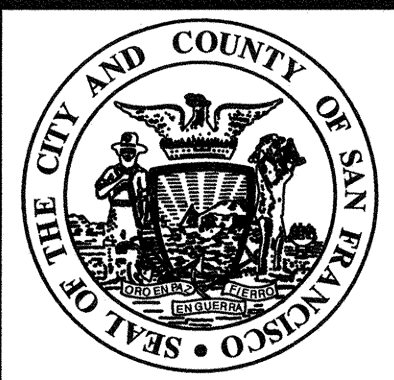
**PLAN**

**LOCATION NO. 17 - NEW WORK**  
SCALE: 1" = 20'-0"

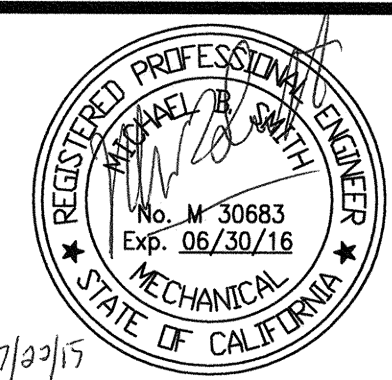


NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 18:17, BY: leeno				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE: M SMITH 07/2015  
DRAWN: DATE: AH/MM 07/2015  
CHECKED: DATE: M CHEE 07/2015

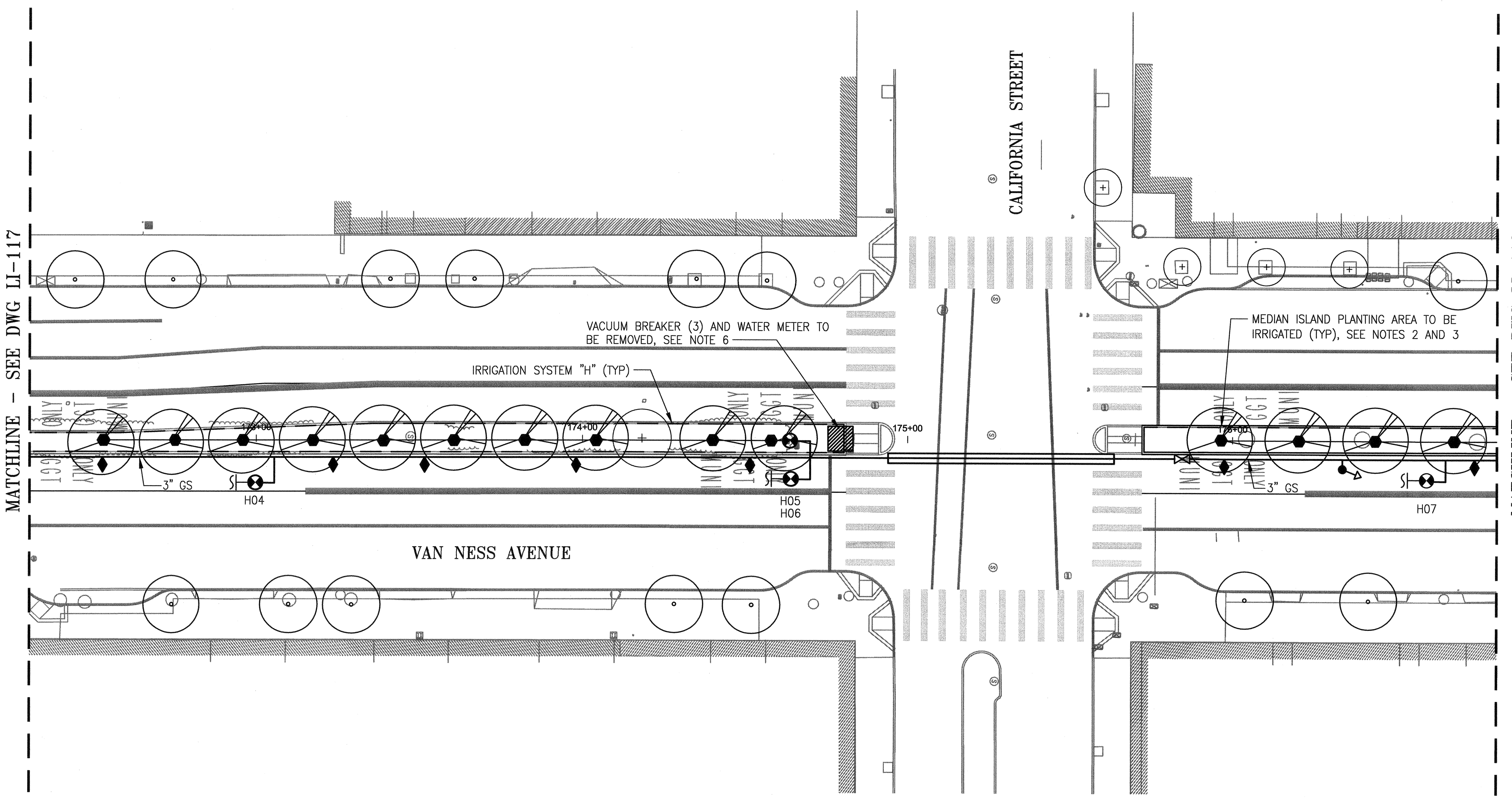
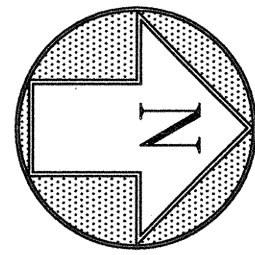
APPROVED: JUL 23 2015  
SECTION MANAGER: DATE: 7/24/15  
DEPUTY DIVISION MANAGER: DATE: 7/27/15  
DIVISION MANAGER: DATE:

SCALE: 1"=20'-0"  
SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**  
**LANDSCAPE IRRIGATION SYSTEMS - NEW WORK**  
**LOCATION NO. 17 - PLAN**

JOB ORDER NO. 2106J  
DRAWING NO. LI-117  
FILE NO. 102,637  
REV. NO. 0

Xrefs: V:\2106L\VANNESS\_BRT\_Mission\_Lombard\2\_Design\Working\_Drawings\EME\Irrigation-Current\locked\_xref\_070615\CP76401LABS.dwg  
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 Model Units: Feet  
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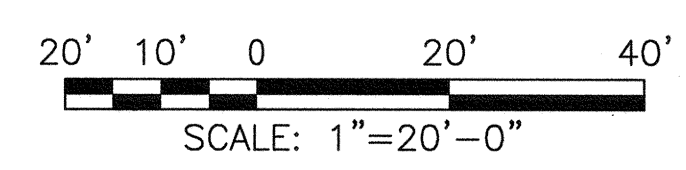
- SHEET NOTES:**
- REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
  - REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
  - REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
  - THE WORK AT THIS LOCATION INCLUDES R/C ALL (E) LANDSCAPE IRRIGATION COMPONENTS ON THE (E) MEDIAN ISLAND(S) WITHIN THE DWG MATCHLINES. IRRIGATION COMPONENTS INCLUDE ALL GS AND PVC PIPING, VALVES AND VALVE BOXES, QUICK COUPLERS, SPRINKLERS, CONTROLLER(S), CONDUIT AND WIRING. REFER TO LANDSCAPE DWGS FOR (E) PLANTS AND TREES TO BE REMOVED AS PART OF THIS CONTRACT. REFER TO RELATED DRAWINGS IN THE CONTRACT PACKAGE FOR LAYOUTS OF (E) PLANTING AREAS.
  - ALL WORK IS NEW AND SHALL BE FURNISHED/INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFICALLY REFERRED TO AS EXISTING AND TO REMAIN IN PLACE.
  - THE CONTRACTOR SHALL COORDINATE WITH SFWD TO DISCONNECT THE DOMESTIC WATER SERVICE, REMOVE THE (E) WATER METER AND METER BOX, R/C THE (E) VACUUM BREAKER(S) AND PIPING DOWNSTREAM FOR 20' AND UPSTREAM TO THE WATER METER OUTLET CONNECTION POINT.

MATCHLINE - SEE DWG LI-117

MATCHLINE - SEE DWG LI-119

**PLAN**

**LOCATION NO. 18 - NEW WORK**  
SCALE: 1" = 20'-0"

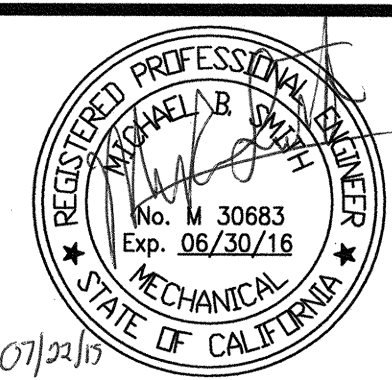


NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 18:25, BY: leeno				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE: M SMITH 07/2015  
DRAWN: DATE: AH/MM 07/2015  
CHECKED: DATE: M CHEE 07/2015

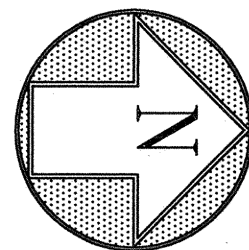
APPROVED: DATE: *Wank* JUL 23 2015  
SECTION MANAGER DATE: *Draper* 7/24/15  
DEPUTY DIVISION MANAGER DATE: *Patricia* 7/27/15  
DIVISION MANAGER DATE:

SCALE: 1"=20'-0"  
SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**  
**LANDSCAPE IRRIGATION SYSTEMS - NEW WORK**  
**LOCATION NO. 18 - PLAN**

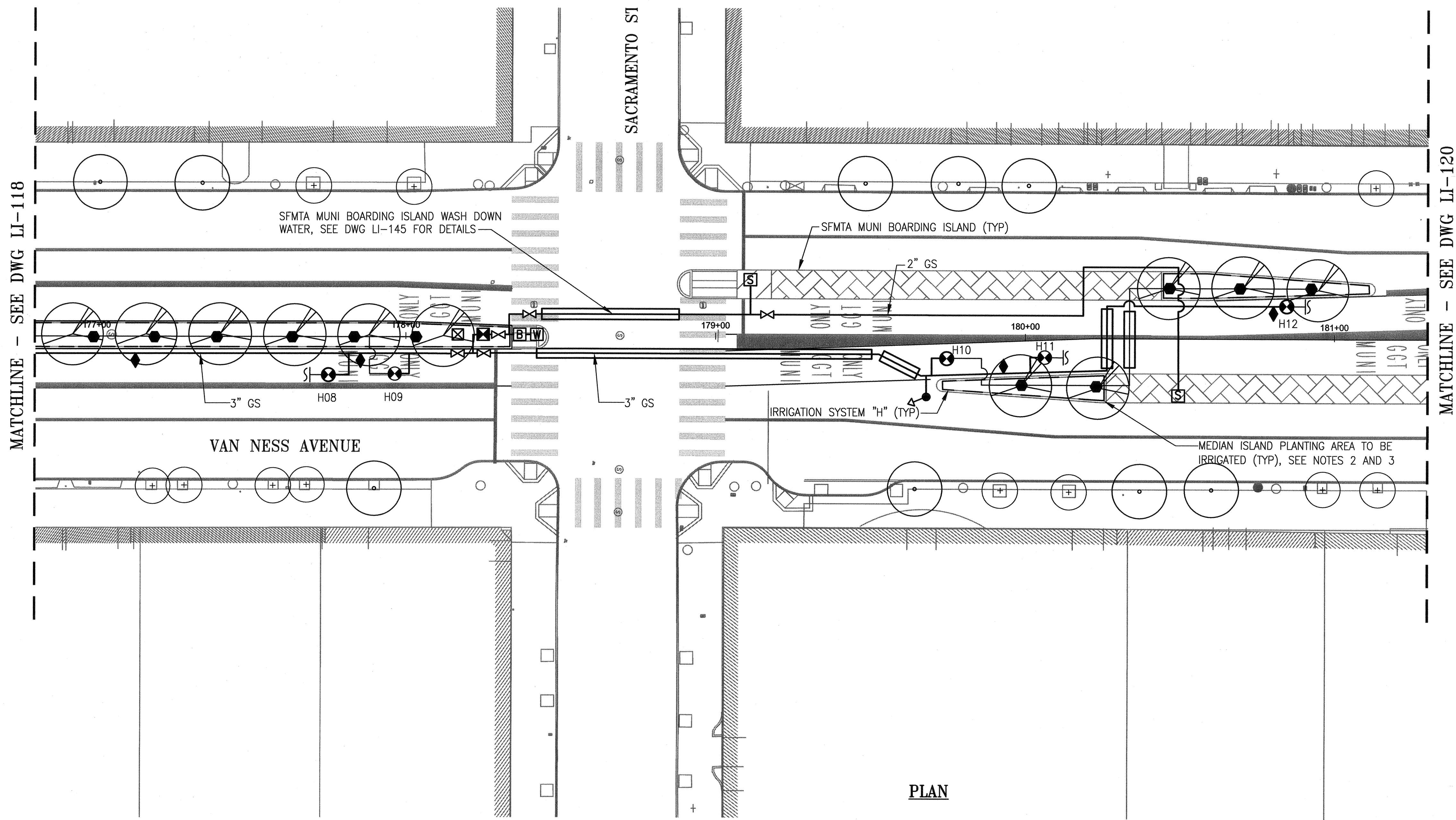
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DRAWING NO. LI-118  
FILE NO. 102,638  
REV. NO. 0

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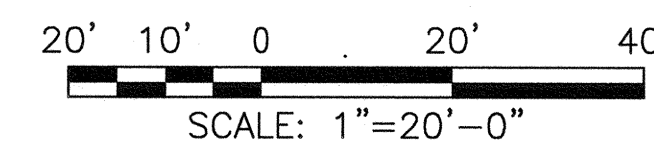
**SHEET NOTES:**

1. REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
2. REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
3. REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
4. THE WORK AT THIS LOCATION INCLUDES R/C ALL (E) LANDSCAPE IRRIGATION COMPONENTS ON THE (E) MEDIAN ISLAND(S) WITHIN THE DWG MATCHLINES. IRRIGATION COMPONENTS INCLUDE ALL GS AND PVC PIPING, VALVES AND VALVE BOXES, QUICK COUPLERS, SPRINKLERS, CONTROLLER(S), CONDUIT AND WIRING. REFER TO LANDSCAPE DWGS FOR (E) PLANTS AND TREES TO BE REMOVED AS PART OF THIS CONTRACT. REFER TO RELATED DRAWINGS IN THE CONTRACT PACKAGE FOR LAYOUTS OF (E) PLANTING AREAS.
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**PLAN**

**LOCATION NO. 19 - NEW WORK**  
SCALE: 1" = 20'-0"

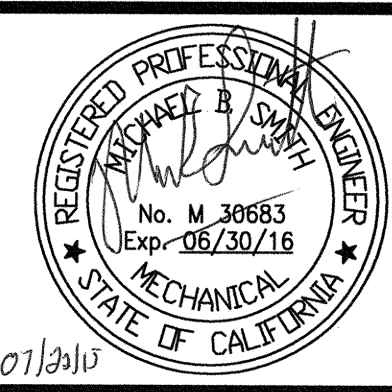


NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 18:25, BY: leeno				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
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**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE: M SMITH 07/2015  
DRAWN: DATE: AH/MM 07/2015  
CHECKED: DATE: M CHEE 07/2015

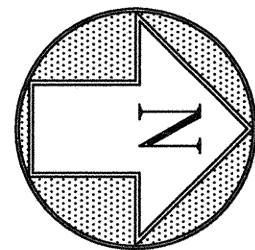
APPROVED: DATE: *Mark* JUL 23 2015  
SECTION MANAGER DATE: *Hope* 7/24/15  
DEPUTY DIVISION MANAGER DATE: *Paul* 7/27/15  
DIVISION MANAGER DATE:

SCALE: 1"=20'-0"  
SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**  
**LANDSCAPE IRRIGATION SYSTEMS - NEW WORK**  
**LOCATION NO. 19 - PLAN**

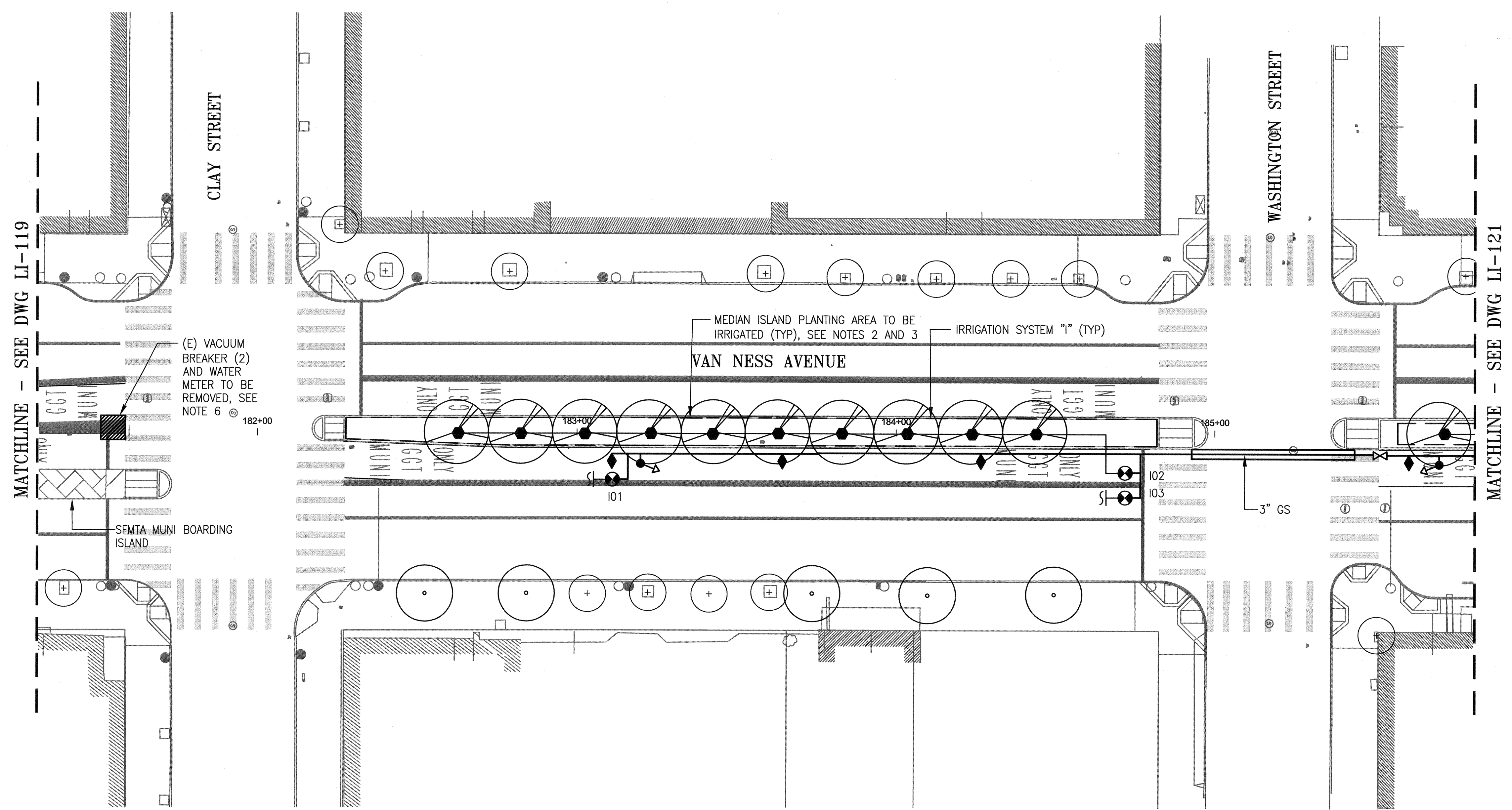
JOB ORDER NO. 2106J  
DRAWING NO. LI-119  
FILE NO. 102,639  
REV. NO. 0

Xrefs: V:\2106\VANNESS\_BRT\_MISSION\_L0MBARD\2\_Design\Working\_Drawings\EME\Irrigation-Current\locked\_xref\CP76401LABS.dwg  
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 Units: Feet



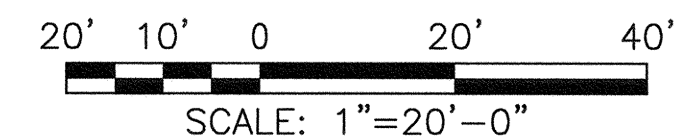
**SHEET NOTES:**

1. REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
2. REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
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**PLAN**

**LOCATION NO. 20 - NEW WORK**  
SCALE: 1" = 20'-0"

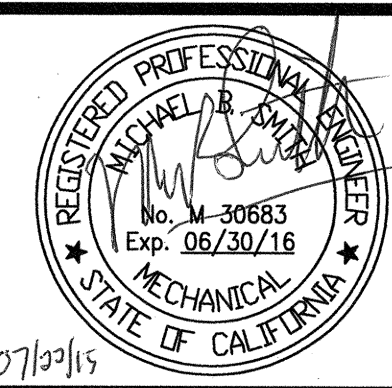


NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 18:32, BY: leeno				

REFERENCE INFORMATION  
& FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
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DESIGNED: DATE:  
M SMITH 07/2015

DRAWN: DATE:  
AH/MM 07/2015

CHECKED: DATE:  
M CHEE 07/2015

APPROVED  
Wank JUL 23 2015

SECTION MANAGER DATE:  
Shaper 7/24/15

DEPUTY DIVISION MANAGER DATE:  
Cahill 7/27/15

DIVISION MANAGER DATE:

SCALE:  
1"=20'-0"

SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**

**LANDSCAPE IRRIGATION SYSTEMS - NEW WORK**  
**LOCATION NO. 20 - PLAN**

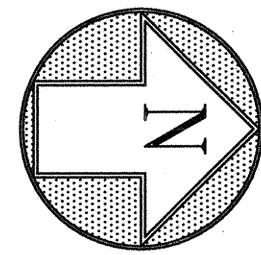
JOB ORDER NO.  
2106J

DRAWING NO.  
LI-120

FILE NO.  
102,640

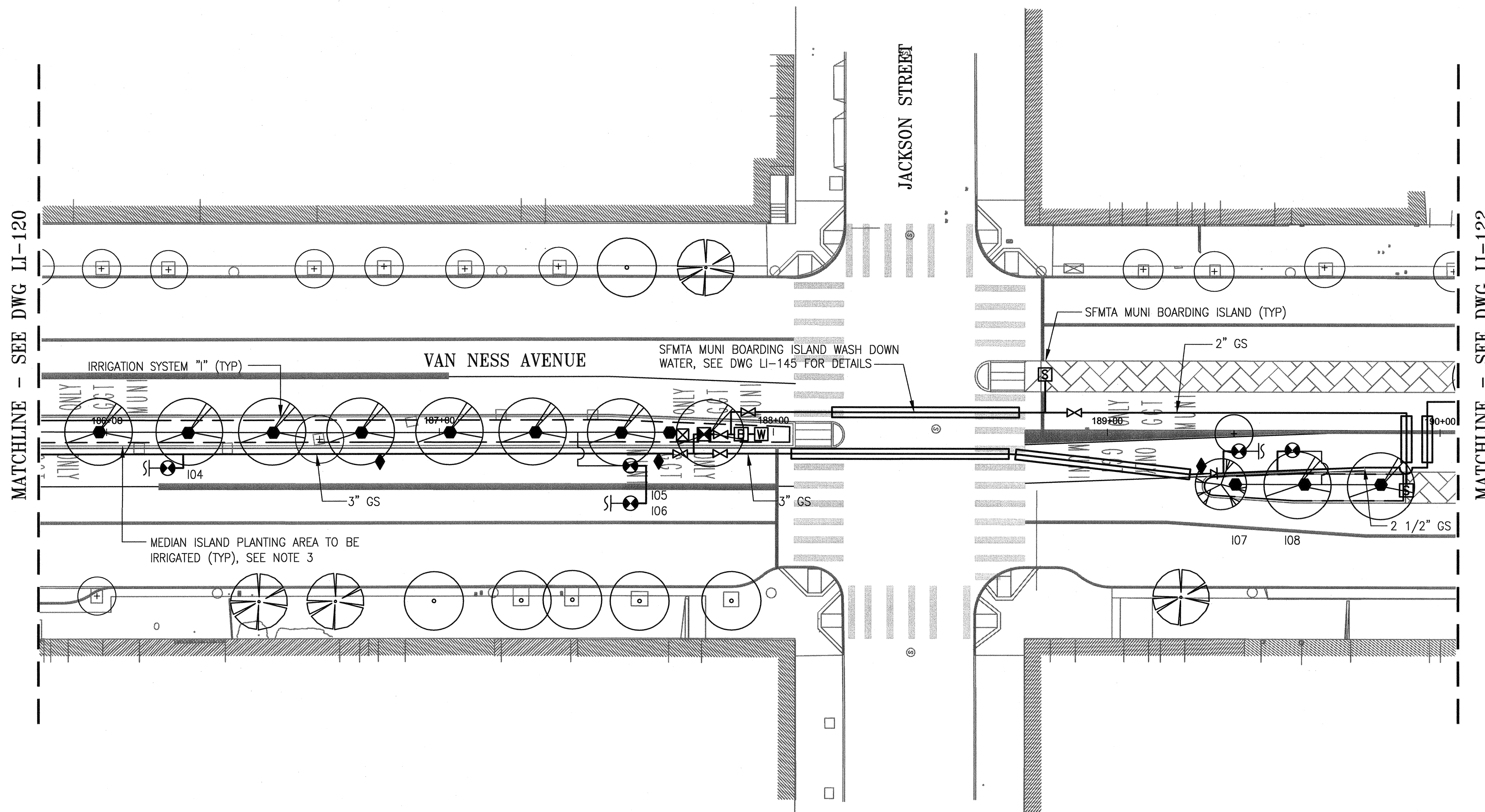
REV. NO.  
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 Plot Time: Wed, 22 Jul 2015 - 6:53pm  
 Model Units: Feet



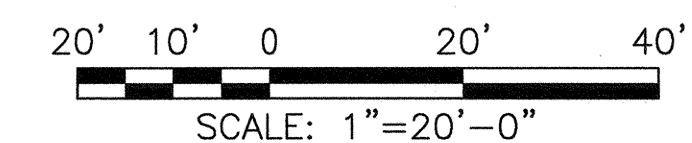
**SHEET NOTES:**

1. REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
2. REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
3. REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
4. THE WORK AT THIS LOCATION INCLUDES R/C ALL (E) LANDSCAPE IRRIGATION COMPONENTS ON THE (E) MEDIAN ISLAND(S) WITHIN THE DWG MATCHLINES. IRRIGATION COMPONENTS INCLUDE ALL GS AND PVC PIPING, VALVES AND VALVE BOXES, QUICK COUPLERS, SPRINKLERS, CONTROLLER(S), CONDUIT AND WIRING. REFER TO LANDSCAPE DWGS FOR (E) PLANTS AND TREES TO BE REMOVED AS PART OF THIS CONTRACT. REFER TO RELATED DRAWINGS IN THE CONTRACT PACKAGE FOR LAYOUTS OF (E) PLANTING AREAS.
5. ALL WORK IS NEW AND SHALL BE FURNISHED/INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFICALLY REFERRED TO AS EXISTING AND TO REMAIN IN PLACE.



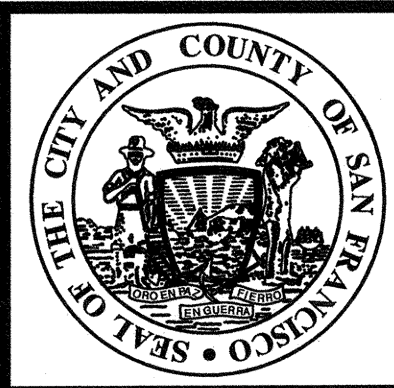
**PLAN**

**LOCATION NO. 21 - NEW WORK**  
SCALE: 1" = 20'-0"

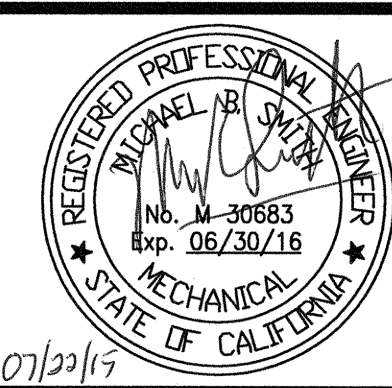


NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 18:32, BY: leeno				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE: M SMITH 07/2015  
DRAWN: DATE: AH/MM 07/2015  
CHECKED: DATE: M CHEE 07/2015

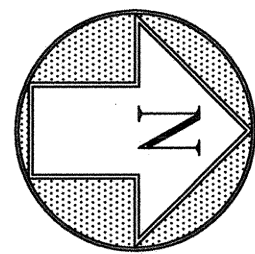
APPROVED: *Mark* JUL 23 2015  
SECTION MANAGER DATE: *Shapa* 7/24/15  
DEPUTY DIVISION MANAGER DATE: *Will* 7/24/15  
DIVISION MANAGER DATE:

SCALE: 1"=20'-0"  
SHEET OF SHEETS

MUNI BUS RAPID TRANSIT SYSTEM  
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT  
LANDSCAPE IRRIGATION SYSTEMS - NEW WORK  
LOCATION NO. 21 - PLAN

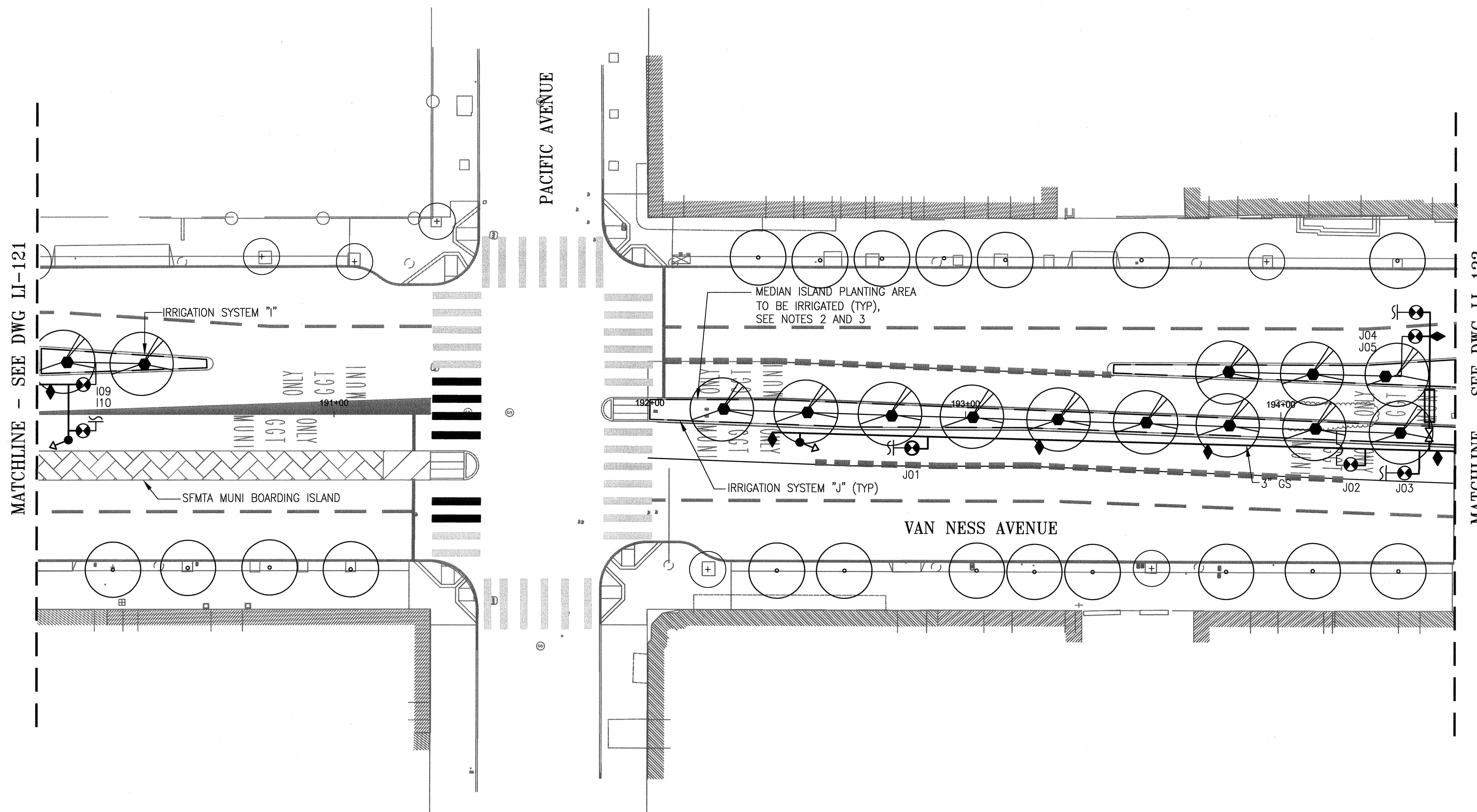
JOB ORDER NO. 2106J  
DRAWING NO. LI-121  
FILE NO. 102,641  
REV. NO. 0

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 Model Units: Feet  
 Measurement Units are English

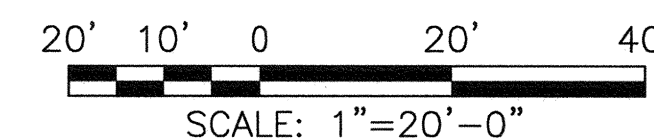


**SHEET NOTES:**

1. REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
2. REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
3. REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
4. THE WORK AT THIS LOCATION INCLUDES R/C ALL (E) LANDSCAPE IRRIGATION COMPONENTS ON THE (E) MEDIAN ISLAND(S) WITHIN THE DWG MATCHLINES. IRRIGATION COMPONENTS INCLUDE ALL GS AND PVC PIPING, VALVES AND VALVE BOXES, QUICK COUPLERS, SPRINKLERS, CONTROLLER(S), CONDUIT AND WIRING. REFER TO LANDSCAPE DWGS FOR (E) PLANTS AND TREES TO BE REMOVED AS PART OF THIS CONTRACT. REFER TO RELATED DRAWINGS IN THE CONTRACT PACKAGE FOR LAYOUTS OF (E) PLANTING AREAS.
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**PLAN**  
**LOCATION NO. 22 - NEW WORK**  
 SCALE: 1" = 20'-0"

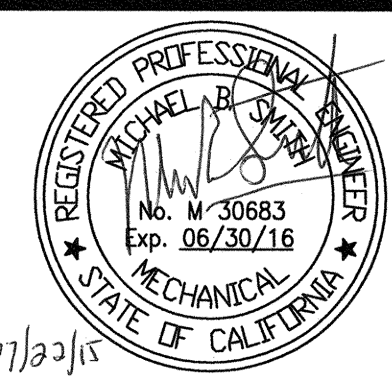


NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 18:32, BY: leeno				

REFERENCE INFORMATION  
& FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
 CITY AND COUNTY OF SAN FRANCISCO



DESIGNED: DATE:  
M SMITH 07/2015

DRAWN: DATE:  
AH/MM 07/2015

CHECKED: DATE:  
M CHEE 07/2015

APPROVED  
 JUL 23 2015

SECTION MANAGER DATE:  
7/24/15

DEPUTY DIVISION MANAGER DATE:  
7/24/15

DIVISION MANAGER DATE:

SCALE:  
1"=20'-0"

SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**

**LANDSCAPE IRRIGATION SYSTEMS - NEW WORK**  
**LOCATION NO. 22 - PLAN**

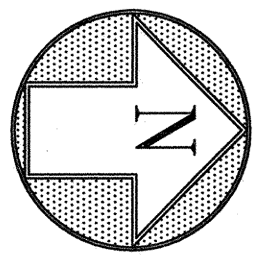
JOB ORDER NO.  
2106J

DRAWING NO.  
LI-122

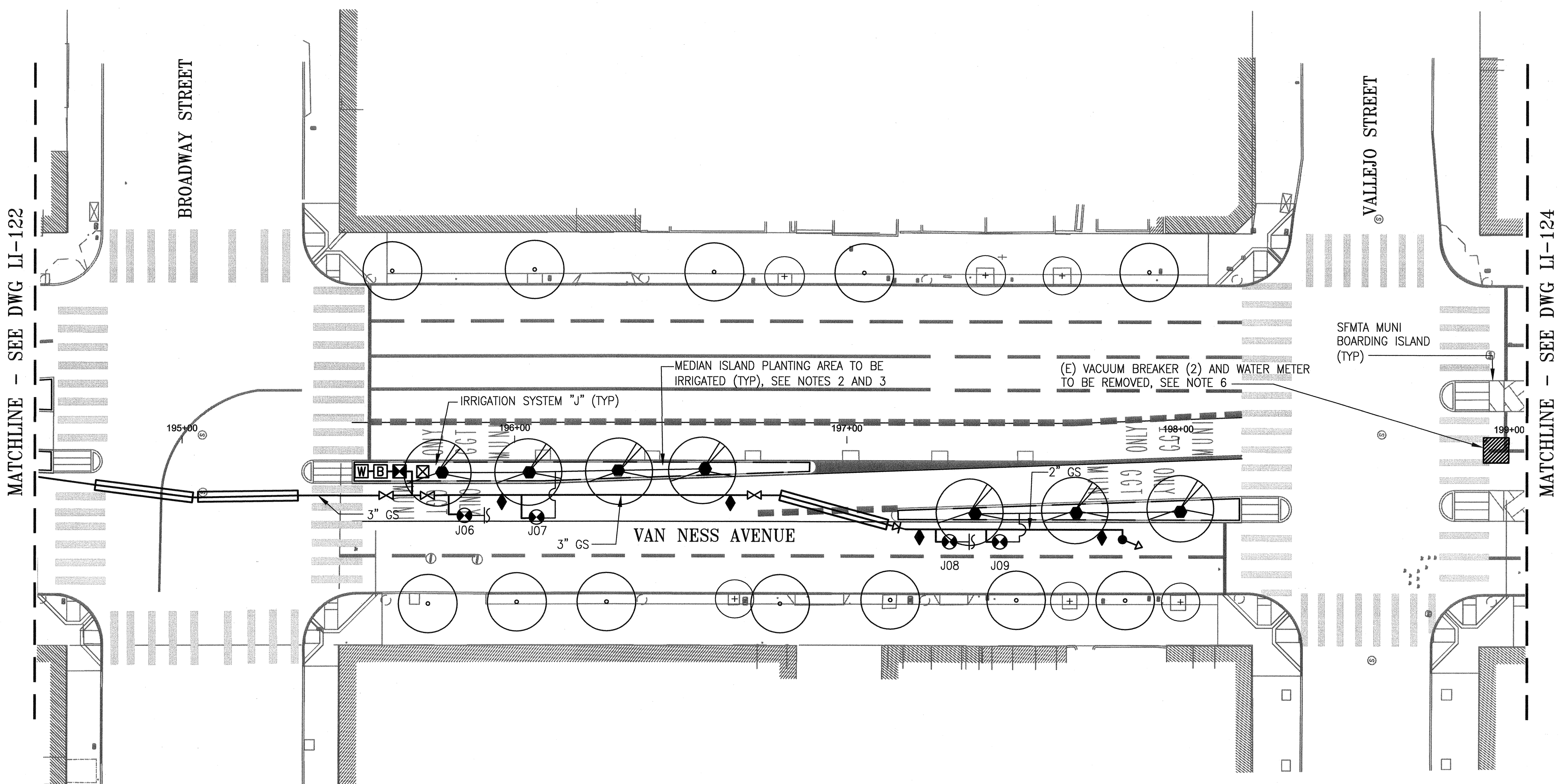
FILE NO.  
102,642

REV. NO.  
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 Model Units: Feet  
 Measurement Units are English  
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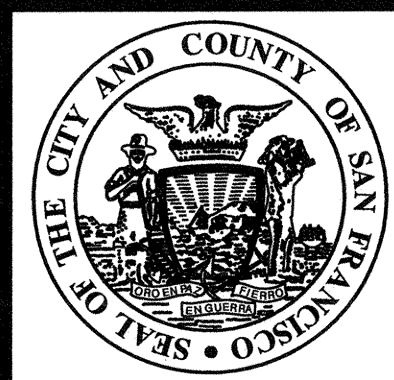
- SHEET NOTES:**
- REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
  - REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
  - REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
  - THE WORK AT THIS LOCATION INCLUDES R/C ALL (E) LANDSCAPE IRRIGATION COMPONENTS ON THE (E) MEDIAN ISLAND(S) WITHIN THE DWG MATCHLINES. IRRIGATION COMPONENTS INCLUDE ALL GS AND PVC PIPING, VALVES AND VALVE BOXES, QUICK COUPLERS, SPRINKLERS, CONTROLLER(S), CONDUIT AND WIRING. REFER TO LANDSCAPE DWGS FOR (E) PLANTS AND TREES TO BE REMOVED AS PART OF THIS CONTRACT. REFER TO RELATED DRAWINGS IN THE CONTRACT PACKAGE FOR LAYOUTS OF (E) PLANTING AREAS.
  - ALL WORK IS NEW AND SHALL BE FURNISHED/INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFICALLY REFERRED TO AS EXISTING AND TO REMAIN IN PLACE.
  - THE CONTRACTOR SHALL COORDINATE WITH SFWD TO DISCONNECT THE DOMESTIC WATER SERVICE, REMOVE THE (E) WATER METER AND METER BOX, R/C THE (E) VACUUM BREAKER(S) AND PIPING DOWNSTREAM FOR 20' AND UPSTREAM TO THE WATER METER OUTLET CONNECTION POINT.



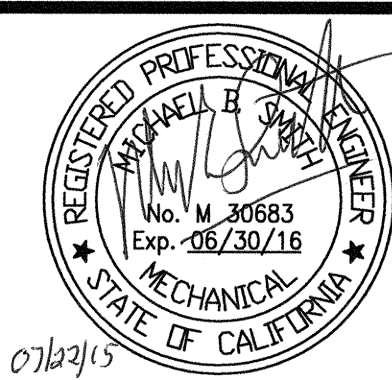
**PLAN**  
**LOCATION NO. 23 - NEW WORK**  
 SCALE: 1" = 20'-0"

NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 18:37, BY: leeno				

REFERENCE INFORMATION  
& FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
 CITY AND COUNTY OF SAN FRANCISCO



DESIGNED: DATE: M SMITH 07/2015  
 DRAWN: DATE: AH/MM 07/2015  
 CHECKED: DATE: M CHEE 07/2015

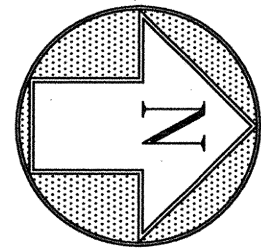
APPROVED: DATE: *Wanda* JUL 23 2015  
 SECTION MANAGER DATE: *Theresa* 7/24/15  
 DEPUTY DIVISION MANAGER DATE: *Calli* 7/24/15  
 DIVISION MANAGER DATE:

SCALE: 1"=20'-0"  
 SHEET OF SHEETS

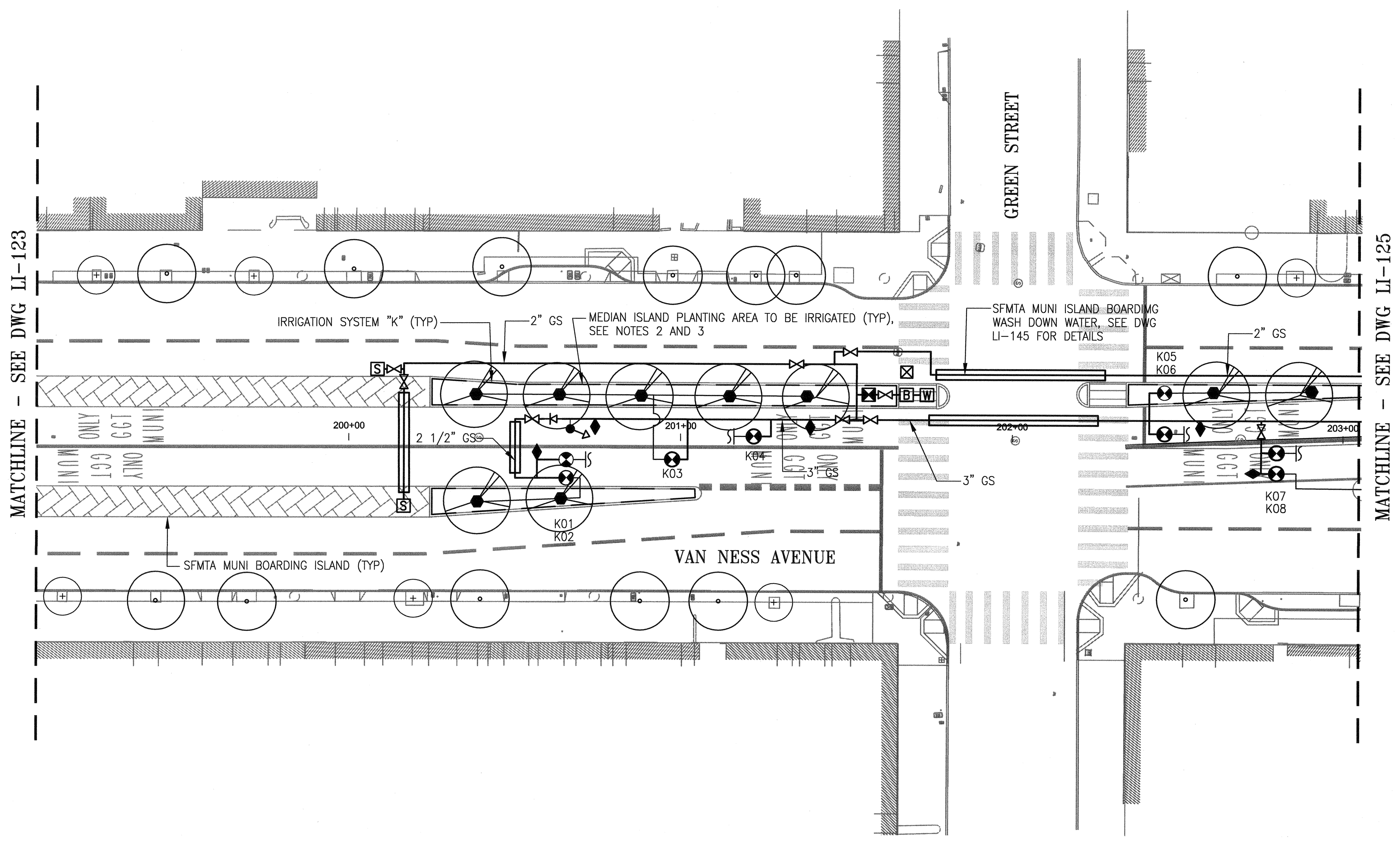
**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**  
 LANDSCAPE IRRIGATION SYSTEMS - NEW WORK  
 LOCATION NO. 23 - PLAN

JOB ORDER NO. 2106J  
 DRAWING NO. LI-123  
 FILE NO. 102,643  
 REV. NO. 0

Xrefs: V:\21061\VANNESS\_BRT\_MISSION\_LOMBARD\2\_Design\Working\_Drawings\EME\Irrigation-Current\locked\_xref\_070615\CPT640\LABS.dwg  
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 Plot time: Wed, 7/22/2015 6:37pm

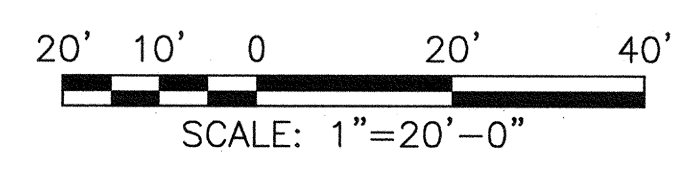


- SHEET NOTES:**
- REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
  - REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
  - REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
  - THE WORK AT THIS LOCATION INCLUDES R/C ALL (E) LANDSCAPE IRRIGATION COMPONENTS ON THE (E) MEDIAN ISLAND(S) WITHIN THE DWG MATCHLINES. IRRIGATION COMPONENTS INCLUDE ALL GS AND PVC PIPING, VALVES AND VALVE BOXES, QUICK COUPLERS, SPRINKLERS, CONTROLLER(S), CONDUIT AND WIRING. REFER TO LANDSCAPE DWGS FOR (E) PLANTS AND TREES TO BE REMOVED AS PART OF THIS CONTRACT. REFER TO RELATED DRAWINGS IN THE CONTRACT PACKAGE FOR LAYOUTS OF (E) PLANTING AREAS.
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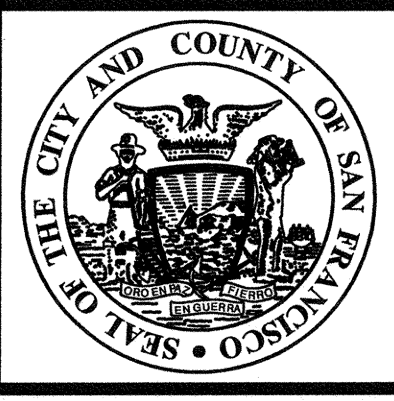
**PLAN**

**LOCATION NO. 24 - NEW WORK**  
SCALE: 1" = 20'-0"

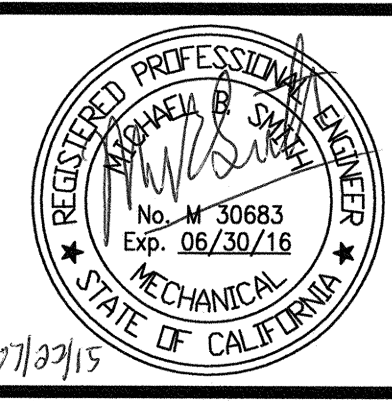


NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 18:37, BY: Ieeno				

REFERENCE INFORMATION  
& FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE:  
M SMITH 07/2015

DRAWN: DATE:  
AH/MM 07/2015

CHECKED: DATE:  
M CHEE 07/2015

APPROVED  
JUL 23 2015

SECTION MANAGER DATE:  
7/24/15

DEPUTY DIVISION MANAGER DATE:  
7/27/15

DIVISION MANAGER DATE:

SCALE:  
1"=20'-0"

SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**

**LANDSCAPE IRRIGATION SYSTEMS - NEW WORK**  
**LOCATION NO. 24 - PLAN**

JOB ORDER NO.  
2106J

DRAWING NO.  
LI-124

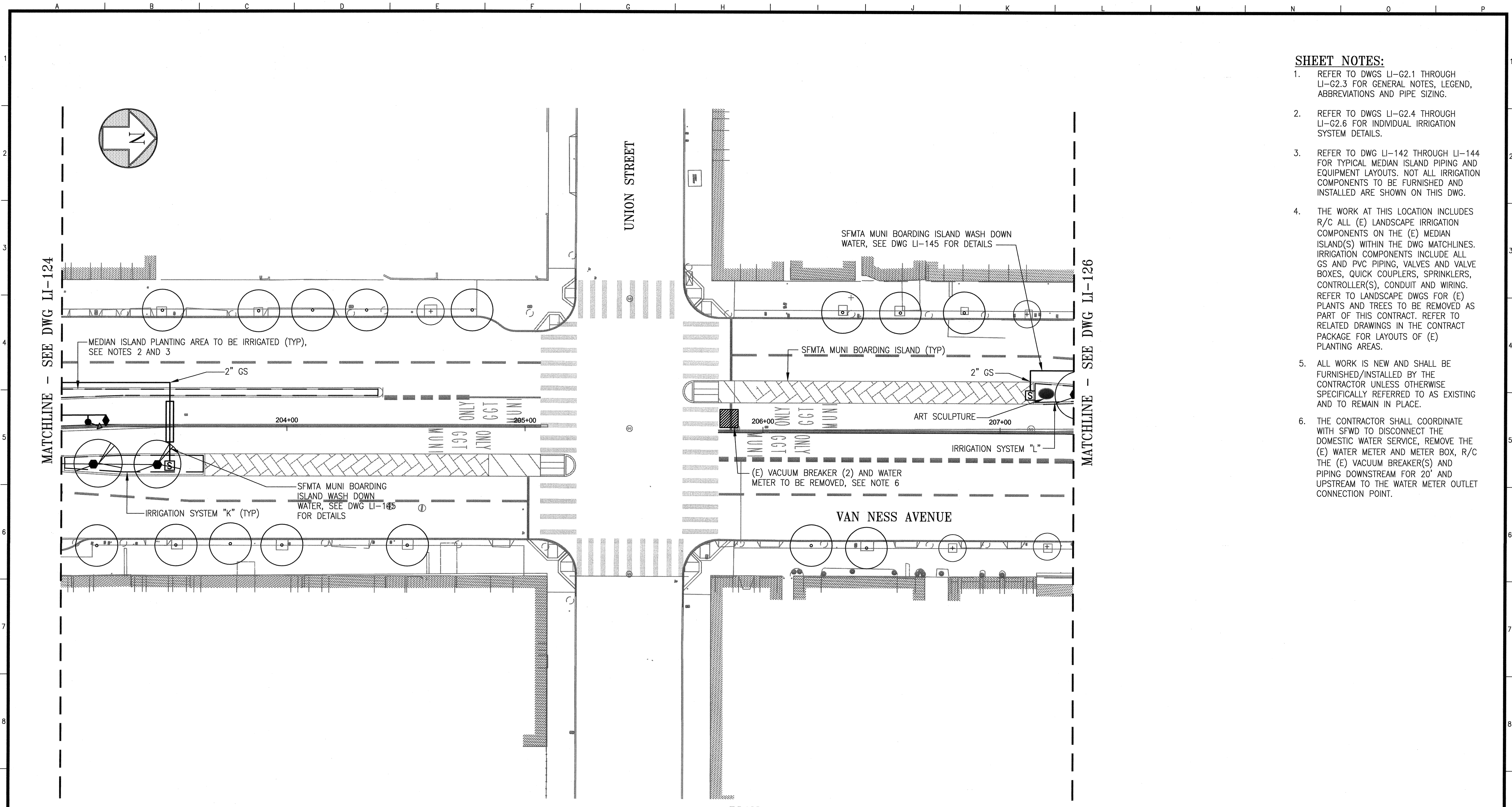
FILE NO.  
102,644

REV. NO.  
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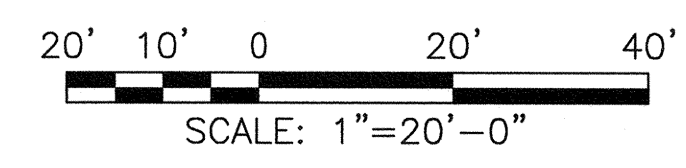
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 Plot Time: Wed, 22 Jul 2015 6:38pm  
 Measurement Units are English  
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- SHEET NOTES:**
- REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
  - REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
  - REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
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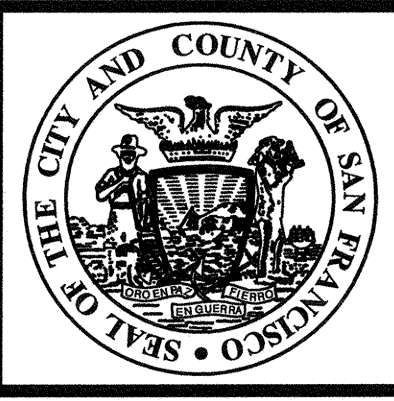


**PLAN**  
**LOCATION NO. 25 - NEW WORK**  
 SCALE: 1" = 20'-0"



NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 18:37, BY: leeno				

REFERENCE INFORMATION  
& FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: M SMITH 07/2015  
 DRAWN: AH/MM 07/2015  
 CHECKED: M CHEE 07/2015

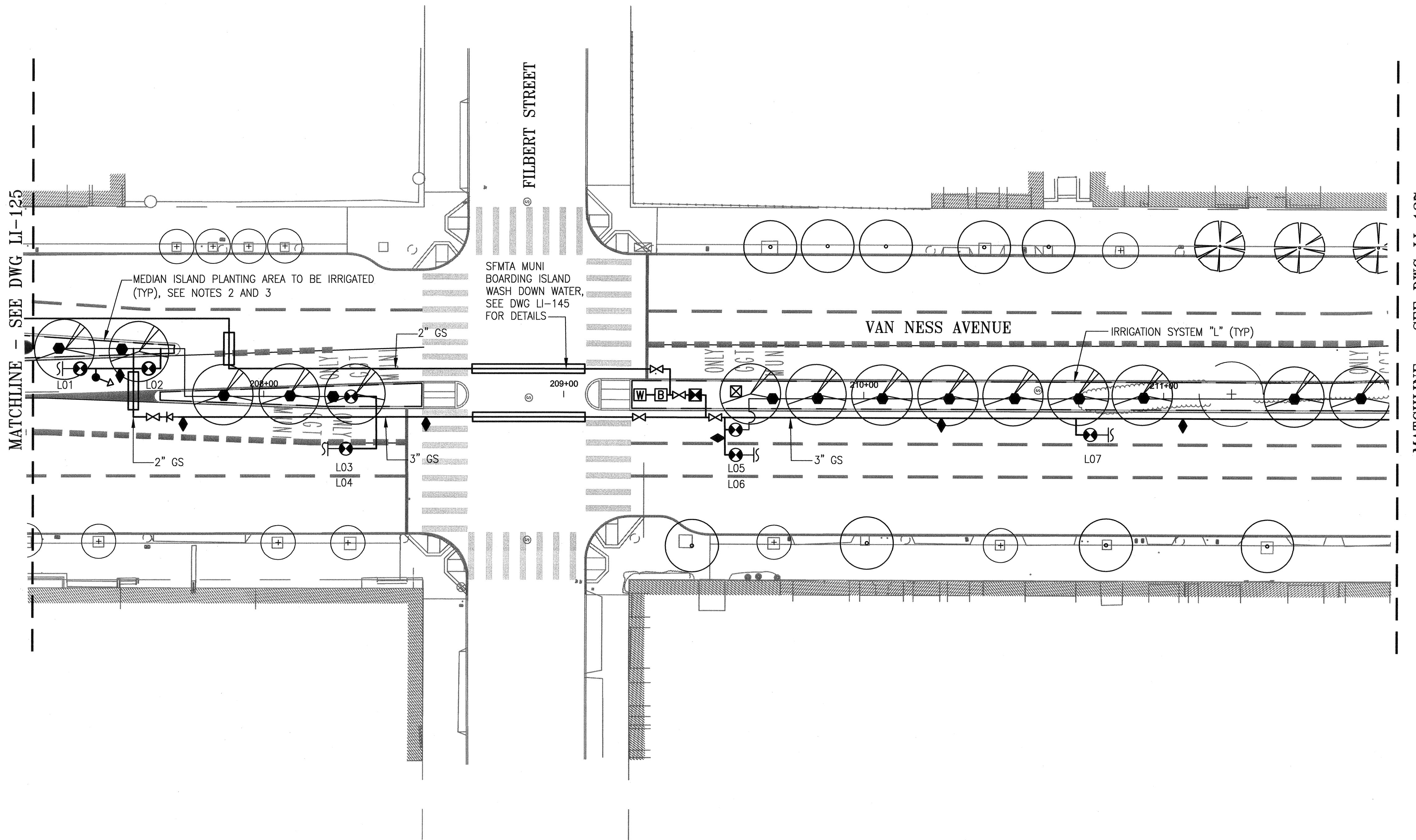
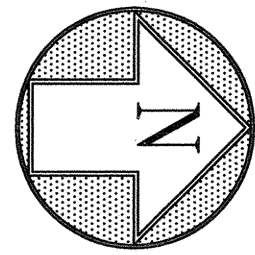
APPROVED: *Handwritten Signature* JUL 23 2015  
 SECTION MANAGER  
 DEPUTY DIVISION MANAGER  
 DIVISION MANAGER

SCALE: 1"=20'-0"  
 SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**  
**LANDSCAPE IRRIGATION SYSTEMS - NEW WORK**  
**LOCATION NO. 25 - PLAN**

JOB ORDER NO. 2106J  
 DRAWING NO. LI-125  
 FILE NO.  
 REV. NO. 0

Drawing Path: V:\2106J\_VANNESS\_BRT\_Mission\_Lombard\2\_Design\Working\_Drawings\EME\Irrigation-Current\locked\_xref\_070615\CPT6401\MS.DWG  
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 Measurement Units are English  
 Model Units: Feet  
 User: leeno



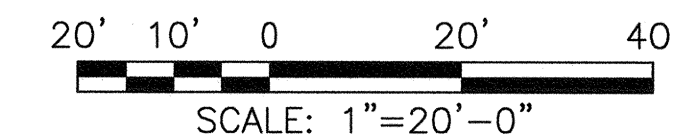
- SHEET NOTES:**
- REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
  - REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
  - REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
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MATCHLINE - SEE DWG LI-125

MATCHLINE - SEE DWG LI-127

**PLAN**

**LOCATION NO. 26 - NEW WORK**  
SCALE: 1" = 20'-0"

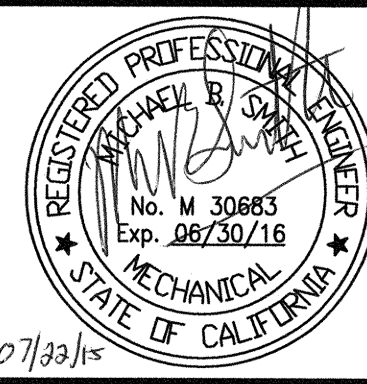


NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 18:37, BY: leeno				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE: M SMITH 07/2015  
DRAWN: DATE: AH/MM 07/2015  
CHECKED: DATE: M CHEE 07/2015

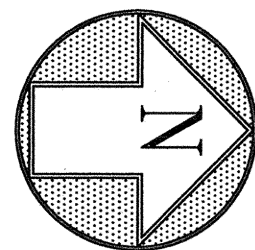
APPROVED: DATE: *Wank* JUL 23 2015  
SECTION MANAGER DATE: *Sho...* 7/24/15  
DEPUTY DIVISION MANAGER DATE: *...* 7/27/15  
DIVISION MANAGER DATE:

SCALE: 1"=20'-0"  
SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**  
**LANDSCAPE IRRIGATION SYSTEMS - NEW WORK**  
**LOCATION NO. 26 - PLAN**

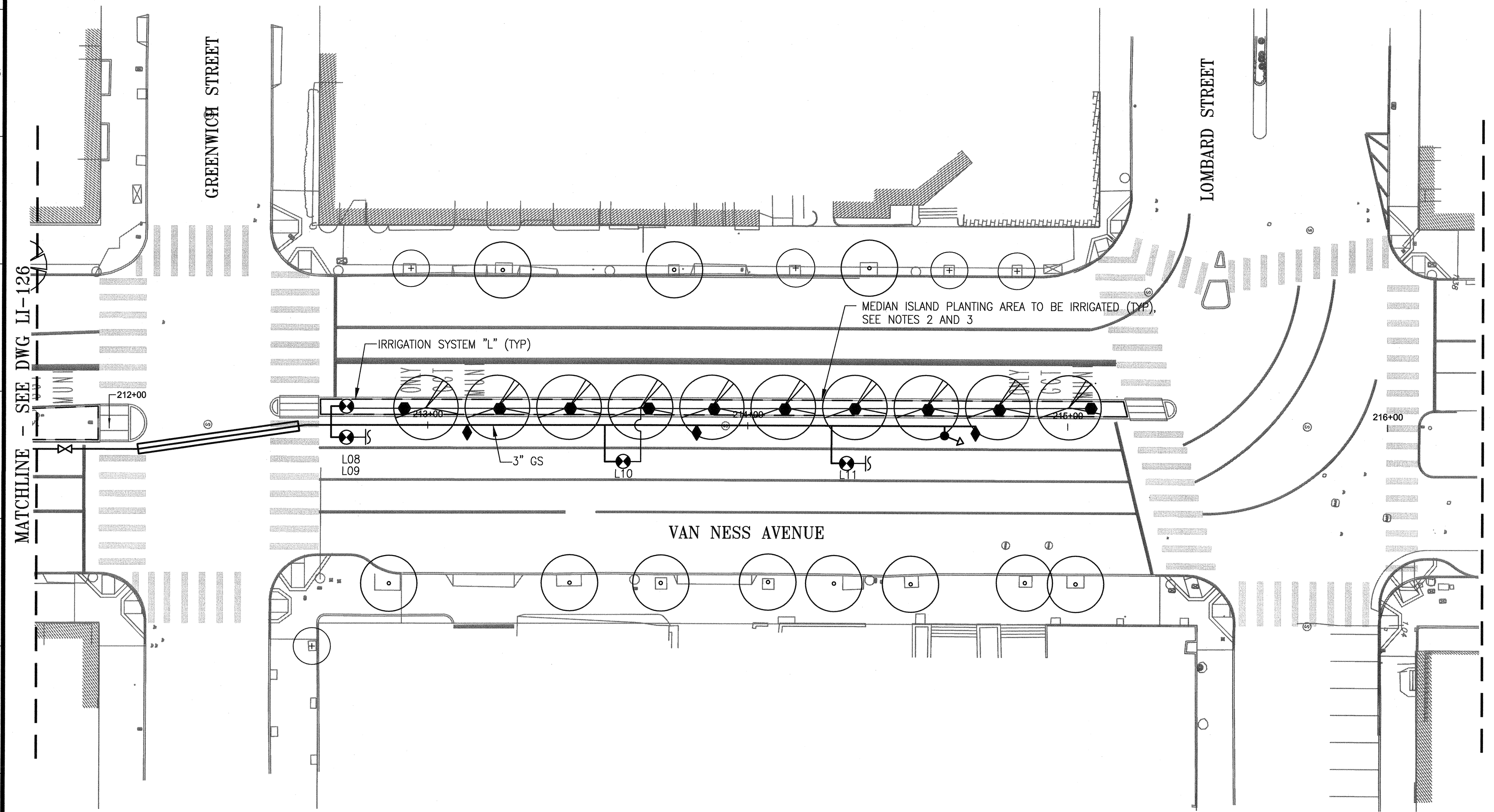
JOB ORDER NO. 2106J  
DRAWING NO. LI-126  
FILE NO. 102,646  
REV. NO. 0

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 leeno  
 Model Units: Feet  
 Measurement Units are English



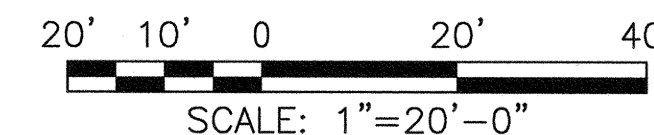
**SHEET NOTES:**

1. REFER TO DWGS LI-G2.1 THROUGH LI-G2.3 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS AND PIPE SIZING.
2. REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
3. REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
4. THE WORK AT THIS LOCATION INCLUDES R/C ALL (E) LANDSCAPE IRRIGATION COMPONENTS ON THE (E) MEDIAN ISLAND(S) WITHIN THE DWG MATCHLINES. IRRIGATION COMPONENTS INCLUDE ALL GS AND PVC PIPING, VALVES AND VALVE BOXES, QUICK COUPLERS, SPRINKLERS, CONTROLLER(S), CONDUIT AND WIRING. REFER TO LANDSCAPE DWGS FOR (E) PLANTS AND TREES TO BE REMOVED AS PART OF THIS CONTRACT. REFER TO RELATED DRAWINGS IN THE CONTRACT PACKAGE FOR LAYOUTS OF (E) PLANTING AREAS.
5. ALL WORK IS NEW AND SHALL BE FURNISHED/INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFICALLY REFERRED TO AS EXISTING AND TO REMAIN IN PLACE.



**PLAN**

**LOCATION NO. 27 - NEW WORK**  
SCALE: 1" = 20'-0"

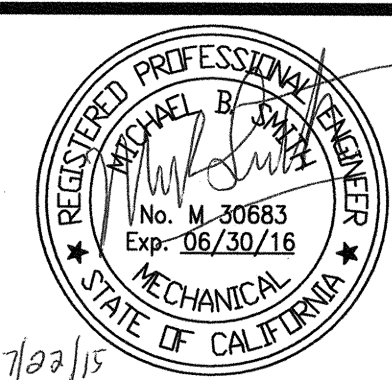


NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 18:43, BY: leeno				

REFERENCE INFORMATION  
& FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE:  
M SMITH 07/2015  
DRAWN: DATE:  
AH/MM 07/2015  
CHECKED: DATE:  
M CHEE 07/2015

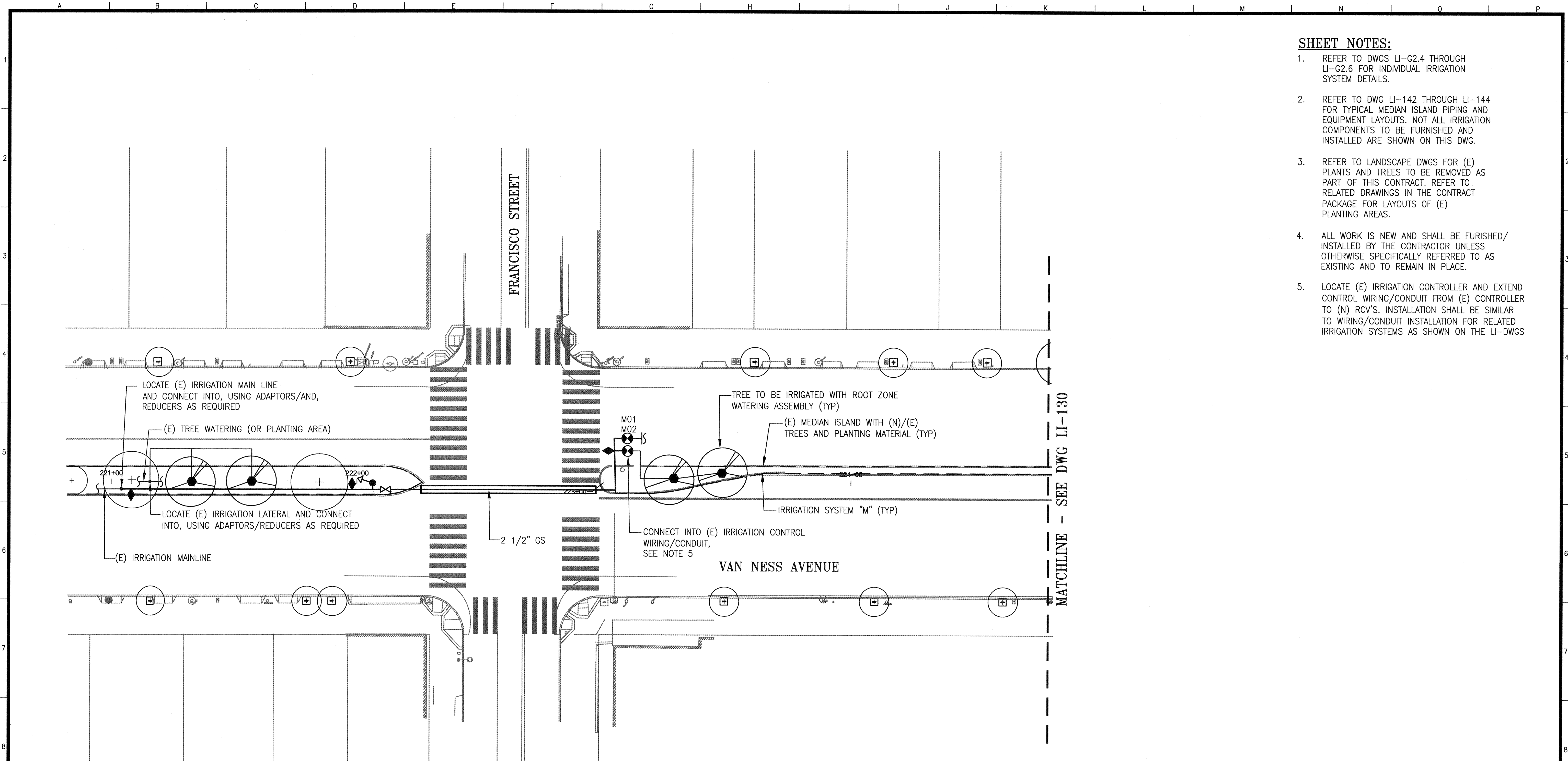
APPROVED  
JUL 23 2015  
SECTION MANAGER  
7/29/15  
DEPUTY DIVISION MANAGER  
7/29/15  
DIVISION MANAGER

SCALE:  
1"=20'-0"  
SHEET OF SHEETS

MUNI BUS RAPID TRANSIT SYSTEM  
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT  
LANDSCAPE IRRIGATION SYSTEMS - NEW WORK  
LOCATION NO. 27 - PLAN

JOB ORDER NO.  
2106J  
DRAWING NO.  
LI-127  
FILE NO.  
102,647  
REV. NO.  
0

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 Measurement Units are English

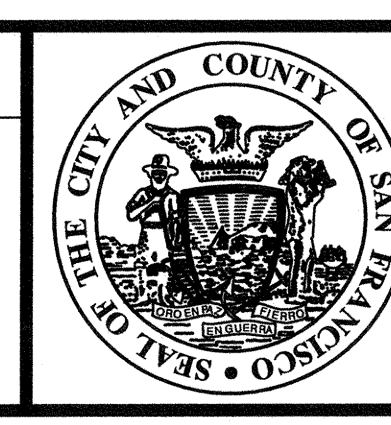


- SHEET NOTES:**
- REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
  - REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
  - REFER TO LANDSCAPE DWGS FOR (E) PLANTS AND TREES TO BE REMOVED AS PART OF THIS CONTRACT. REFER TO RELATED DRAWINGS IN THE CONTRACT PACKAGE FOR LAYOUTS OF (E) PLANTING AREAS.
  - ALL WORK IS NEW AND SHALL BE FURNISHED/INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFICALLY REFERRED TO AS EXISTING AND TO REMAIN IN PLACE.
  - LOCATE (E) IRRIGATION CONTROLLER AND EXTEND CONTROL WIRING/CONDUIT FROM (E) CONTROLLER TO (N) RCV'S. INSTALLATION SHALL BE SIMILAR TO WIRING/CONDUIT INSTALLATION FOR RELATED IRRIGATION SYSTEMS AS SHOWN ON THE LI-DWGS

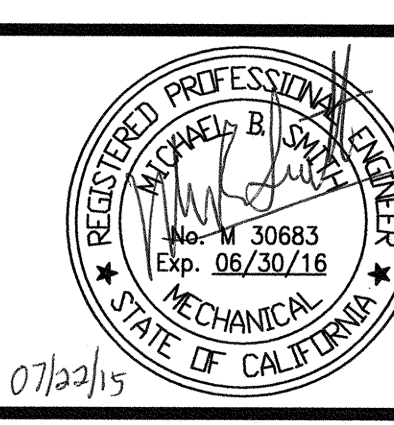
**PLAN**  
**LOCATION NO. 29 - NEW WORK**  
 SCALE: 1" = 20'-0"

NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
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REFERENCE INFORMATION  
& FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
 CITY AND COUNTY OF SAN FRANCISCO



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 M SMITH 07/2015

DRAWN: DATE:  
 AH/MM 07/2015

CHECKED: DATE:  
 M CHEE 07/2015

APPROVED  
 JUL 23 2015

SECTION MANAGER DATE:  
 7/24/15

DEPUTY DIVISION MANAGER DATE:  
 7/24/15

DIVISION MANAGER DATE:

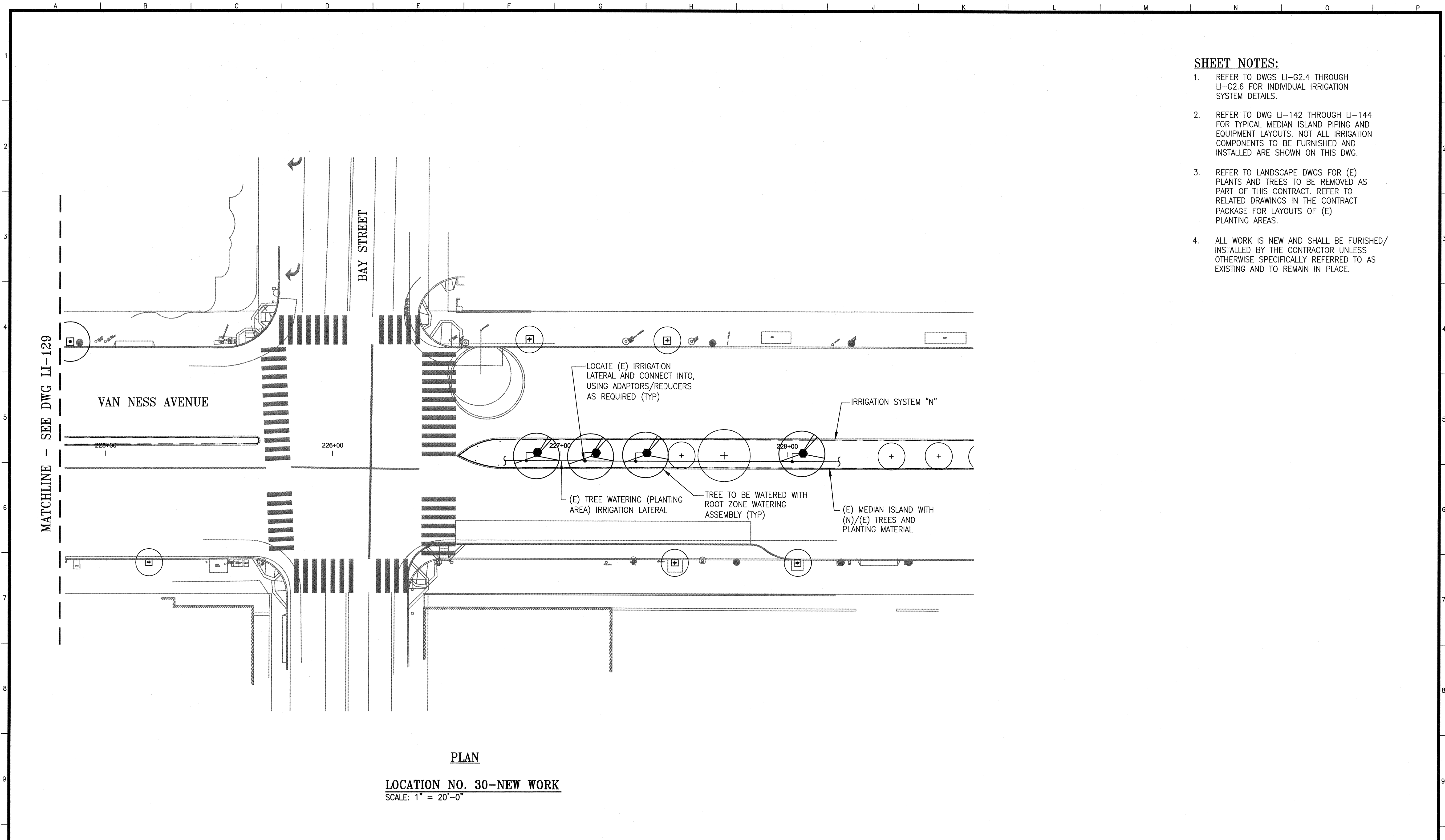
SCALE:  
 1"=20'-0"

SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**  
 LANDSCAPE IRRIGATION SYSTEMS - NEW WORK  
 LOCATION NO. 29 - PLAN

JOB ORDER NO. 2106J
DRAWING NO. LI-129
FILE NO. 102,648
REV. NO. 0

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 Plot Time: Thu, 23 Jul 2015 - 10:57am



- SHEET NOTES:**
- REFER TO DWGS LI-G2.4 THROUGH LI-G2.6 FOR INDIVIDUAL IRRIGATION SYSTEM DETAILS.
  - REFER TO DWG LI-142 THROUGH LI-144 FOR TYPICAL MEDIAN ISLAND PIPING AND EQUIPMENT LAYOUTS. NOT ALL IRRIGATION COMPONENTS TO BE FURNISHED AND INSTALLED ARE SHOWN ON THIS DWG.
  - REFER TO LANDSCAPE DWGS FOR (E) PLANTS AND TREES TO BE REMOVED AS PART OF THIS CONTRACT. REFER TO RELATED DRAWINGS IN THE CONTRACT PACKAGE FOR LAYOUTS OF (E) PLANTING AREAS.
  - ALL WORK IS NEW AND SHALL BE FURNISHED/INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFICALLY REFERRED TO AS EXISTING AND TO REMAIN IN PLACE.

NO.	DATE	DESCRIPTION	BY	APP.
THIS DRAWING WAS LAST MODIFIED: 07/23/15 10:58, BY: leeno				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
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 M SMITH 07/2015

DRAWN: DATE:  
 AH/MM 07/2015

CHECKED: DATE:  
 M CHEE 07/2015

APPROVED  
 JUL 23 2015

SECTION MANAGER DATE:  
 7/29/15

DEPUTY DIVISION MANAGER DATE:  
 7/29/15

DIVISION MANAGER DATE:

SCALE:  
 1"=20'-0"

SHEET OF SHEETS

MUNI BUS RAPID TRANSIT SYSTEM  
 VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT

LANDSCAPE IRRIGATION SYSTEMS - NEW WORK  
 LOCATION NO. 30 - PLAN

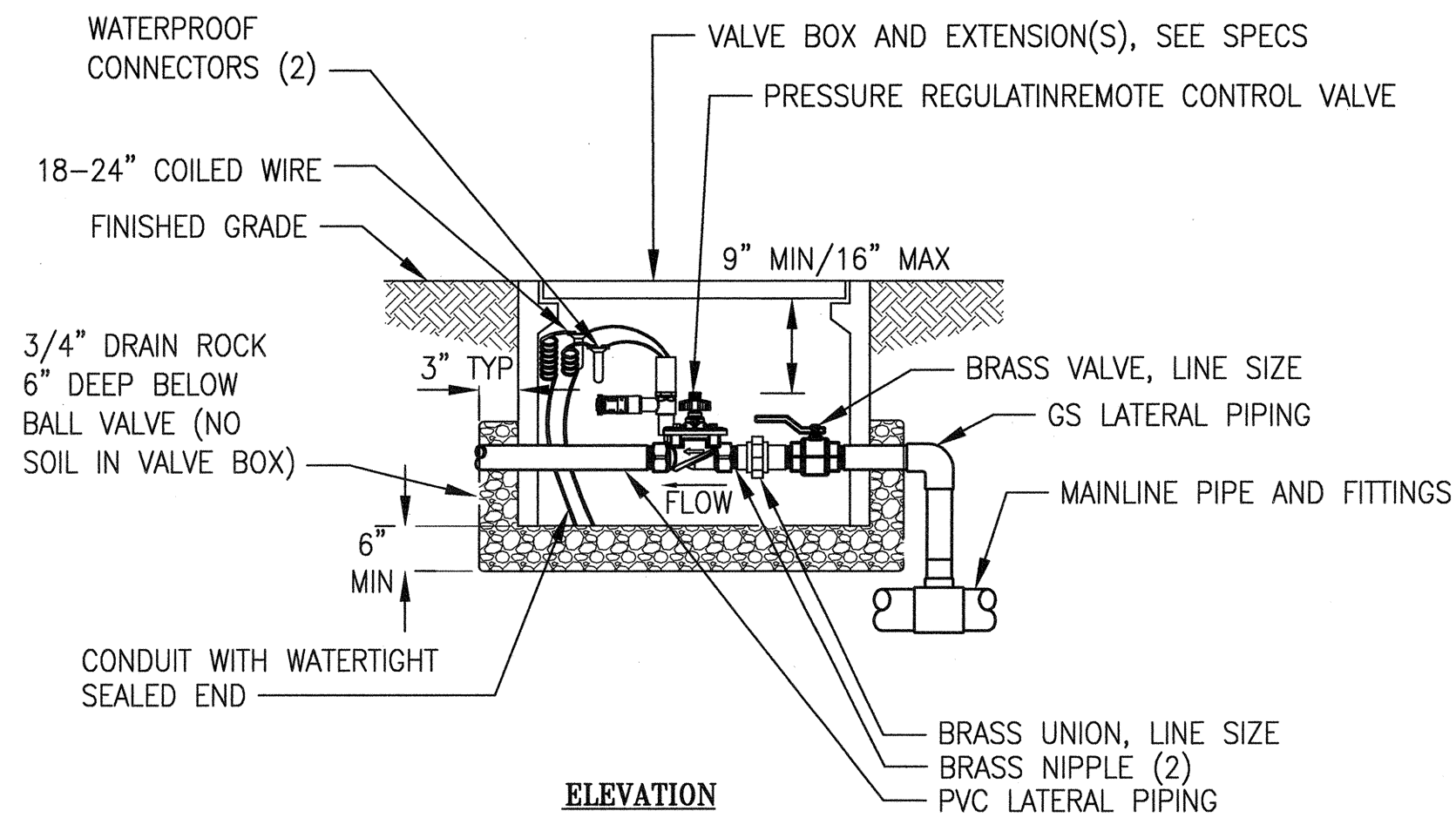
JOB ORDER NO.  
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DRAWING NO.  
 LI-130

FILE NO.  
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REV. NO.  
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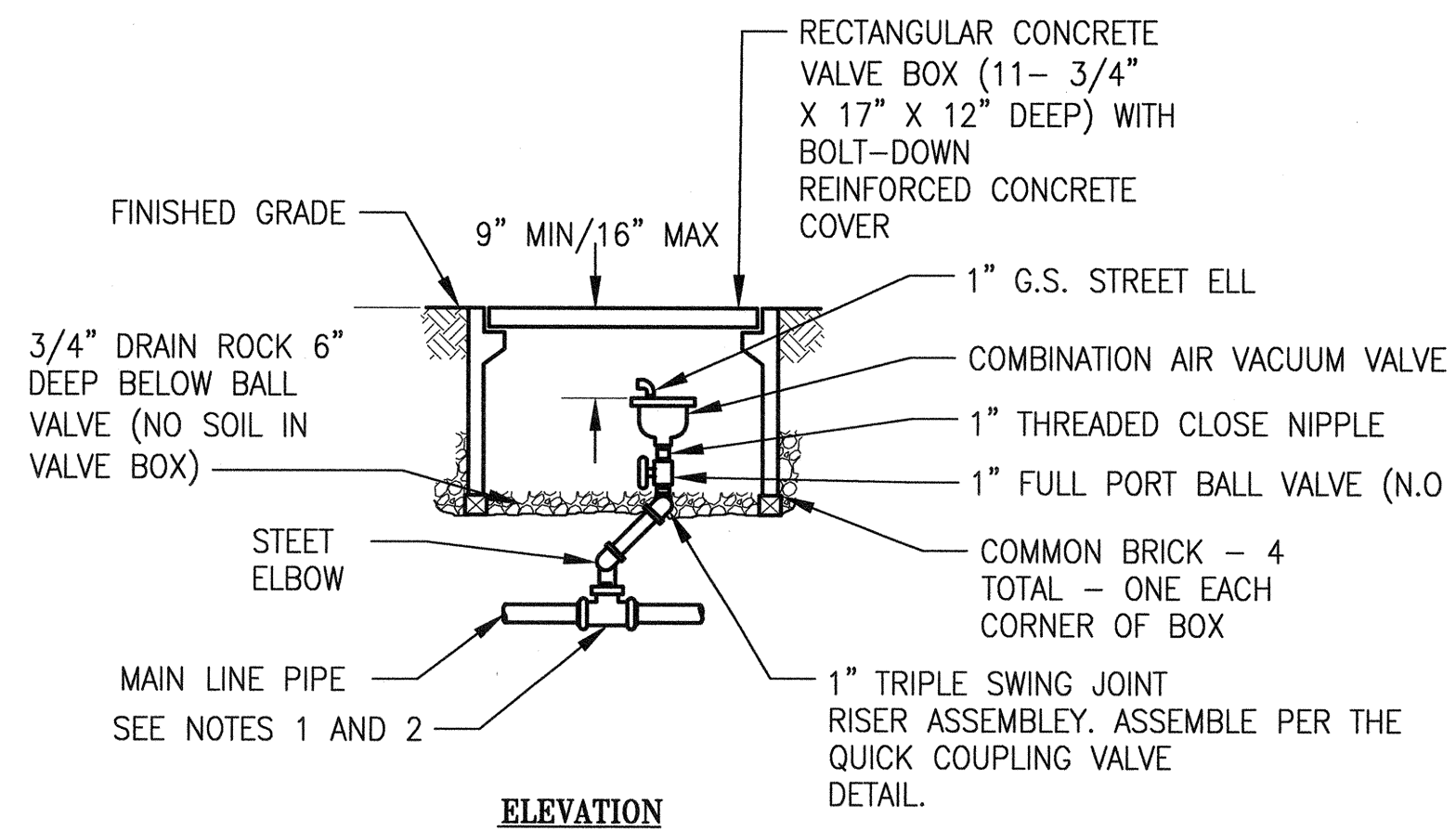
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**NOTES:**

1. COVER FOR IRRIGATION PIPING DOWNSTREAM OF RCV SHALL TRANSITION TO 18" FOR SPRAY/BUBBLERS AND 24" FOR ROTORS.
2. THE CONTRACTOR SHALL MINIMIZE THE NUMBER OF INDIVIDUAL TEE/SERVICE SADDLE CONNECTIONS TO THE MAIN LINE AT LOCATIONS WHERE THERE ARE MULTIPLE RCV/LATERAL CONNECTIONS TO BE MADE TO THE MAIN LINE. THE CONTRACTOR SHALL SIZE ALL UPSTREAM PIPING TO THE MAIN LINE PER THE "SPRINKLER/BUBBLER LATERAL PIPE SIZING" TABLE ON THE IRRIGATION DRAWINGS BASED ON THE COMBINED TOTAL FLOW RATE FOR ALL LATERALS BEING IN OPERATION OFF THE MAINLINE CONNECTION AT THE SAME TIME.
3. DECODER AND WIRING ARE NOT SHOWN, REFER TO CONTROLLER MANUFACTURER FOR INSTALLATION LAYOUT.

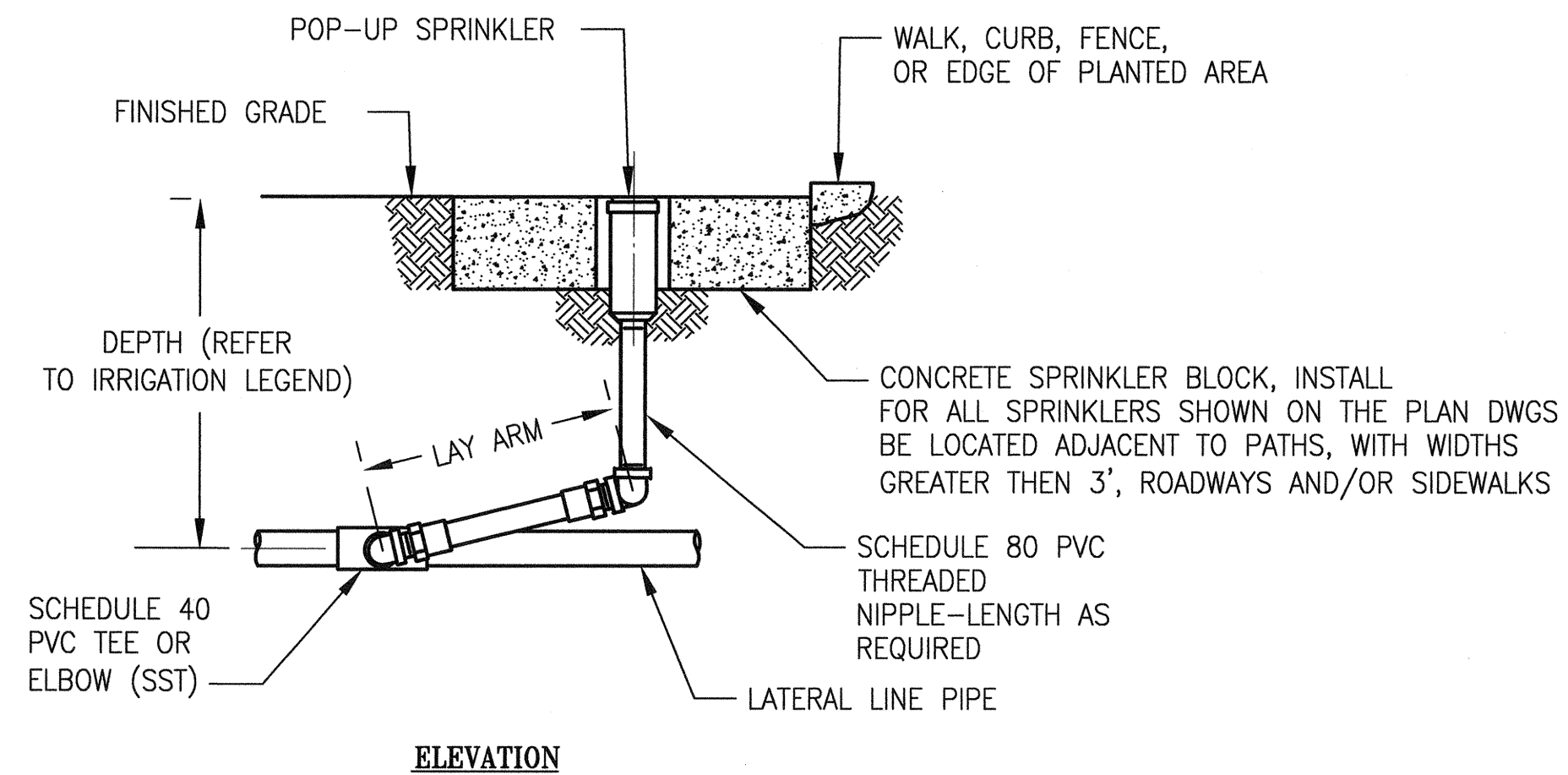
**REMOTE CONTROL VALVE DETAIL** ①



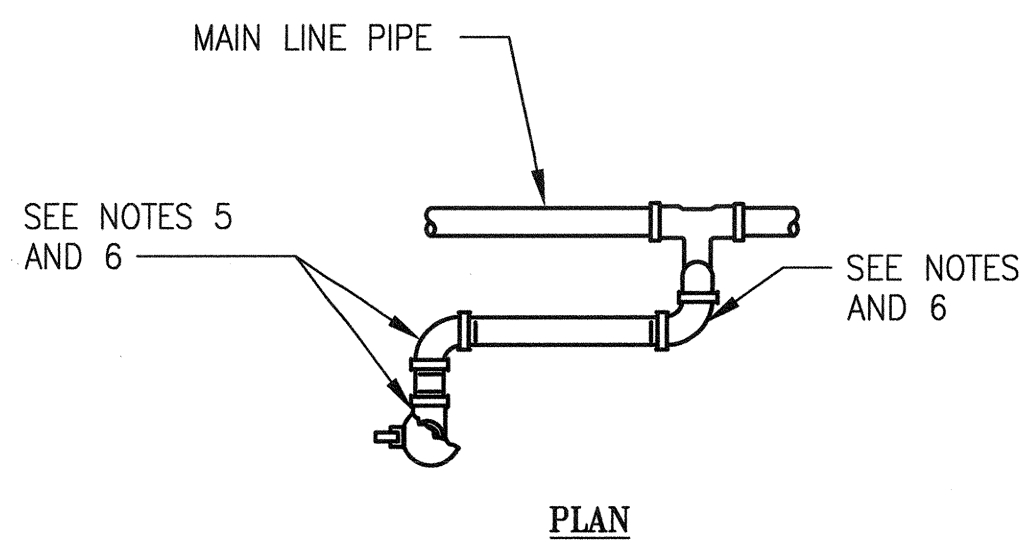
**NOTES:**

1. FOR 4 INCH DIA. OR LARGER MAIN LINE CONNECTION, USE A SADDLE CONNECTION—SEE SADDLE CONNECTION DETAIL 10 ON DWG LI-133.
2. FOR 2.5 INCH DIA. OR SMALLER MAIN LINE CONNECTION, USE A THREADED TEE OR ELBOW.
3. ALL PIPING AND FITTINGS SHALL BE SCH 40 GS. MAINLINE PIPING SHALL BE GS/DI/C900 PVC AS SHOWN ON THE DWGS.

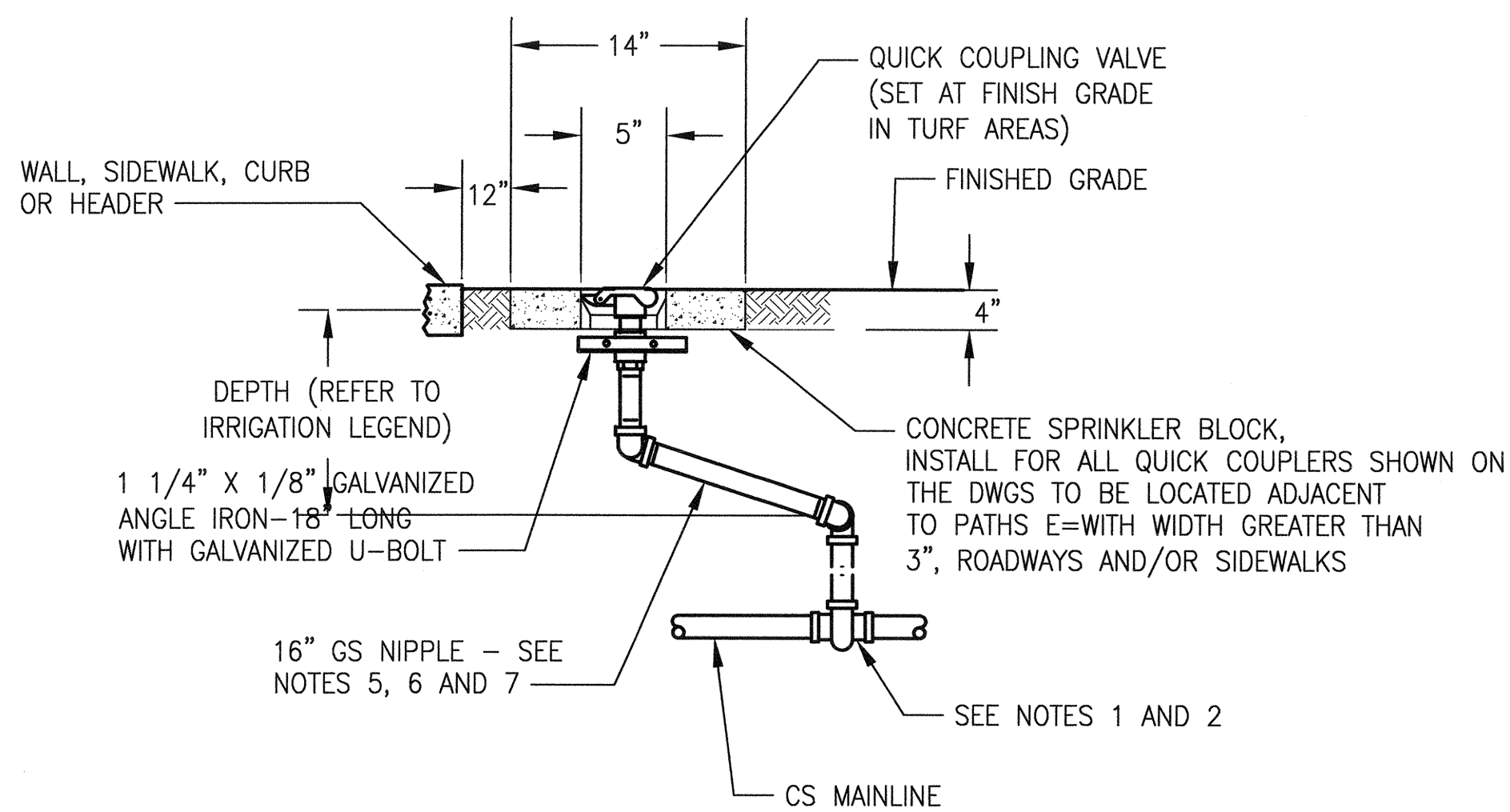
**COMBINATION AIR VACUUM VALVE DETAIL** ②



**POP-UP TURF SPARY OR ROTARY SPRINKLER RISER DETAIL** ③



**PLAN**

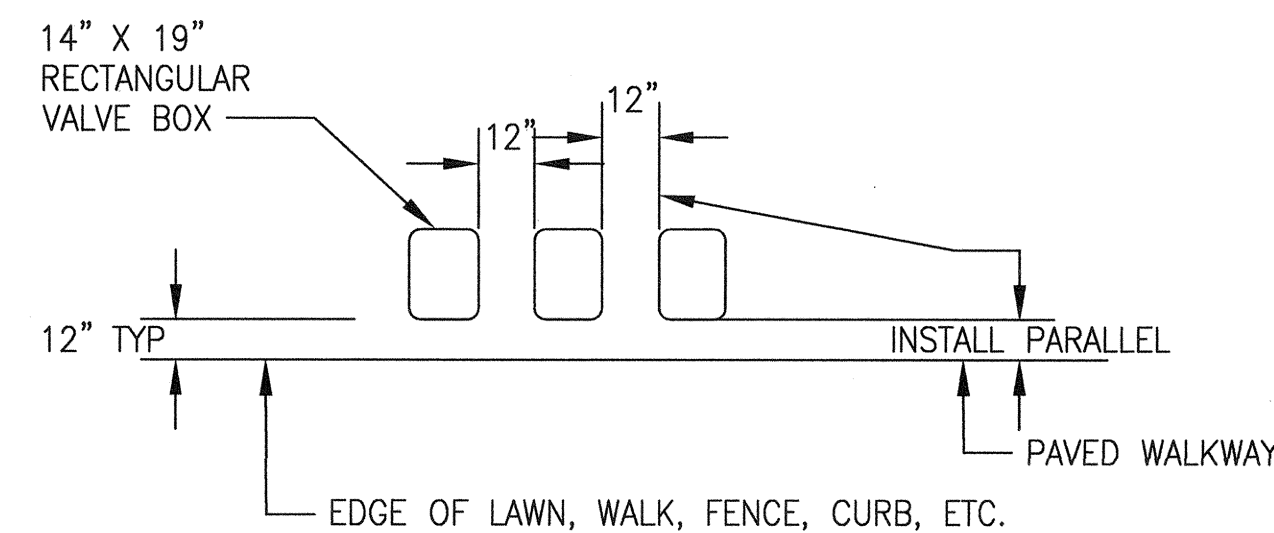


**ELEVATION**

**QUICK COUPLING VALVE DETAIL** ④

**NOTES:**

1. FOR 4 INCH DIA. OR LARGER MAIN LINE CONNECTION, USE A SADDLE CONNECTION - SEE DETAIL 10 ON DWG LI-133.
2. FOR 3 INCH DIA. OR SMALLER MAIN LINE CONNECTION, USE A THREADED TEE.
3. UNLESS OTHERWISE NOTED, PIPE AND FITTINGS ARE 1 1/4" PIPE S
4. INSTALL QCV PERPENDICULAR TO EXISTING GRADE UNLESS FIELD CONDITIONS REQUIRE ADJUSTMENT.
5. FINGER-TIGHTEN O-RING JOINTS AND BACK-OFF ONE FULL TURN T ALLOW SWING ACTION. PROVIDE 10 INCHES BETWEEN CENTER LINES ELBOWS ON SWING ARM.
6. USE A 1-1/4" GS SWING JOINT (MIPT INLET X MIPT OUTLET), FOR QUICK COUPLING VALVE.
7. INSTALL THE SWING JOINT LAY ARM AT AN ANGLE BETWEEN 30° AND OF THE MAIN IN ORDER TO ABSORB DOWNWARD IMPACT.
8. QUICK COUPLERS ARE TO BE INSTALLED IN TURF/PLANTING AREAS UNLESS SHOWN ON THE DWGS.
9. ALL PIPING AND FITTINGS SHALL BE SCH 40 GS. MAINLINE SHALL E GS/DI/C900 PVC AS SHOWN ON THE DWGS.



**PLAN**

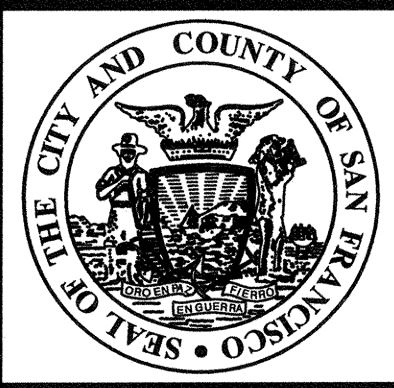
**VALVE BOX INSTALLATION DETAIL** ⑤

**NOTES:**

1. CENTER VALVE BOX OVER REMOTE CONTROL VALVE AND ISOLATION BALL VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET RCV AND VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN ONLY IF GROUND COVER DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE OF LAWN, WALK, FENCE, CURB, ETC.
5. INSTALL EXTENSION(S) BY VALVE BOX MANUFACTURER AS REQUIRED TO COMPLETELY ENCLOSE ASSEMBLY.

NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 14:44, BY: leeno				

REFERENCE INFORMATION & FILE NO. OF SURVEYS
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**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



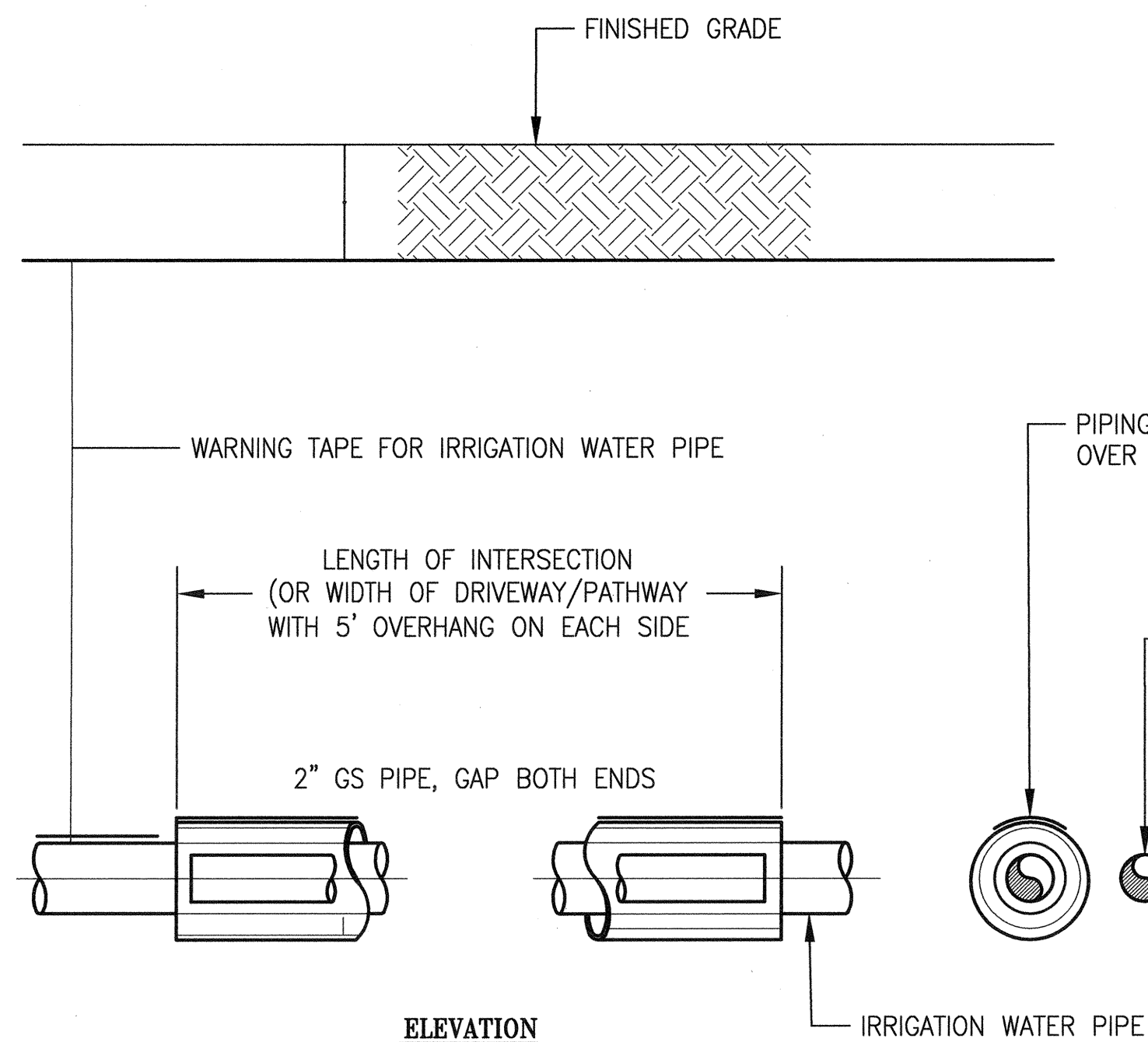
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M SMITH 07/2015	None JUL 23 2015
DRAWN: DATE:	SECTION MANAGER DATE:
HO/MM 07/2015	None 7/24/15
CHECKED: DATE:	DEPUTY DIVISION MANAGER DATE:
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SCALE:	NONE
SHEET OF SHEETS	

<b>MUNI BUS RAPID TRANSIT SYSTEM</b>	
<b>VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT</b>	
<b>LANDSCAPE IRRIGATION SYSTEMS</b>	
<b>NEW WORK - DETAILS I</b>	

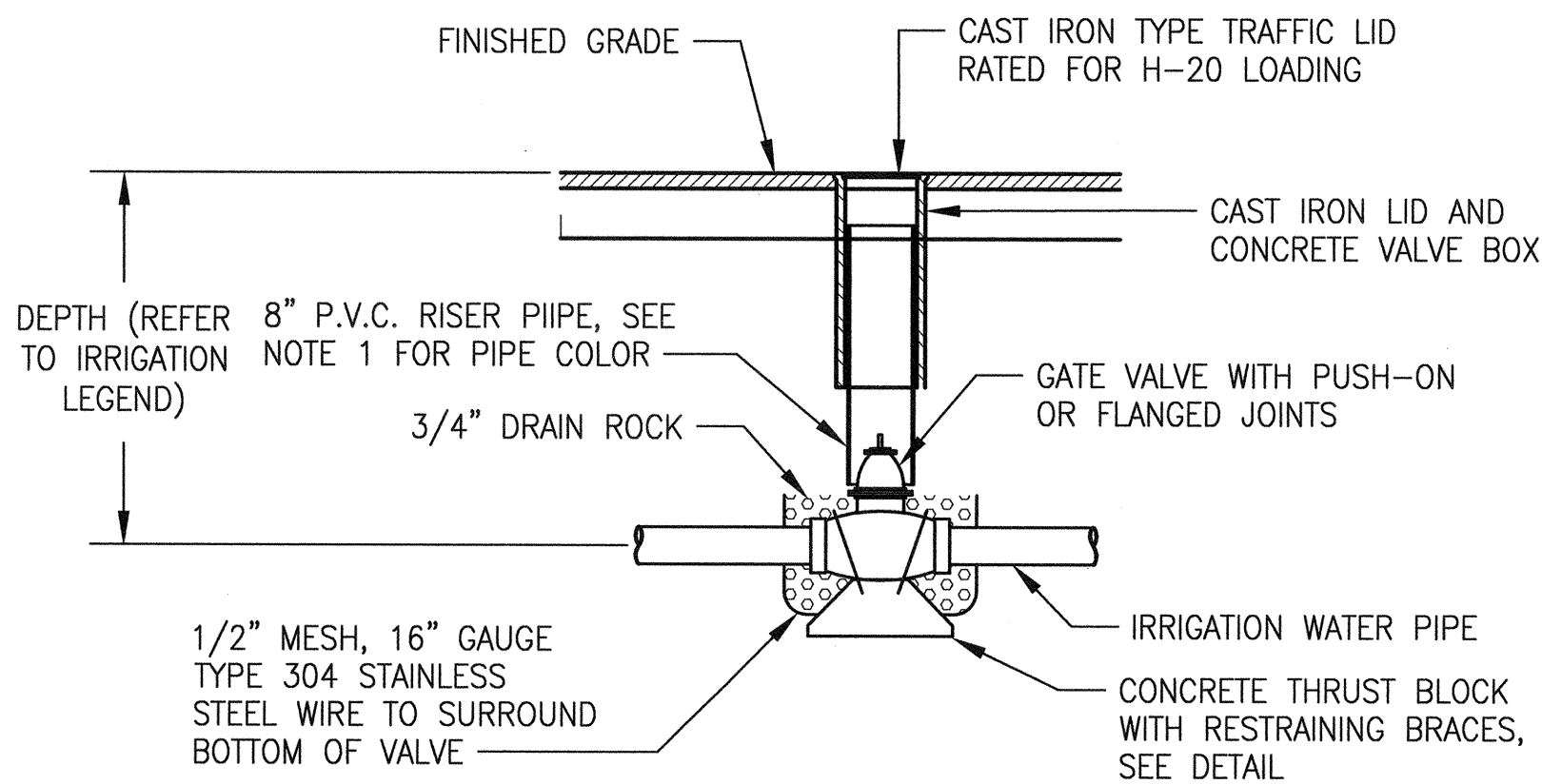
JOB ORDER NO.	2106J
DRAWING NO.	LI-132
FILE NO.	102,650
REV. NO.	0

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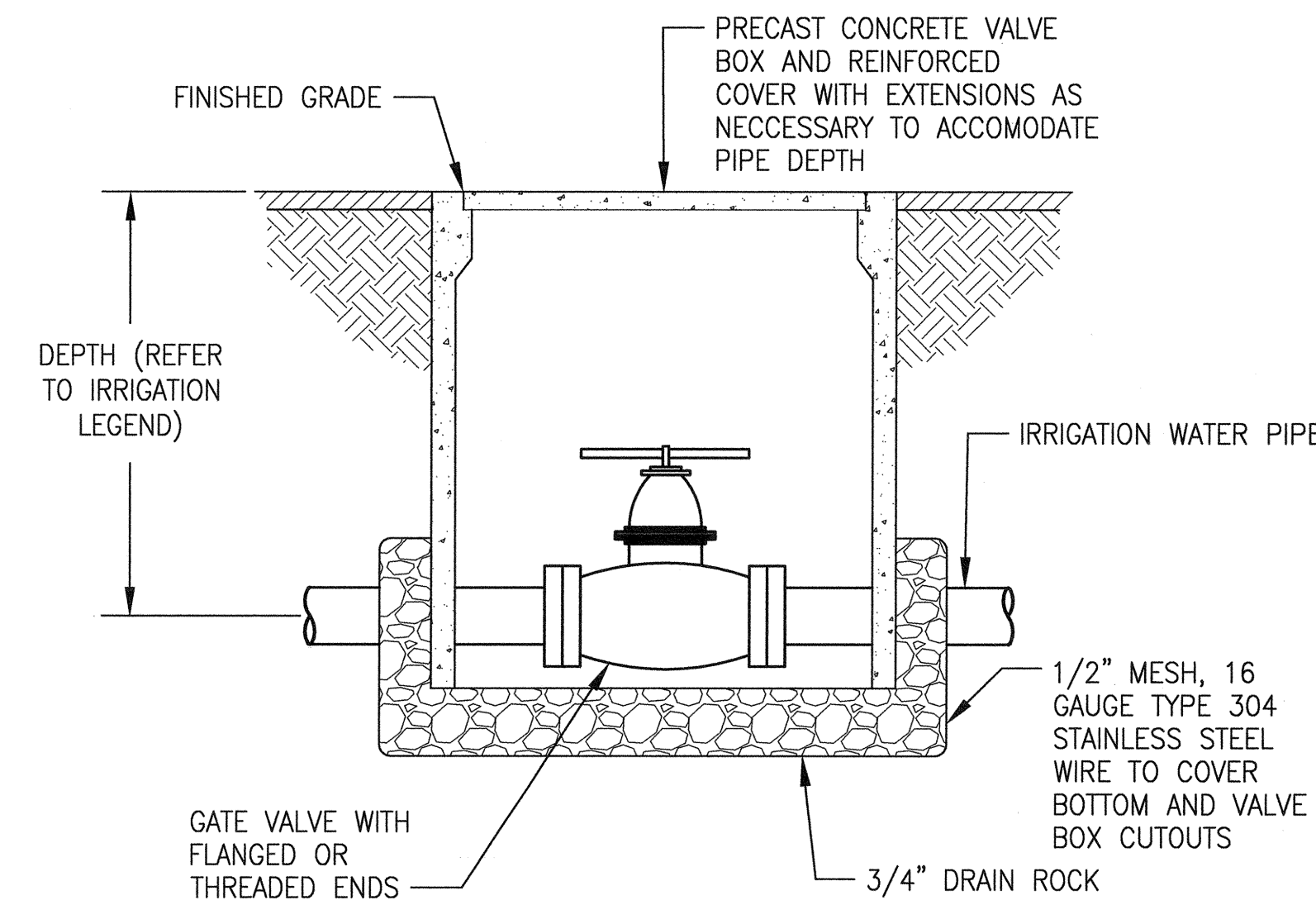
PIPE SLEEVING/WARNING TAPE DETAIL 6

- NOTES:**
- PVC RISER PIPE SHALL BE AS FOLLOWS: IRRIGATION WATER: PURPLE.
  - LID SHALL HAVE CAST IN 1" HIGH LETTERS THE APPROPRIATE WORDING: "IRRIGATION" ON TOP SURFACE, 3/16" ABOVE PARENT SURFACE.
  - VALVE BOX AND LID SHALL BE RATED FOR H-20 LOADING.
  - WHERE REQUIRED USE ADAPTOR FITTINGS SPECIFICALLY DESIGNED TO TRANSITING BETWEEN DI AND C900 PVC PIPE WHEN INSTALLING DI GATE VALVES ON C900 PVC MAIN LINES.

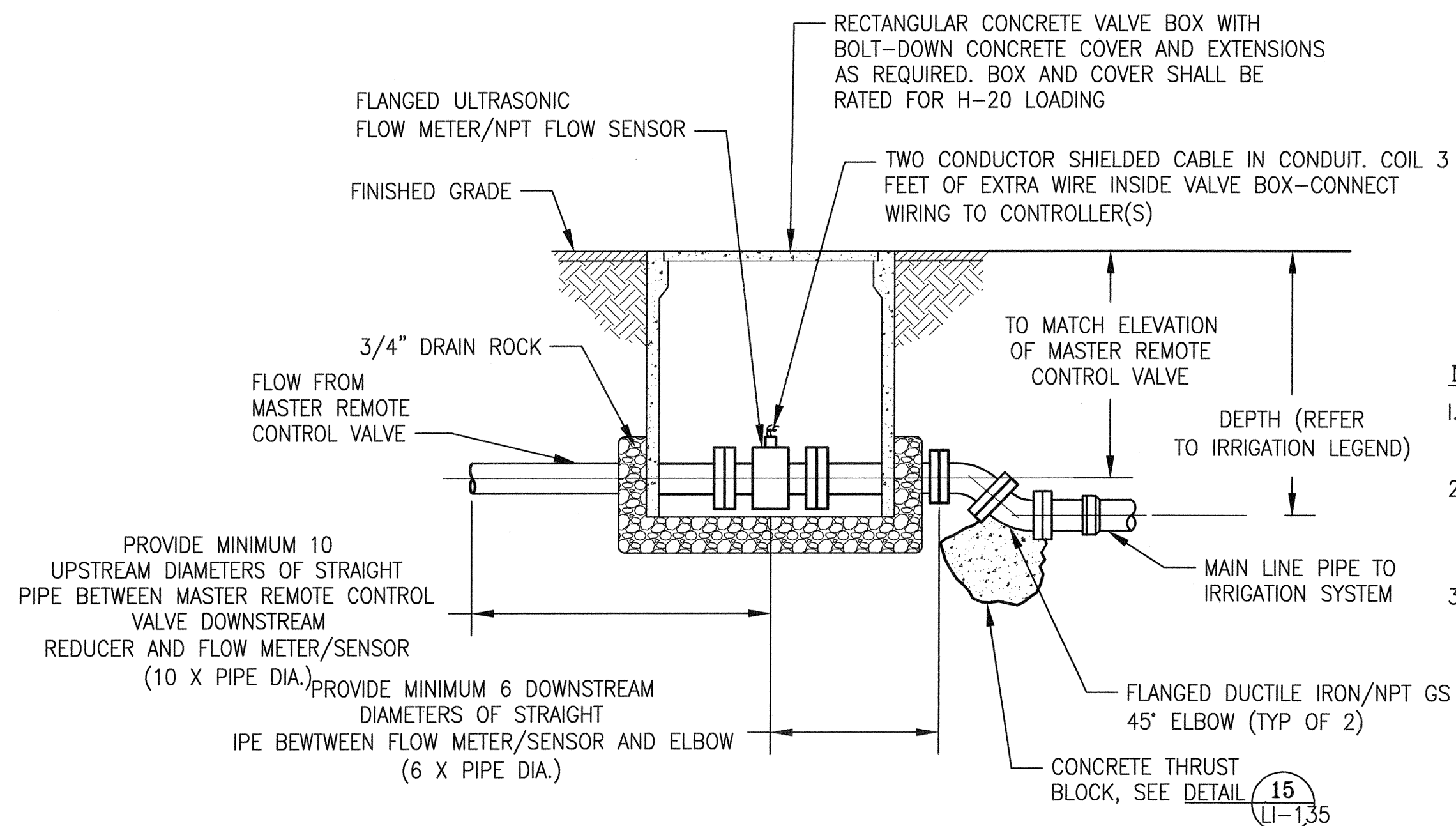


4" AND LARGER GATE VALVE DETAIL 7

- NOTES:**
- LID SHALL HAVE CAST IN 1" HIGH LETTERS THE APPROPRIATE WORDING: "IRRIGATION" ON TOP SURFACE, 3/16" ABOVE PARENT SURFACE.
  - VALVE BOX AND LID SHALL BE RATED FOR H-20 LOADING.

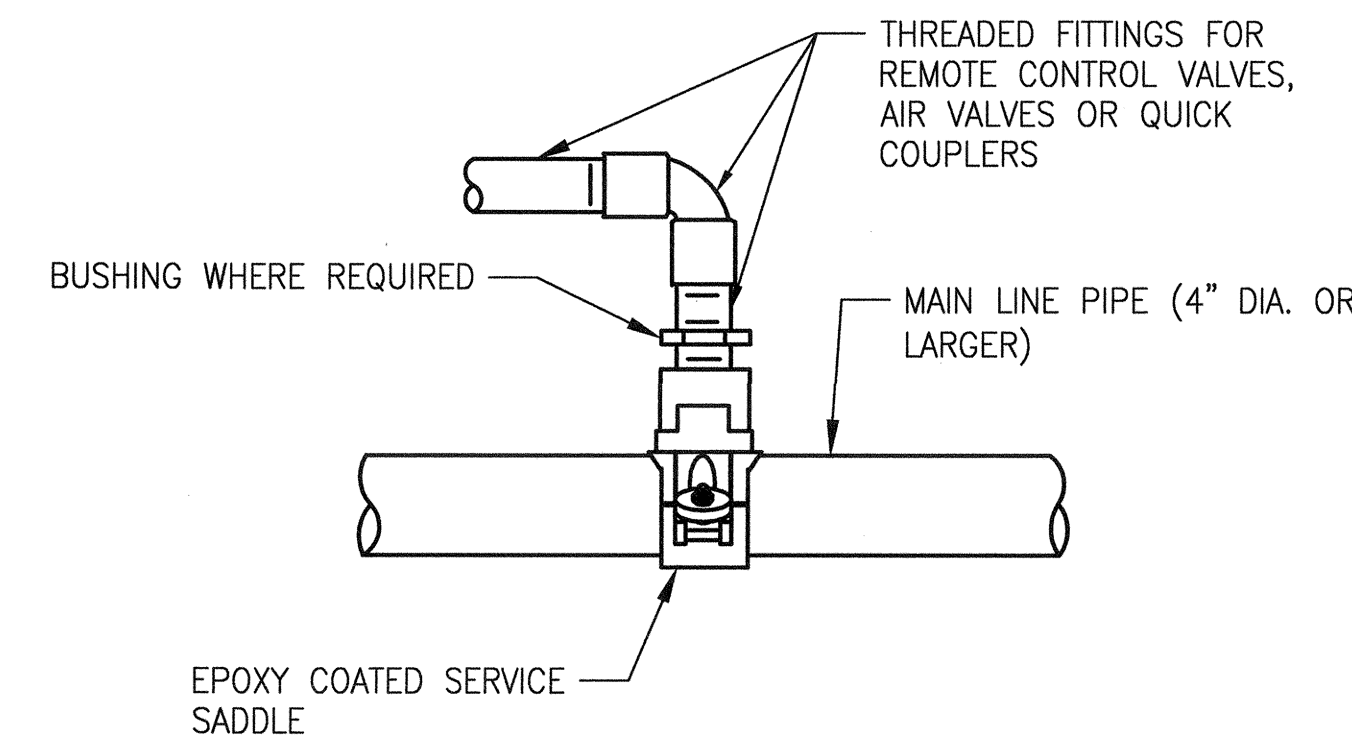


3" AND SMALLER GATE VALVE DETAIL 8



FLOW MEASURING DETAIL 9

- NOTES:**
- INSTALL FLOW METER/SENSOR PER THE MANUFACTURER'S INSTRUCTIONS.
  - CONDUIT AND WIRING NOT SHOWN, REFER TO CONTROLLER MANUFACTURER'S DETAILS FOR INSTALLATION LAYOUT AND THE SPECIFICATIONS.
  - FLOW METER/SENSOR SHALL BE LINE SIZE AS SHOWN ON T PLAN DWGS FOR LOCATION DOWNSTREAM OF MASTER REMOTE CONTROL VALVE.



SADDLE CONNECTION DETAIL 10

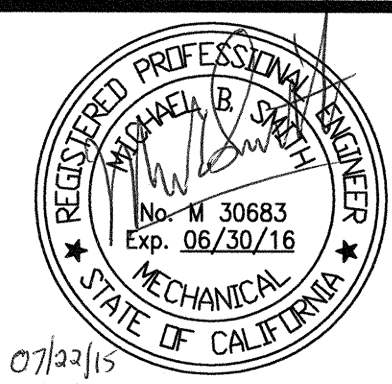
- NOTES:**
- TIGHTEN NUT EVENLY UNTIL SADDLE BODY CONFORMS SNUGLY TO PIPE. LOOSEN NUTS AND TORQUE AS RECOMMENDED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS.
  - FOR QUICK COUPLING VALVE CONNECTION, TAP SIZE SHALL BE 1-1/4" FIPT.
  - FOR COMBINATION AIR VALVE CONNECTION, TAP SIZE SHALL BE 1" FIPT.
  - FOR IRRIGATION LATERALS, TAP SIZE SHALL BE SIZED TO CONFORM TO COMBINED TOTAL FLOW RATE OF ALL DOWNSTREAM LATERALS OPERATING AT THE SAME TIME. REFER TO PLAN DRAWING TABLES FOR INDIVIDUAL.
  - LATERAL FLOW RATES & SIZE TAP PER 'LATERAL PIPING SIZE SCHEDULE' ON IRRIGATION DRAWINGS L5.05. WHERE TAP SIZE EXCEEDS SERVICE SADDLE, USE MULTIPLE SERVICE SADDLES OR TEE FITTING.

NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 14:44, BY: leeno				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE: M SMITH 07/2015  
 DRAWN: DATE: HO/LEE 07/2015  
 CHECKED: DATE: M CHEE 07/2015

APPROVED: DATE: [Signature] JUL 23 2015  
 SECTION MANAGER DATE: [Signature] 7/24/15  
 DEPUTY DIVISION MANAGER DATE: [Signature] 7/27/15  
 DIVISION MANAGER DATE:

SCALE: NONE  
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MUNI BUS RAPID TRANSIT SYSTEM  
 VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT  
 LANDSCAPE IRRIGATION SYSTEMS  
 NEW WORK - DETAILS II

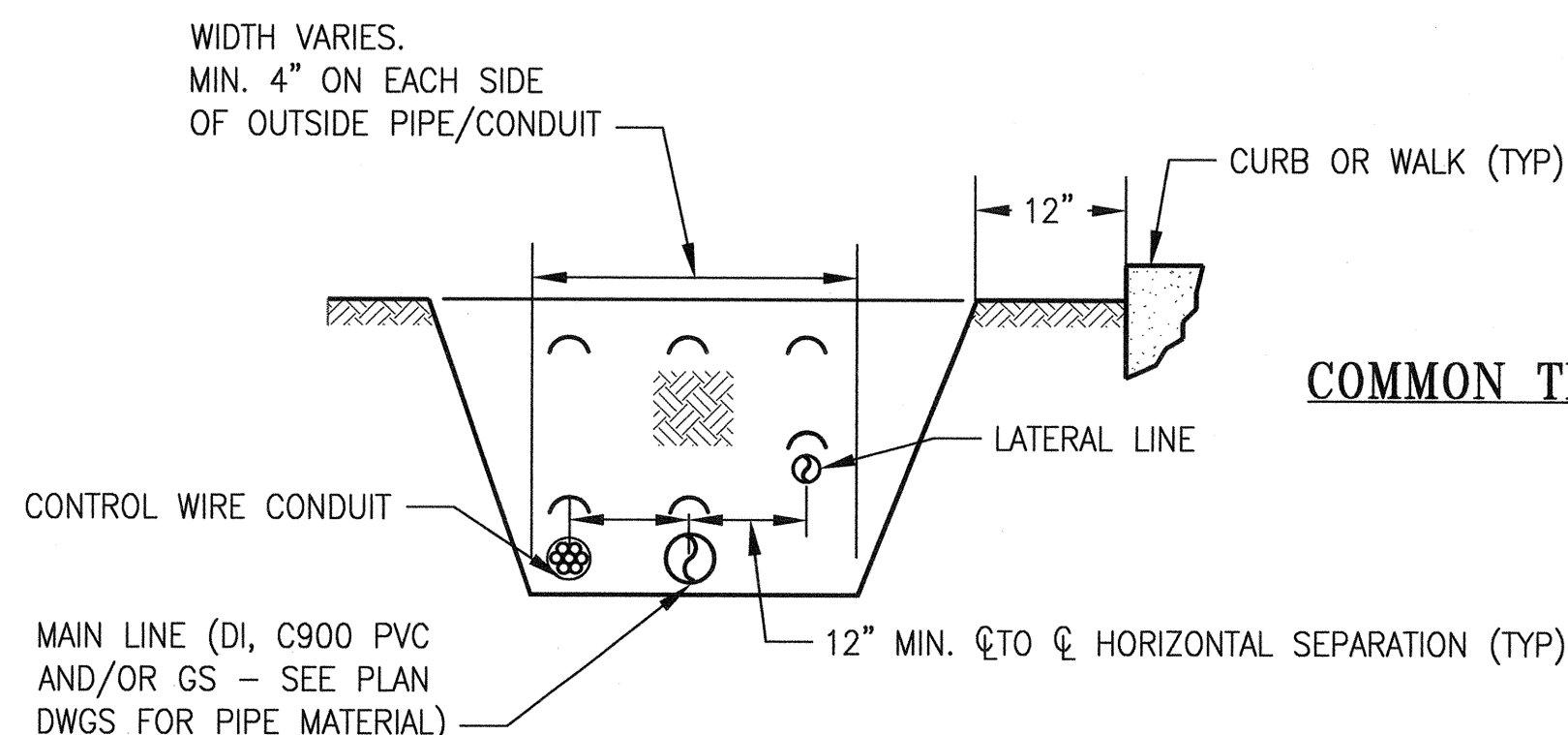
JOB ORDER NO. 2106J  
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 FILE NO. 102,651  
 REV. NO. 0

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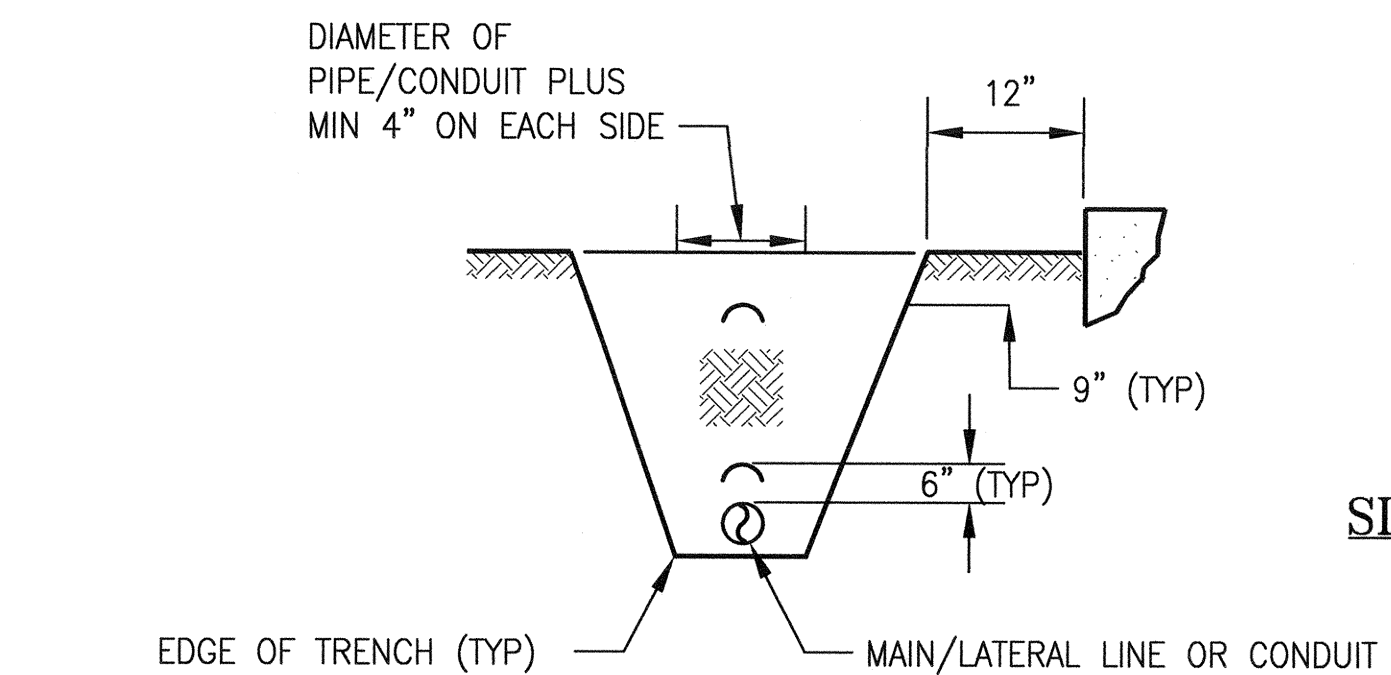
PIPE/CONDUIT DEPTH CHART	
IRRIGATION UTILITY	DEPTH TO TOP OF UTILITY
MAIN LINE-3" OR SMALLER	30"
MAIN LINE-4" OR GREATER	36"
LATERAL LINE-SPRAY/BUBBLER	18"
LATERAL LINE-ROTORS	24"
CONTROL WIRE CONDUIT	24"

**NOTES:**

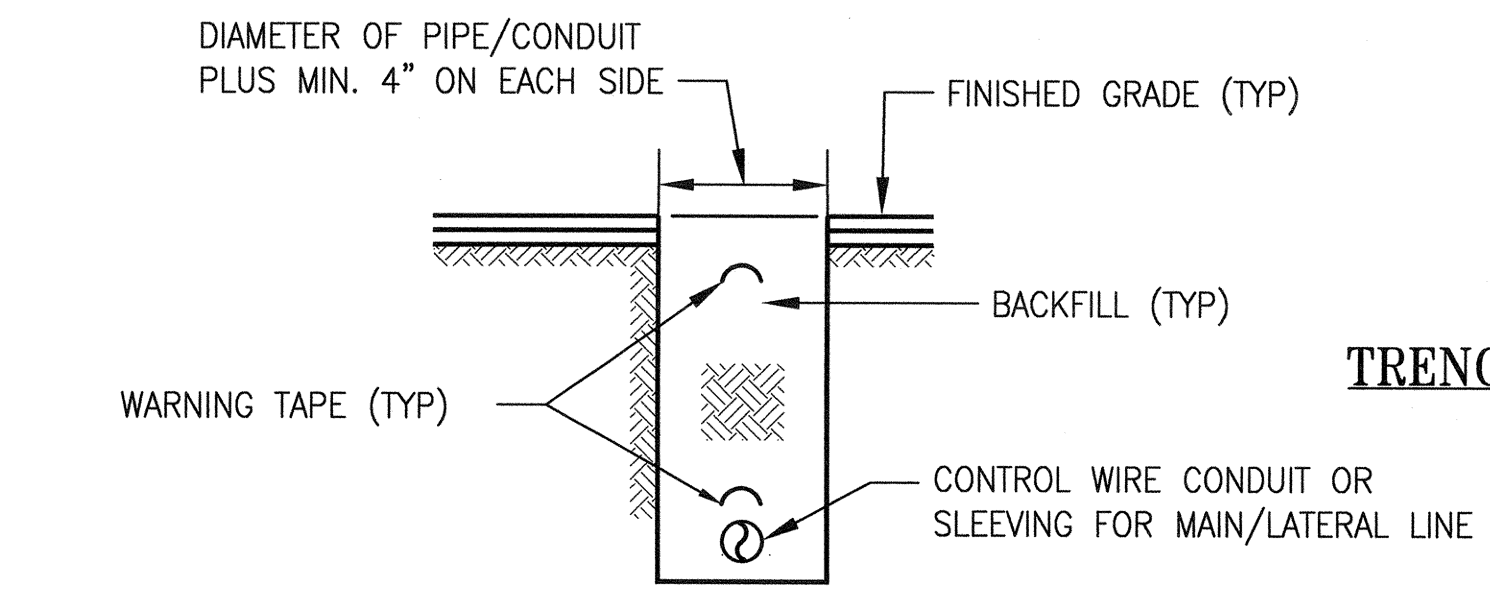
- IF THE EXCAVATED NATIVE MATERIAL IS LARGER THAN 3/4" DIAMETER, PROVIDE SUITABLE BACKFILL MATERIAL. THE CITY REPRESENTATIVE SHALL DETERMINE THE SUITABILITY OF THE BACKFILL MATERIAL. COMPACT BACKFILL MATERIAL TO 95% RELATIVE COMPACTION. PROVIDE NATIVE MATERIAL FOR BACKFILL THAT IS CLEAR OF ALL DEBRIS AND ROCKS LARGER THAN 1/2" IN DIAMETER.
- PROVIDE 3' MINIMUM CLEARANCE BETWEEN NEW IRRIGATION UTILITIES AND OTHER NEW/EXISTING UTILITIES AND/OR STRUCTURES, UNLESS APPROVED BY THE CITY REPRESENTATIVE.
- RESTORE ALL BACKFILLED TRENCH SURFACES PER THE SPECIFICATIONS OR MATCH THE SURROUNDING SITE CONDITIONS WHEN NO NEW WORK IS CALLED OUT ELSEWHERE IN THE CONTRACT DOCUMENTS



**COMMON TRENCH DETAIL**

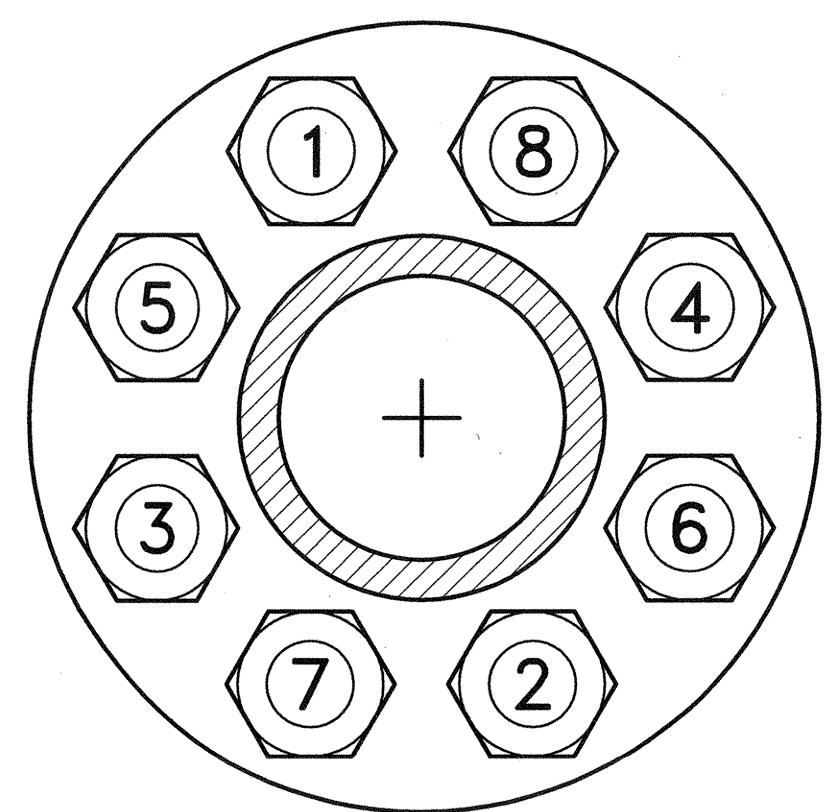


**SINGLE LINE TRENCH DETAIL**



**TRENCHING UNDER ROADWAY**

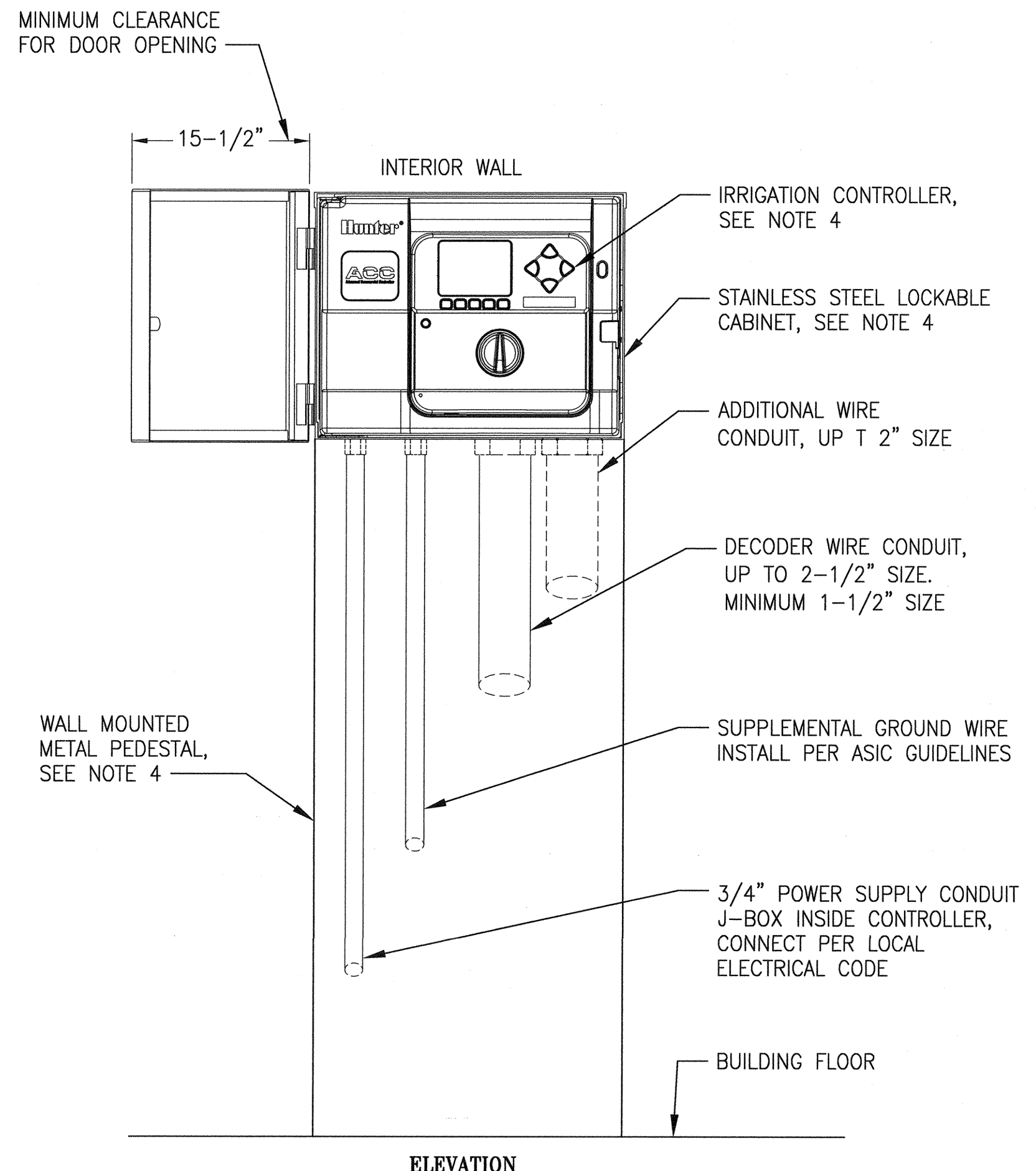
**TRENCHING DETAIL 12**



**NOTES:**

- UNIFORMLY BEAR FLANGE FACES ON THE GASKET, LUBRICATE BOLT THREADS AND HAND TIGHTEN BOLTS AND NUTS UNIFORMLY AND SEQUENTIALLY ON OPPOSITE SIDES OF THE FLANGE. TORQUE 5/8" DIA. BOLTS AND NUTS TO 30 FT. LBS.; 3/4" DIA. BOLTS AND NUTS TO 50 FT. LBS. AND 7/8" DIA. BOLTS AND NUTS TO 80 FT. LBS.
- SEE ABOVE DIAGRAM FOR NUMBERED TORQUE SEQUENCE FOR FLANGED CONNECTIONS.
- PAINT FITTINGS (EXCEPT FACTORY PAINTED EQUIPMENT) ACCORDING TO SPECIFICATIONS.

**FLANGE BOLT TIGHTENING DETAIL 11**



**ELEVATION**

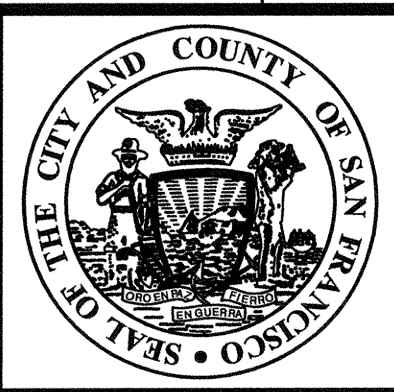
**NOTES:**

- MOUNT CONTROLLER WITH LCD SCREEN 5'-6" ABOVE FINISHED FLOOR.
- CONTROLLER SHALL BE HARD WIRED TO GROUND 110 VAC ELECTRICAL SOURCE.
- CONDUIT TO BE SECURED TO WALL PER ELECTRICAL CODE, MINIMUM OF 3 LOCATIONS PER ROW.
- SECURE CONTROLLER/CABINET/PEDESTAL AT LOCATION AS DIRECTED BY THE CITY REPRESENTATIVE AND PER THE CONTROLLER MANUFACTURERS INSTRUCTIONS.

**INTERIOR (BUILDING) IRRIGATION CONTROLLER INSTALLATION DETAIL 13**

NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 14:44, BY: leeno				

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**DESIGN AND ENGINEERING**  
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**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE: M SMITH 07/2015  
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APPROVED: DATE: [Signature] JUL 23 2015  
 SECTION MANAGER: DATE: [Signature] 7/24/15  
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 DIVISION MANAGER: DATE:

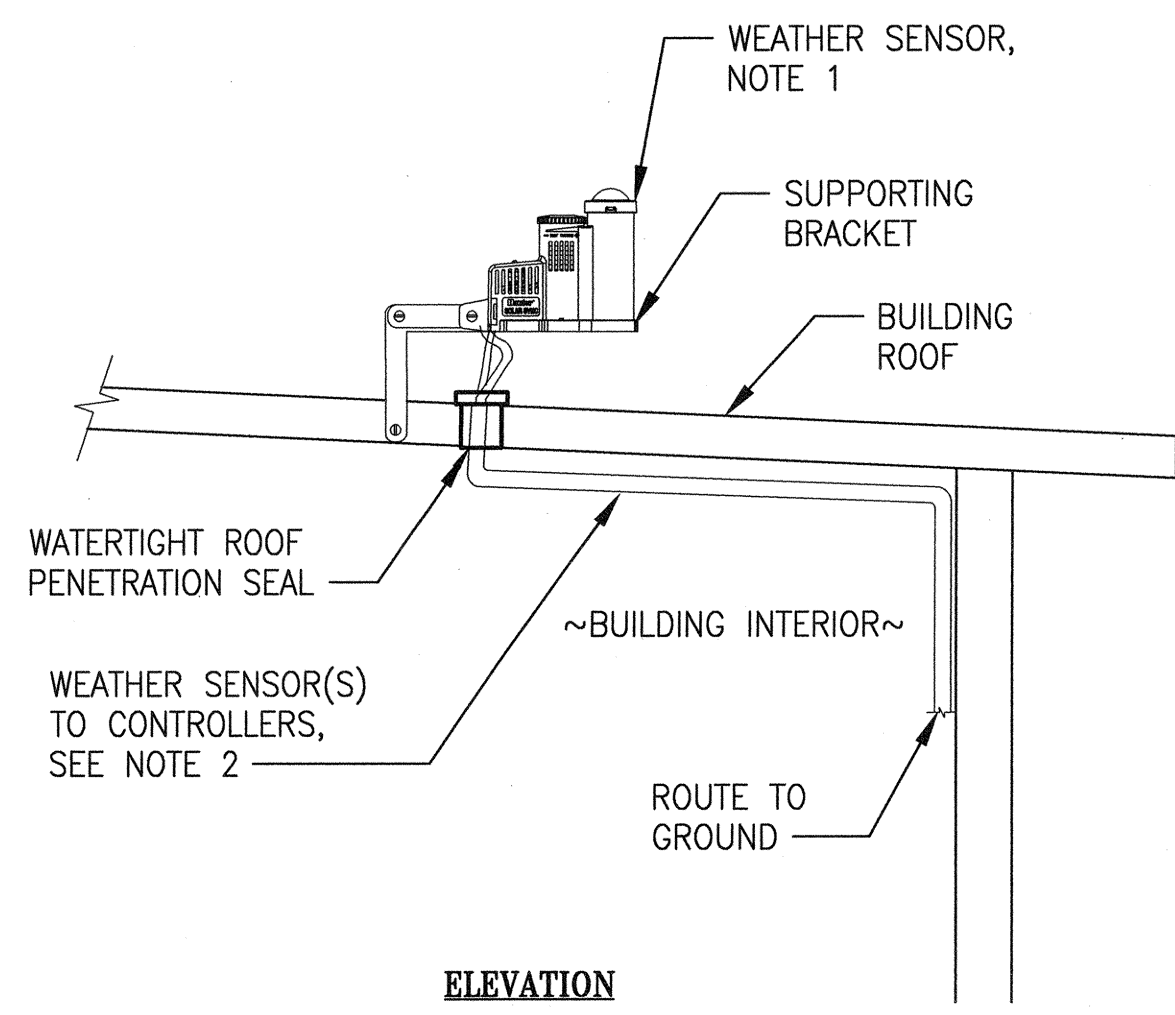
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 SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**  
**LANDSCAPE IRRIGATION SYSTEMS**  
**NEW WORK - DETAILS III**

JOB ORDER NO. 2106J  
 DRAWING NO. LI-134  
 FILE NO. 102,652  
 REV. NO. 0

Drawing Path: V:\2021\AlamoSquare\_RestroomAndIrrigation\Project\2\_Design\Working\_Drawings\EME\Current\BDC\_22X34\_TBD\_EME.dwg  
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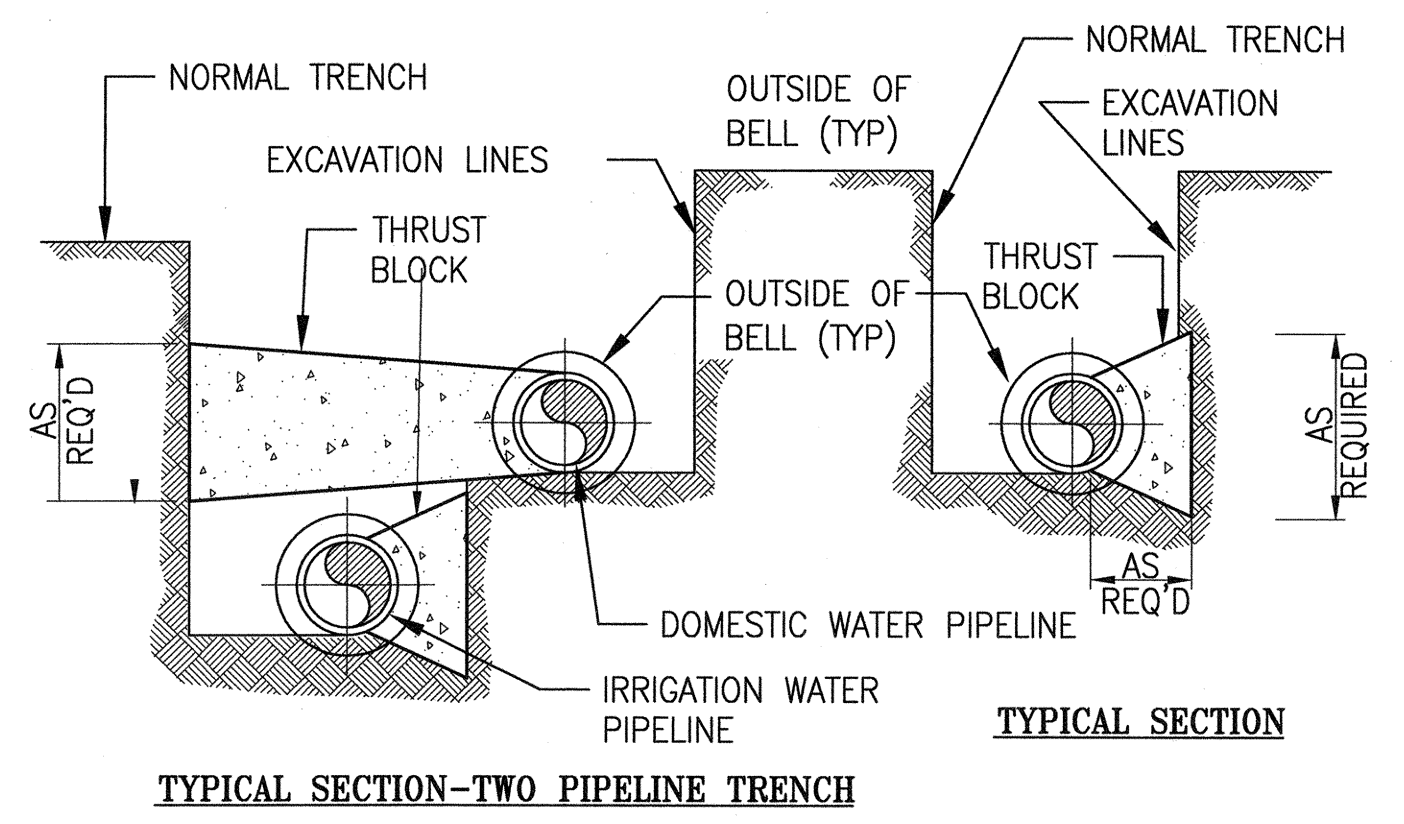




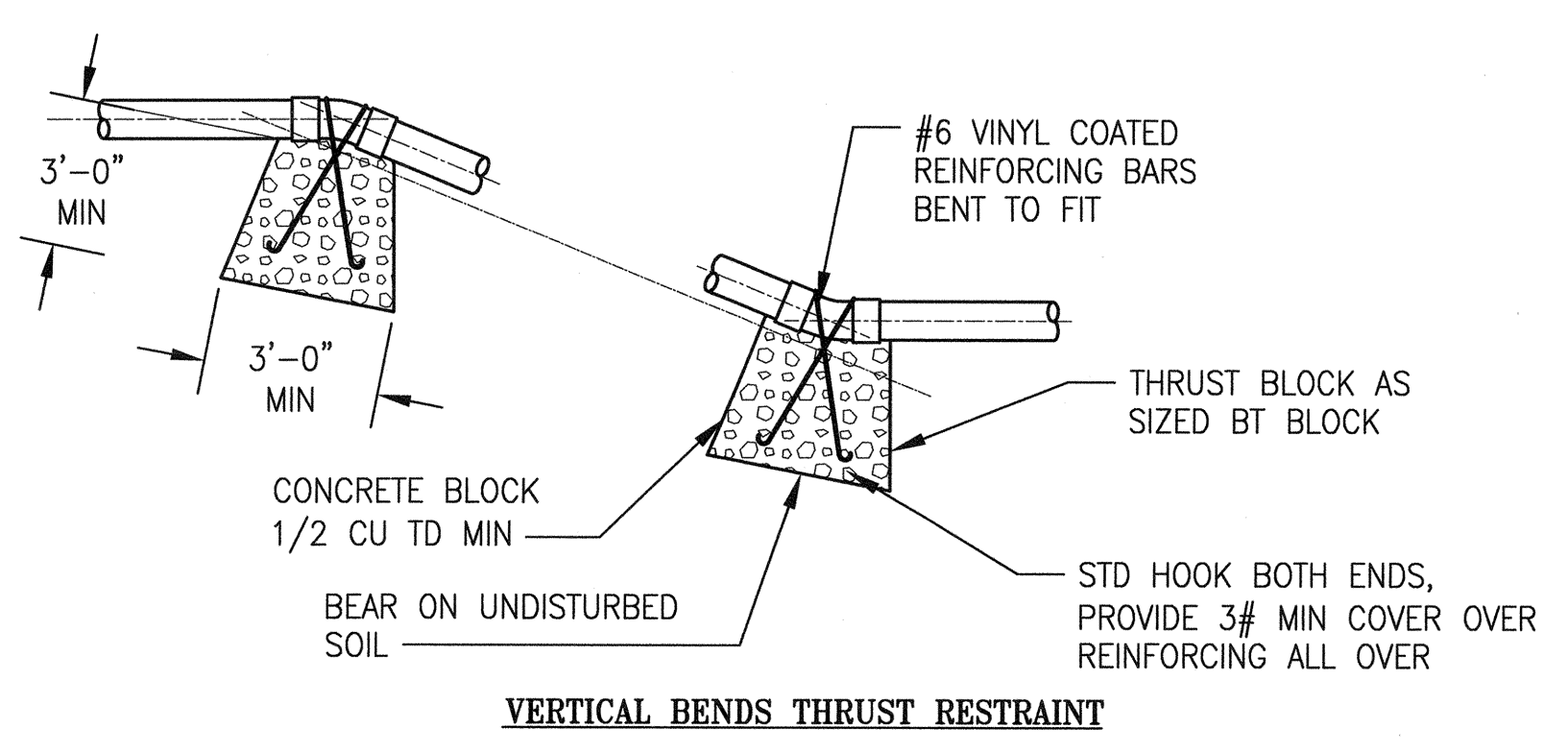
ELEVATION

- NOTES:**
1. EXACT LOCATION TO MOUNT THE WEATHER SENSOR TO BE MOUNTED ON THE (N) MAINTENANCE BUILDING ROOF SHALL BE DETERMINED IN THE FIELD BY THE CITY REPRESENTATIVE AND THE MANUFACTURER'S REPRESENTATIVE FOR OPTIMUM LOCATION FOR UNOBSTRUCTED FULL DAY SUN AND RAIN WHEN REQUIRED.
  2. CONDUIT TYPE/INSTALLATION AND 16 GAUGE-2 WIRE SHALL MEET THE REQUIREMENTS OF THE ELECTRICAL CODE.
  3. REFER TO PLAN DWGS FOR CONDUIT WIRED/WIRELESS WEATHER SENSOR INSTALLATION.
  4. REFER TO DETAIL 31 ON DWG LI-141 FOR WEATHER SENSORS TO BE INSTALLED IN BACKFLOW PREVENTOR ENCLOSURES WHEN SHOWN ON THE PLAN DWGS.

WEATHER SENSOR DETAIL 14



TYPICAL SECTION-TWO PIPELINE TRENCH

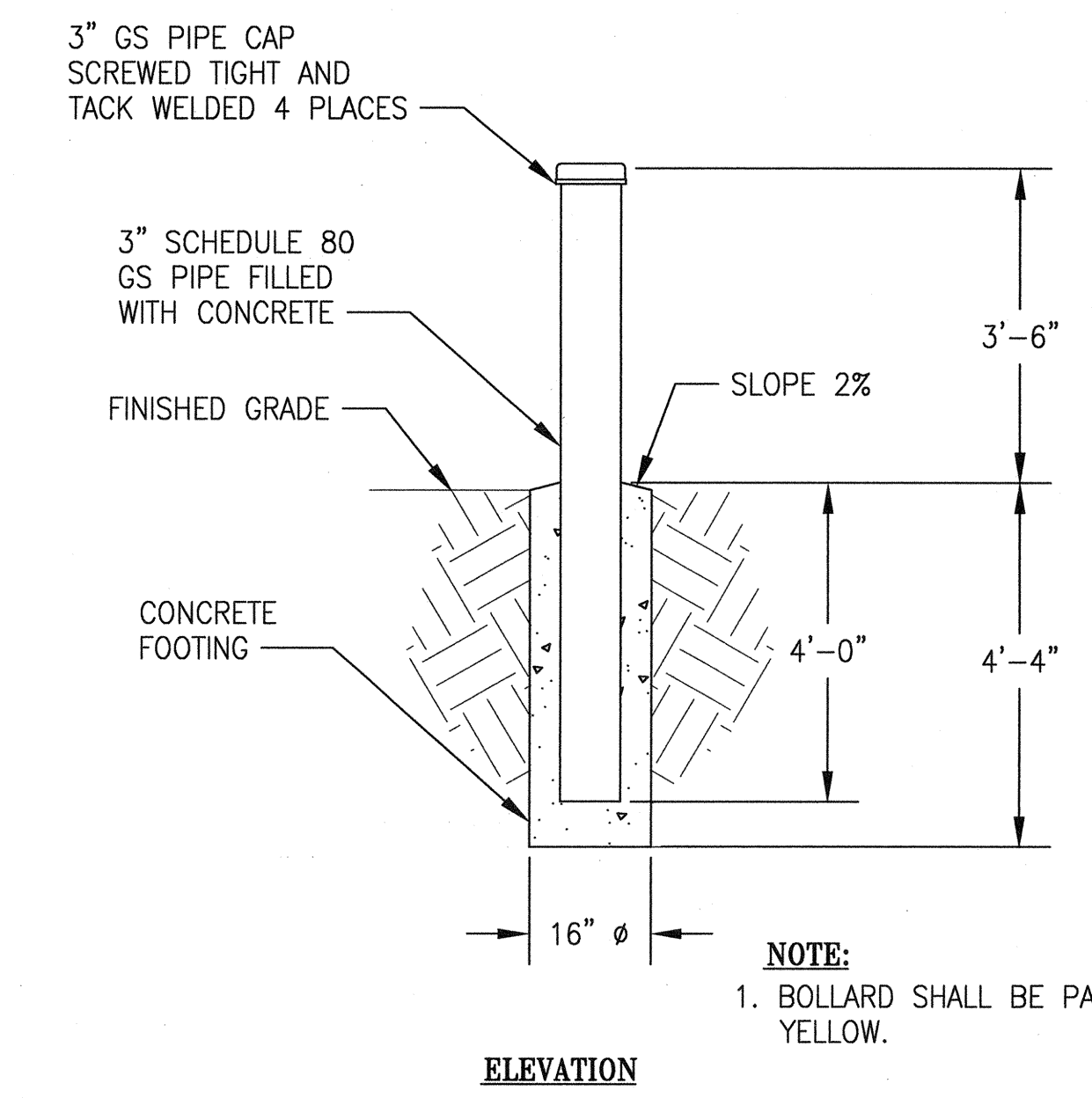
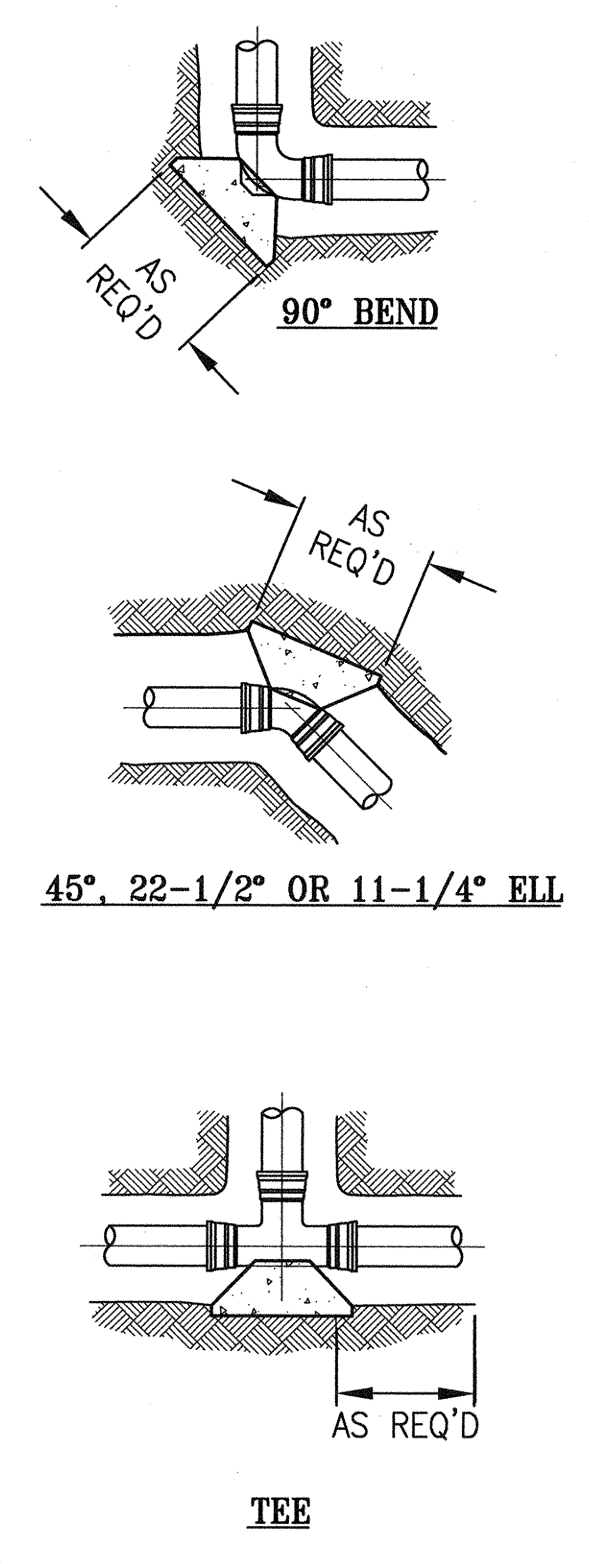


VERTICAL BENDS THRUST RESTRAINT

PIPE DIAMETER	AREA IN SQUARE FEET AT FITTINGS				
	TEE & END CAP	90° ELL	45° ELL	22 1/2° ELL	11 1/4° ELL
IRRIGATION WATER PIPING DESIGN PRESSURE = 250 PSI					
3" AND 4"	2	3	2	1	1
6"	4	5	3	2	1
8"	6	9	5	2	1

- NOTES:**
1. THRUST BLOCKS SHALL BE PLAIN CONCRETE POURED AGAINST UNDISTURBED EARTH. THE SIDES OF THE THRUST BLOCKS SHALL BE FORMED WITH PLYWOOD WHICH SHALL BE REMOVED WHEN THE CONCRETE IS SET.
  2. CAPS AND PLUGS SHALL HAVE THRUST BLOCKS WITH AREAS AS SPECIFIED FOR TEES. POLYETHYLENE WRAP SHALL BE IN PLACE BEFORE THRUST BLOCKS ARE POURED.
  3. AREA GIVEN IS IN A PLANE AT RIGHT ANGLES TO THE LINE OF RESULTANT THRUST.
  4. THRUST BLOCKS ARE DESIGNED FOR SANDY SOIL WITH AN ALLOWABLE SOIL BEARING VALUE OF 4000 LB/SF AND A SAFETY FACTOR OF 1.5. AREAS SHALL BE INCREASED FOR SOILS WITH LOWER BEARING VALUES.
  5. PIPE JOINTS AND RESTRAINT/GLAND JOINTS OF FITTINGS SHALL NOT BE COVERED WITH CONCRETE.
  6. LARGE THRUST BLOCKS WILL REQUIRE EXCAVATION BEYOND THE TRENCH WALL TO OBTAIN THE REQUIRED BEARING AREA.
  7. THRUST BLOCKS ARE REQUIRED FOR DUCTILE IRON AND C900 PVC PIPE FITTING, INCLUDING ON FLANGED AND RESTRAINED JOINT PUSH-ON FITTINGS. REFER TO THE SPECS FOR REQUIREMENTS FOR RESTRAINT JOINT HARDWARE.

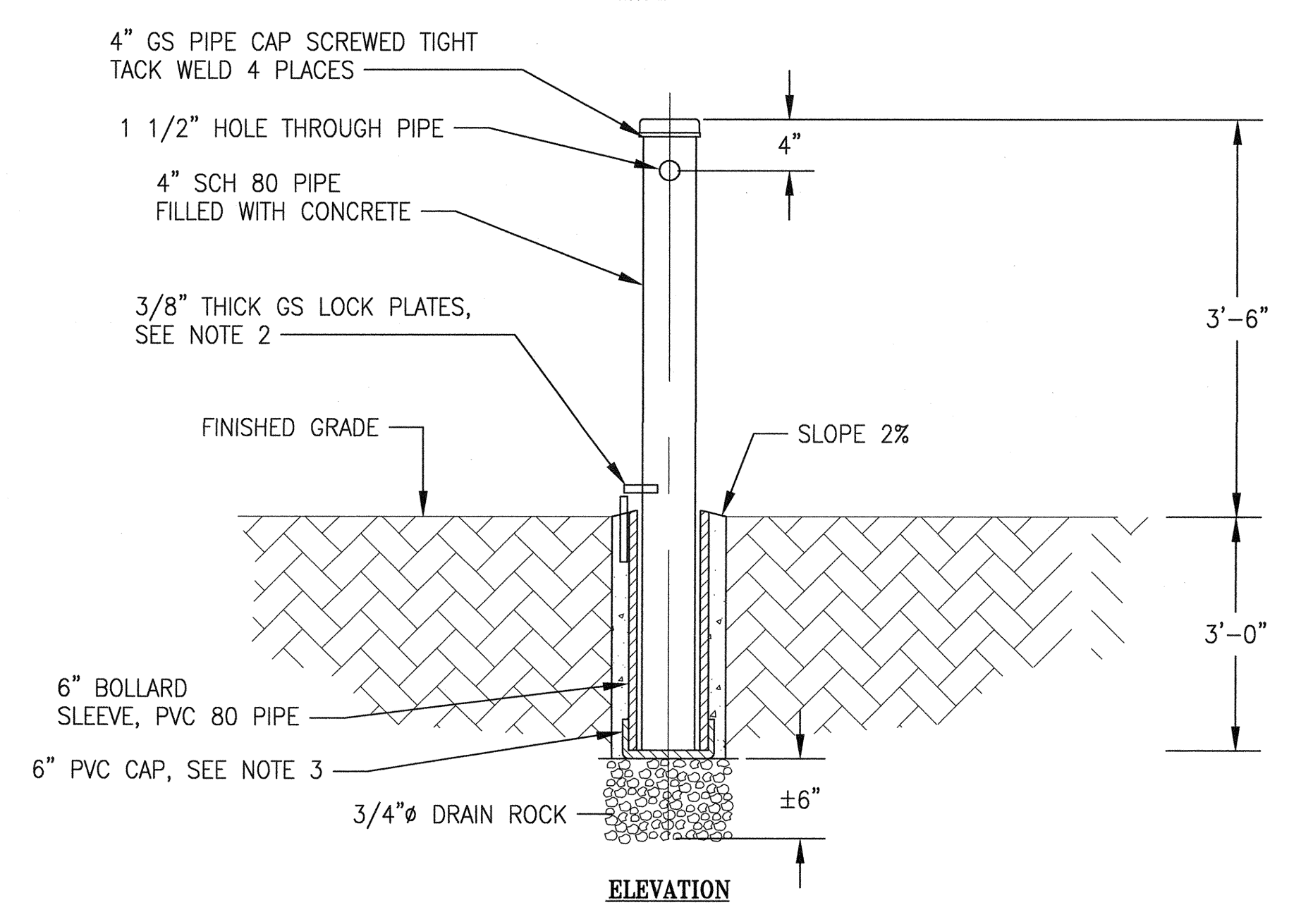
STANDARD THRUST BLOCK DETAIL 15



ELEVATION

- NOTE:**
1. BOLLARD SHALL BE PAINTED SAFETY YELLOW.

PERMANENT BOLLARD DETAIL 16



ELEVATION

- NOTES:**
1. BOLLARD SHALL BE PAINTED SAFETY YELLOW.
  2. GROUND MOUNTED LOCK PLATE SHALL BE EMBEDDED 8" INTO CONCRETE AND PROTRUDE 1 1/4" ABOVE CONCRETE FOOTING.
  3. SOLVENT WELD PVC CAP TO PIPE SLEEVE, DRILL 6 (SIX) 1/2" Ø HOLES THROUGH PVC CAP BOTTOM.

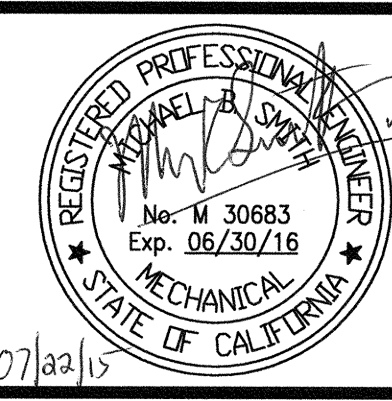
REMOVABLE BOLLARD DETAIL 17

NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
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**CITY AND COUNTY OF SAN FRANCISCO**



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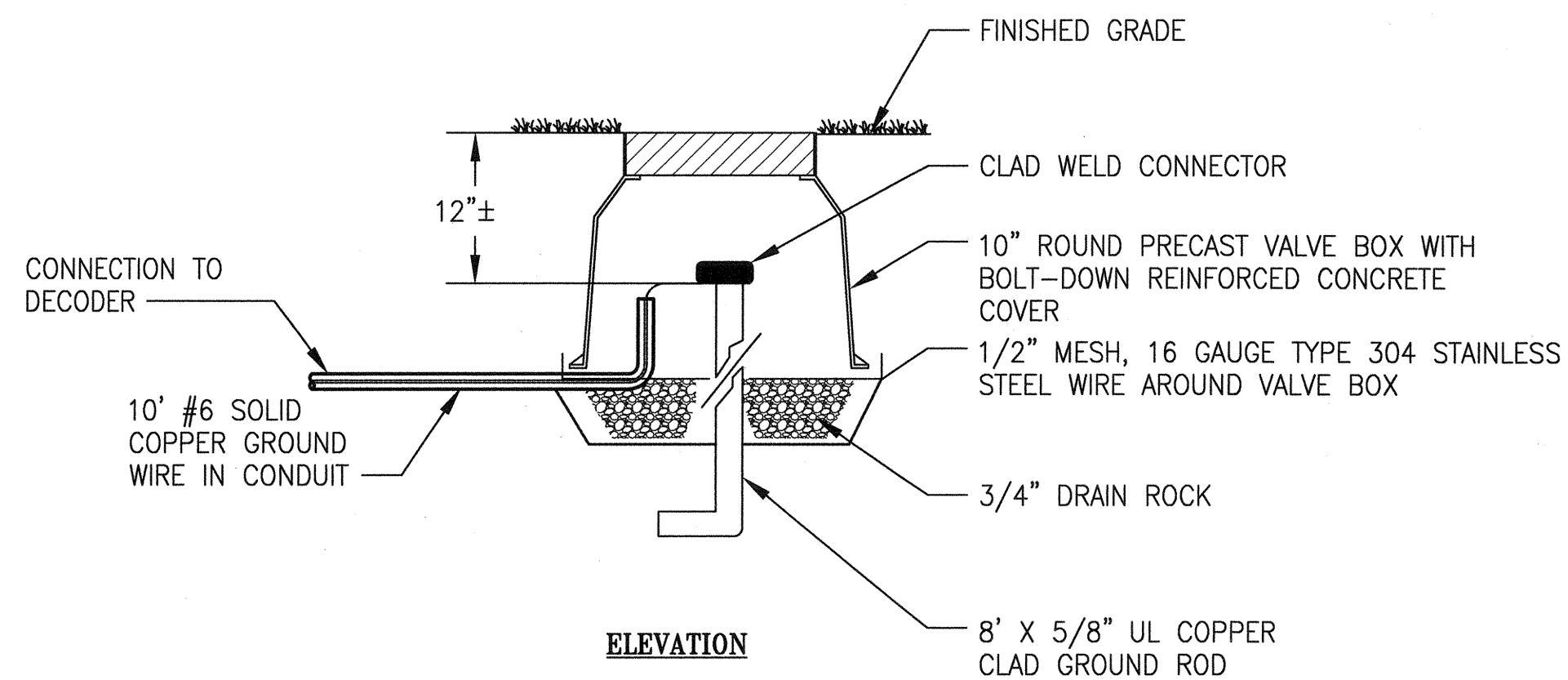
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 SECTION MANAGER DATE: [Signature] 7/24/15  
 DEPUTY DIVISION MANAGER DATE: [Signature] 7/27/15  
 DIVISION MANAGER DATE:

SCALE: NONE  
 SHEET OF SHEETS

MUNI BUS RAPID TRANSIT SYSTEM  
 VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT  
 LANDSCAPE IRRIGATION SYSTEMS  
 NEW WORK - DETAILS IV

JOB ORDER NO. 2106J  
 DRAWING NO. LI-135  
 FILE NO. 102,653  
 REV. NO. 0

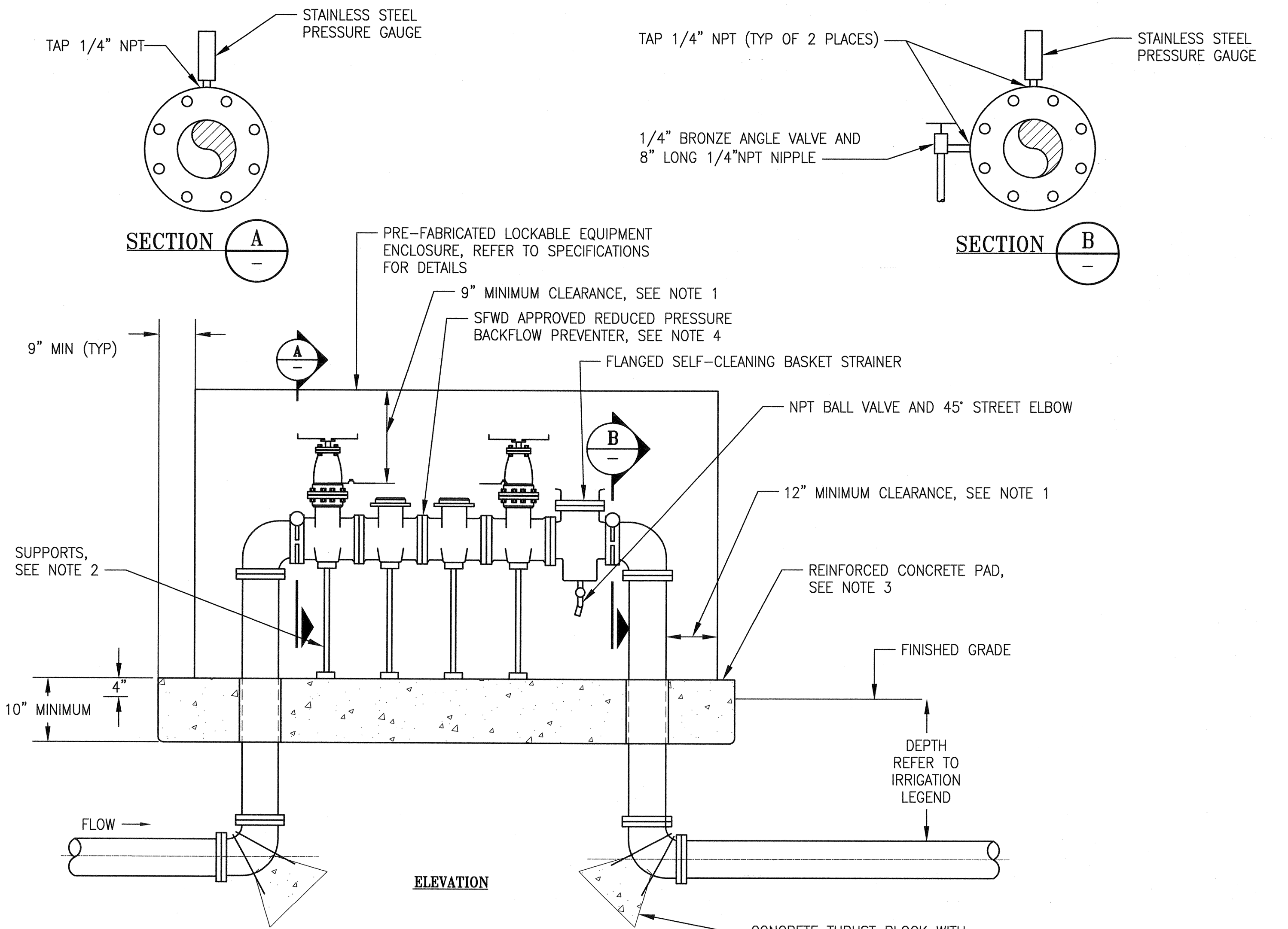
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 Plot Time: Wed, 22 Jul 2015 - 2:47pm



**NOTES:**

1. CONDUIT SHALL BE SEALED WITH AN APPROVED SEALANT/CAPPED END.
2. GROUNDING ROD SHALL BE LOCATED WITH 10' OF CONNECTING DECODER.
3. VALVE BOX AND LID SHALL BE RATED FOR H-20 LOADING.
4. BOTTOM OF GROUNDING ROD SHALL BE BENT 90° FOR A DISTANCE OF 8".

**GROUNDING ROD DETAIL 18**



**NOTES:**

1. PROVIDE 9" CLEARANCE BETWEEN TOP OF GATE VALVES IN OPEN POSITION AND THE ENCLOSURE TOP, AND 12" CLEARANCE BETWEEN ALL OTHER LOCATIONS OF THE BACKFLOW PREVENTER/BASKET STRAINER AND THE ENCLOSURE.
2. F/1 ADJUSTABLE VALVE SUPPORTS UNDER EACH VALVE.
3. SUBMIT DWGS OF THE REINFORCED CONCRETE PAD SIGNED/STAMPED BY A CIVIL ENGINEER LICENSED TO PRACTICE IN THE STATE OF CALIFORNIA FOR APPROVAL BY THE CITY REPRESENTATIVE PRIOR TO CONSTRUCTION.
4. REFER TO IRRIGATION PLAN DWGS FOR SIZE OF BACKFLOW PREVENTER.
5. REFER TO SPECIFICATIONS FOR REQUIREMENTS TO INSTALL BACKFLOW PREVENTER PLUMB AND LEVEL.
6. F/1 1 1/2" THICK TYPE 303 STAINLESS STEEL FLANGE SPACERS. SPACERS SHALL BE THE SAME DIAMETER AS PIPE/FITTING FLANGES AND PRESSURE GAUGES. PRESSURE GAUGES SHALL BE FACE UPWARDS VIA A 90° ELBOW. BLOW-DOWN VALVE SHALL BE MOUNTED ON THE SIDE OF THE PIPE AND PROVIDED WITH A 9" LENGTH OF PIPE FACING DOWN FROM THE BASKET STRAINER. SPACER SHALL BE MACHINED, DRILLED AND TAPPED IN AN APPROVED MACHINE SHOP.
7. PROVIDE AND SECURE TO THE BASKET STRAINER A 16-GAUGE STAINLESS STEEL TAG (MINIMUM 4"x6") WITH EMBOSSED LETTERS STATING THE FOLLOWING:  
"CAUTION: DO NOT OPEN BASKET STRAINER LID WHILE LINE IS UNDER PRESSURE." CLOSE UPSTREAM/DOWNSTREAM GATE VALVES NEAREST STRAINER. OPEN BLOW-DOWN VALVE AND RELIEVE LINE PRESSURE GAUGES. STRAINER LID MAY NOW BE OPENED."

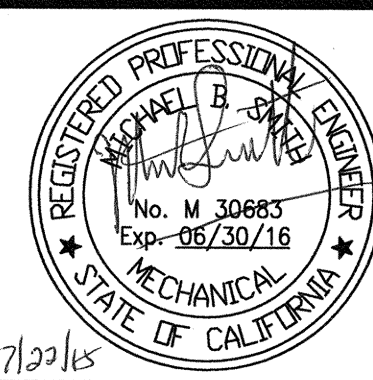
**BACKFLOW PREVENTER AND BASKET STRAINER ASSEMBLY DETAIL 19**

NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 14:44, BY: leeno				

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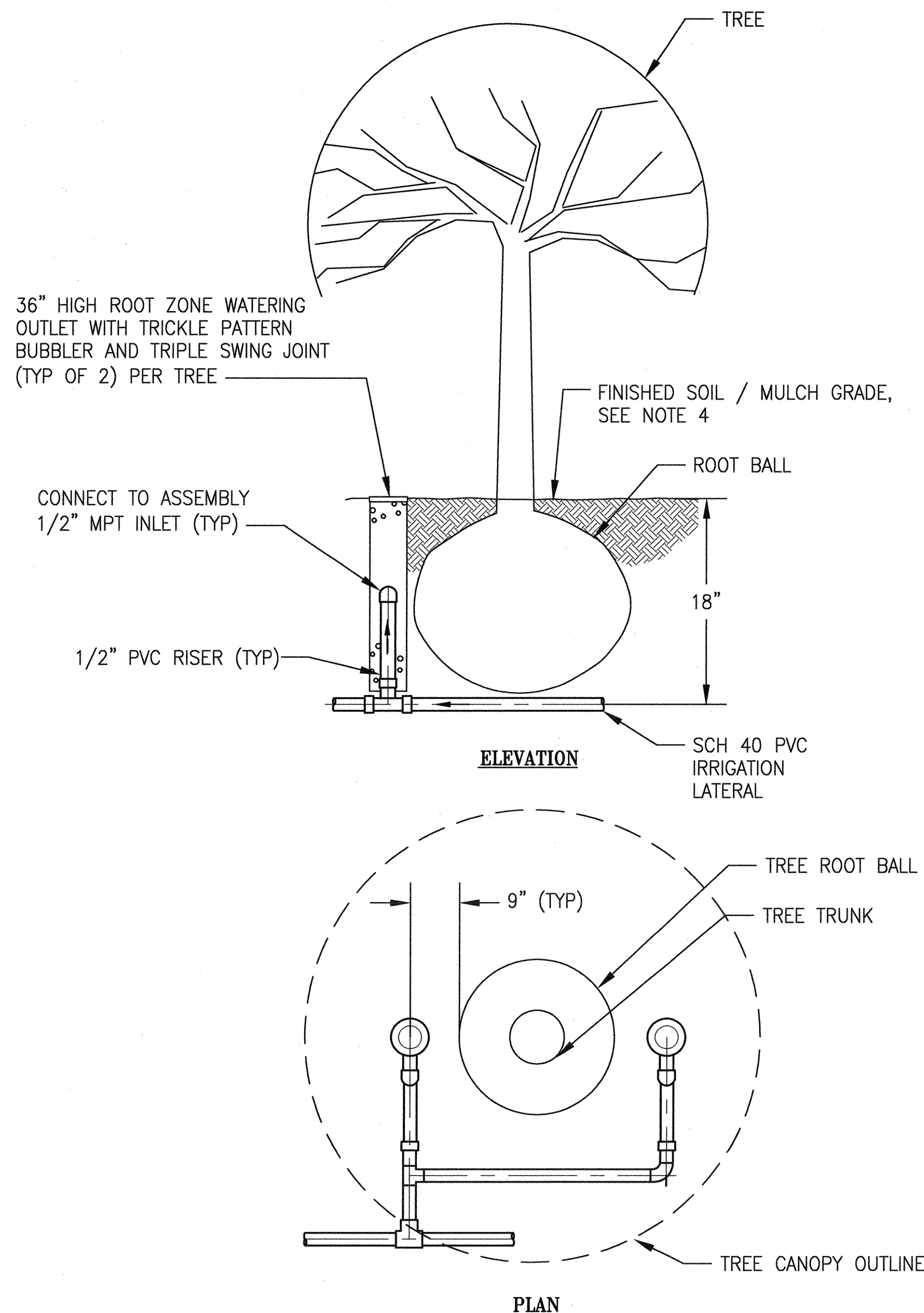
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 SECTION MANAGER: DATE: *Ho* 7/24/15  
 DEPUTY DIVISION MANAGER: DATE: *Lee* 7/29/15  
 DIVISION MANAGER: DATE:

SCALE: NONE  
 SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**  
**LANDSCAPE IRRIGATION SYSTEMS**  
**NEW WORK - DETAILS V**

JOB ORDER NO. 2106J  
 DRAWING NO. LI-136  
 FILE NO. 102,654  
 REV. NO. 0

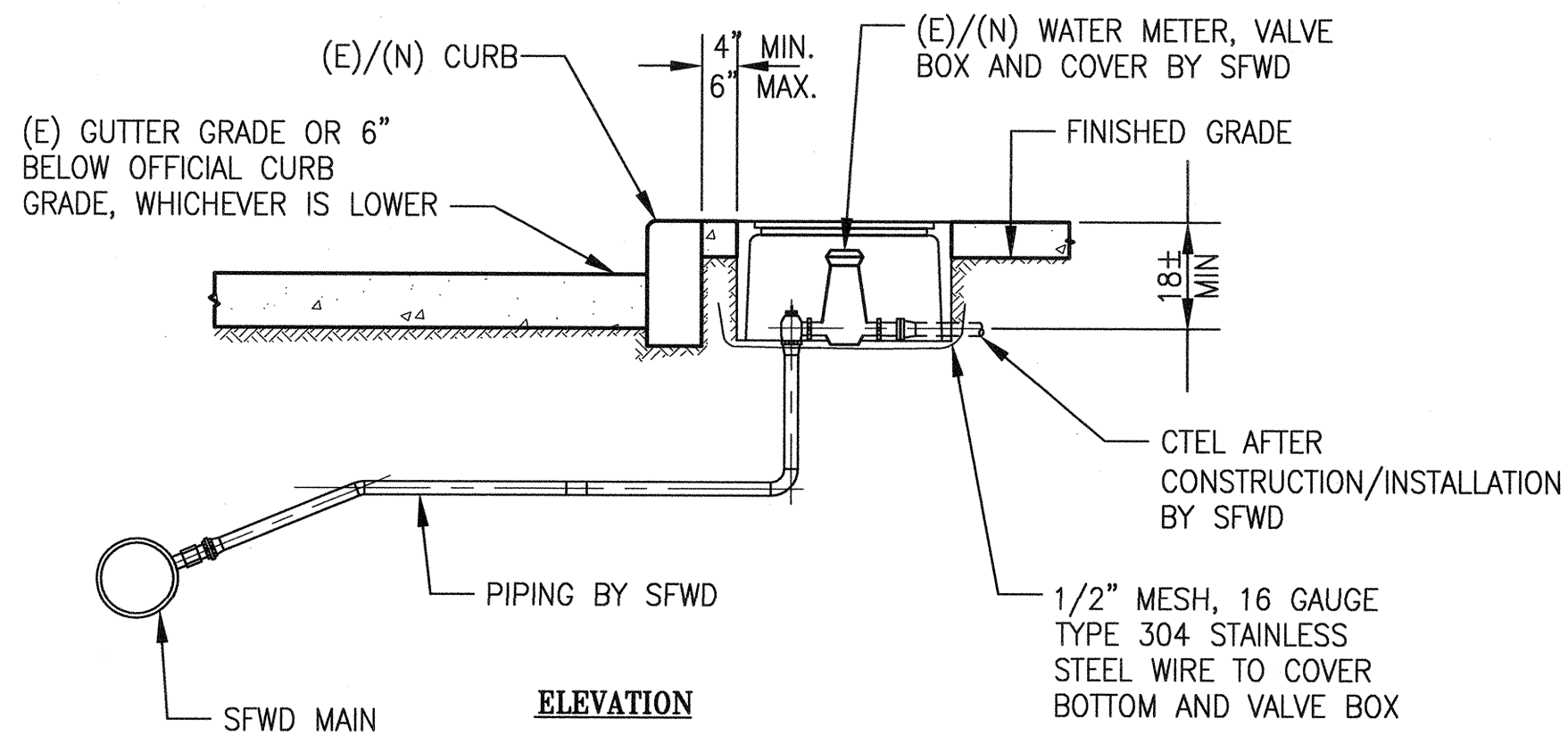
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 Plot Time: Wed, 22 Jul 2015 2:47pm



**NOTES:**

1. REFER TO LANDSCAPE DRAWINGS FOR EXACT LOCATIONS OF TREES TO BE WATERED.
2. FIELD ADJUST ASSEMBLY LOCATIONS AS REQUIRED.
3. OUTLETS SHALL BE LOCATED UPHILL FROM THE TREE ROOT BALL WHEN TREE IS LOCATED ON A SLOPED GRADE.
4. TOP OF WATERING OUTLET SHALL BE INSTALLED FLUSH WITH COMPACTED MULCH/ SOIL GRADE

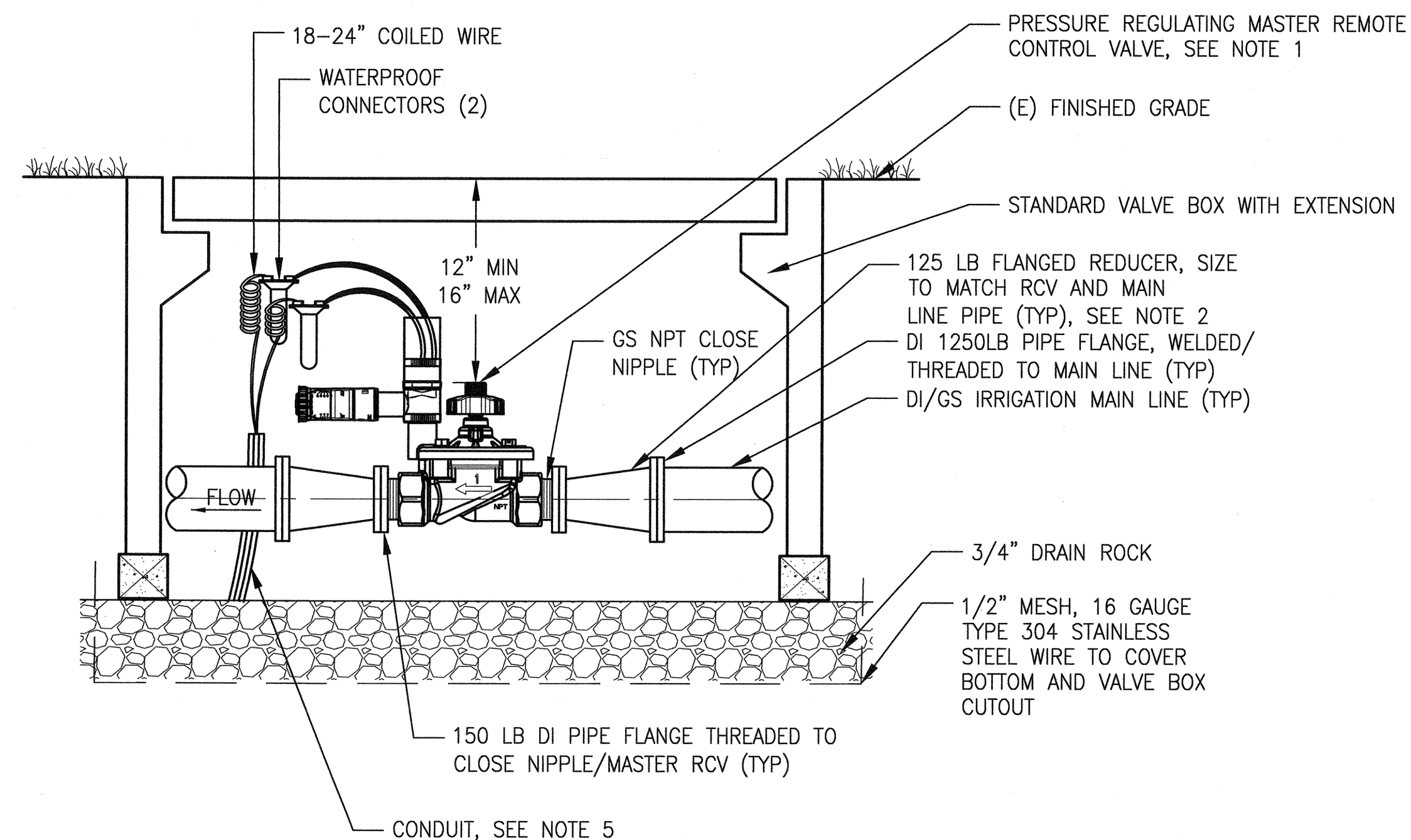
TREE ROOT ZONE WATERING UNIT DETAIL 20



**NOTES:**

1. 1" SERVICE USED FOR 5/8", 3/4", AND 1" METER INSTALLATION
2. 2" SERVICE USED FOR 1 1/2", AND 2" METER INSTALLATION
3. REFER TO THE SPECIFICATIONS FOR WORK TO BE PERFORMED BY SFWD

SFWD WATER METER DETAIL 21



**NOTES:**

1. ALL FLANGE FASTENERS SHALL BE TYPE 316 STAINLESS STEEL.
2. WHERE THE MASTER RCV AND MAIN LINE PIPE ARE OF THE SAME SIZE, THE FLANGED REDUCERS SHALL BE OMITTED. INSTALL FLANGES ONTO MAIN LINE PIPES. NO BACK-TO-BACK FLANGES WITH DIFFERING FEMALE NPT PIPE SIZES SHALL BE ALLOWED. THIS DETAIL SHALL SUPERCEDE IRRIGATION PLAN DWGS WHEN REDUCERS ARE NOT SHOWN AS SEPARATE PIPE FITTINGS AND MAIN LINE/MASTER RCV(S) ARE OF DIFFERENT PIPE SIZES.
3. THE CONDUIT END SHALL BE SEALED PER THE ELECTRICAL CODE TO PRODUCE A WATER TIGHT JOINT. REFER TO THE SPECIFICATIONS FOR SIZE.
4. ALL FLANGE SIZES SHALL MATCH MAIN LINE AND MASTER RCV PIPE SIZES AS SHOWN ON THE IRRIGATION PLAN DWGS.
5. DECODER AND WIRING NOT SHOWN. REFER TO CONTROLLER MANUFACTURER FOR INSTALLATION LAYOUT.
6. ELEVATION OF MAINLINE PIPING UPSTREAM/DOWNSTREAM OF MASTER RCV SHALL BE 30" FOR 3" AND SMALLER PIPE, AND 36" FOR 4" AND LARGER PIPE. USE 22-1/2" ELBOW TO TRANSITION BETWEEN MASTER RCV AND MAINLINE PIPE ELEVATIONS.

MASTER REMOTE CONTROL VALVE DETAIL 22

NO.	DATE	DESCRIPTION	BY	APP.
THIS DRAWING WAS LAST MODIFIED: 07/23/15 11:57, BY: leeno				

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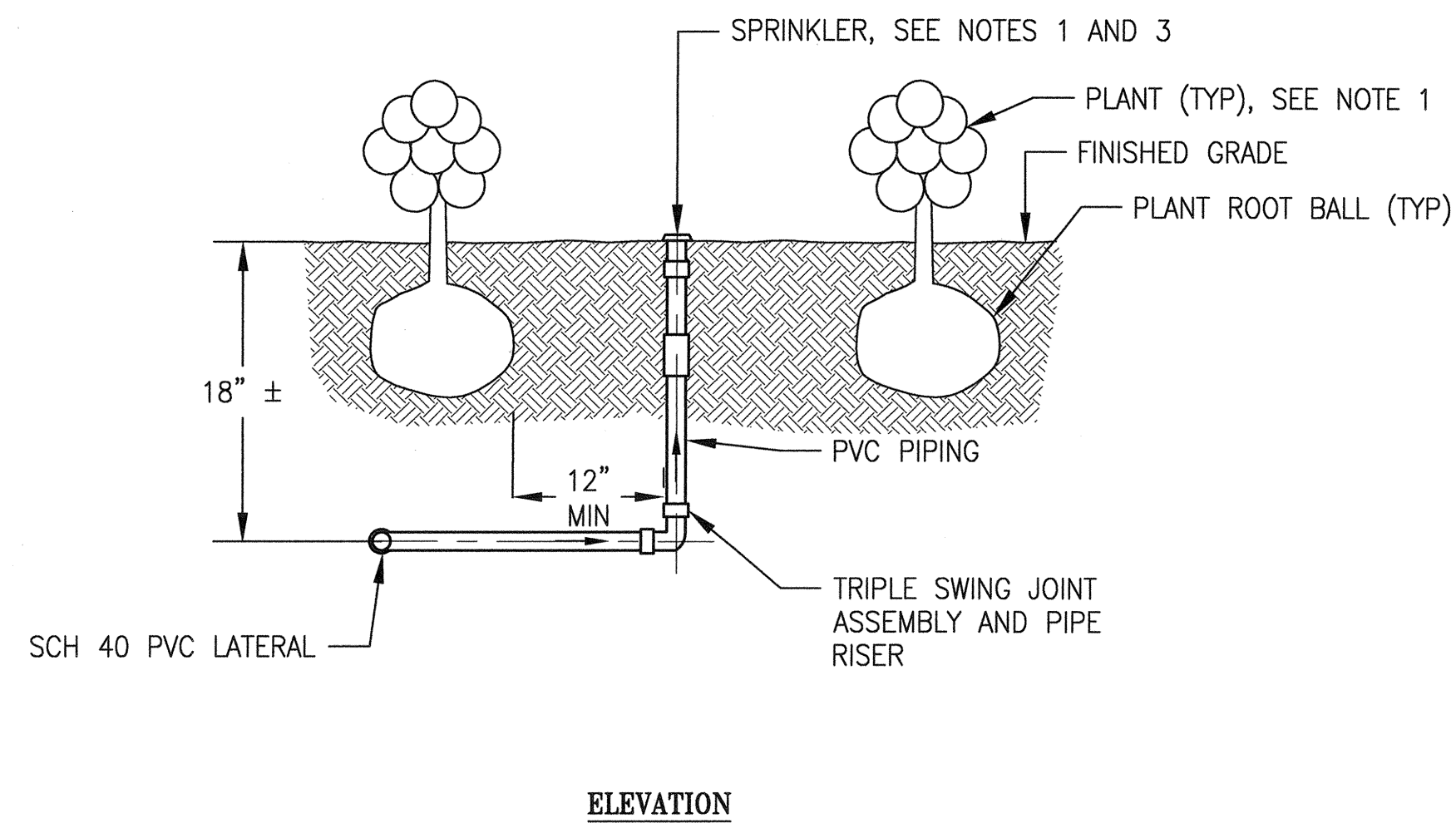
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SECTION MANAGER: <i>Diaper</i>	DATE: 7/24/15
DEPUTY DIVISION MANAGER: <i>Ed</i>	DATE: 7/27/15
DIVISION MANAGER:	DATE:

SCALE: NONE
SHEET OF SHEETS:

MUNI BUS RAPID TRANSIT SYSTEM  
 VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT  
 LANDSCAPE IRRIGATION SYSTEMS  
 NEW WORK - DETAILS VI

JOB ORDER NO. 2106J
DRAWING NO. LI-137
FILE NO. 102,655
REV. NO. 0

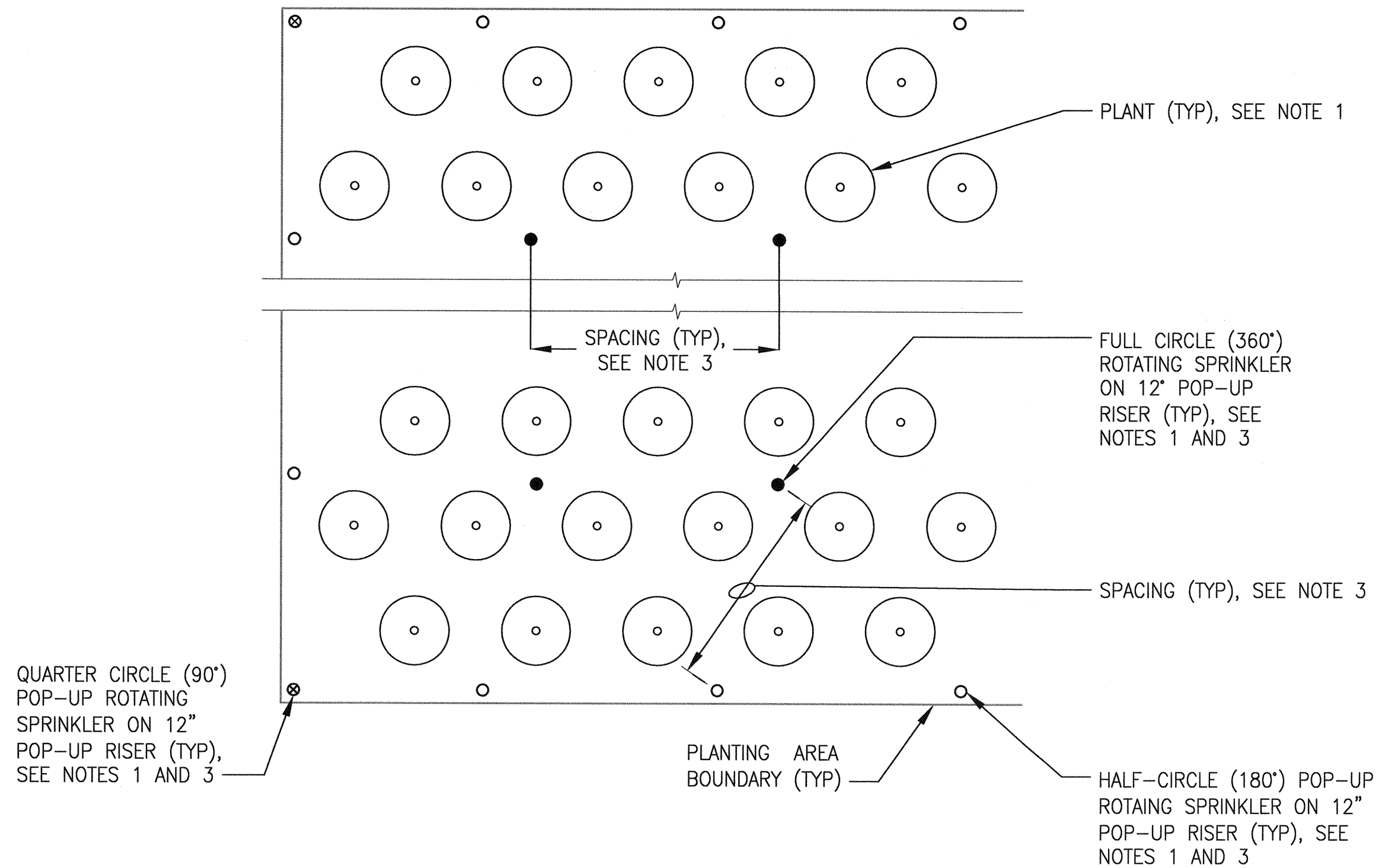
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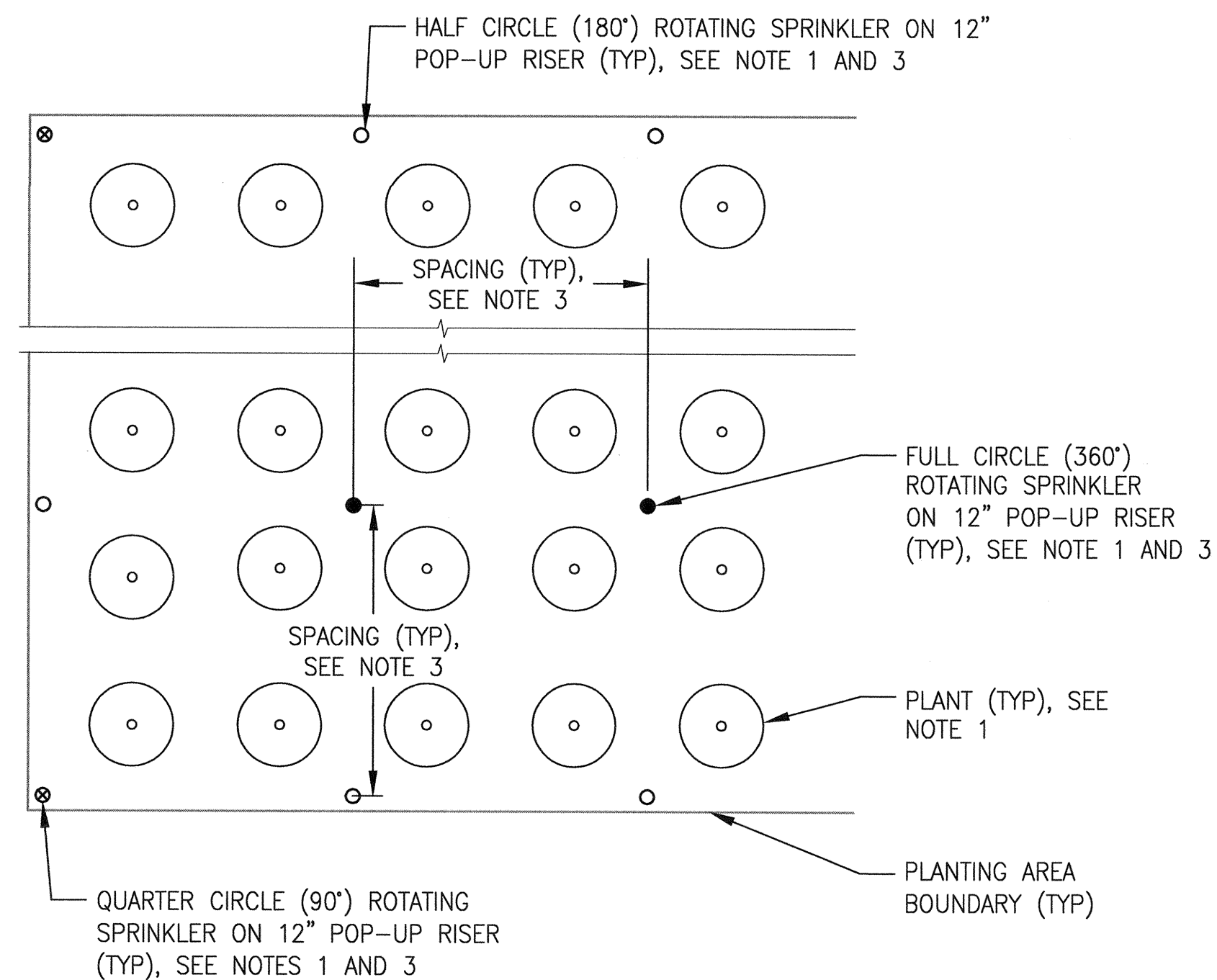
**NOTES:**

1. THE CONTRACTOR SHALL SUBMIT A LAYOUT SHOWING THE PIPING, SPRINKLERS AND PLANTS FOR APPROVAL BY THE CITY REPRESENTATIVE PRIOR TO BEGINNING WORK. REFER TO THE LANDSCAPE DWGS FOR PLANT TYPE, QUANTITY AND SPACING.
2. TRIANGULAR AND SQUARE SPACING LAYOUTS ARE FOR REFERENCE ONLY AND SHALL BE MODIFIED TO SUIT FIELD CONDITIONS AND ACTUAL PLANTING LAYOUT AS SHOWN ON THE LANDSCAPE DWGS IN THE CONTRACT PACKAGE.
3. SPRINKLERS SHALL BE INSTALLED TO MINIMIZE STREAM IMPACT TO PLANTS WHILE MAINTAINING MAXIMUM HEAD-TO-HEAD COVERAGE. ACTUAL SPRINKLER ADJUSTMENT SHALL BE MADE FOR A THROW RADIUS OF 1.25 TIMES THE HEAD-TO-HEAD COVERAGE. EACH SPRINKLERS SHALL BE INSTALLED ON A PVC TRIPLE SWING JOINT ASSEMBLY, SEE DETAIL 4 ON DWG LI-132
4. THE CONTRACT BASE BID SHALL INCLUDE F/I 120% OF THE QUANTITY OF PLANTING AREA SPRINKLERS AS SHOWN ON THE DWGS.
5. ADJACENT PLANTING AREAS WITH DIFFERENT PLANT TYPES/SPACING LAYOUT SHALL BE SUPPLIED WITH WATER FROM A SEPARATE RCV. 180° STREAM BUBBLERS SHALL BE USED AT BOUNDARIES BETWEEN DIFFERENT PLANT TYPES/SPACING AREAS IN ORDER TO MAINTAIN SEPARATE WATERING RATES FOR EACH AREA.
6. MINIMUM PIPE SIZE SHALL BE 3/4 INCH SCHEDULE 40 PVC. REFER TO THE PLAN DWGS AND PIPE SIZING TABLE FOR SIZING OF PIPE.
7. FLOW RATES IN ALL LATERAL PIPES SHALL BE NOT EXCEED 5 FT/SEC. NOTIFY THE CITY REPRESENTATIVE IN WRITING IF THE RCV SHOWN ON DRAWINGS WILL EXCEED THE MAXIMUM FLOW RATE OF 5 FT/SEC. THE CONTRACT BASE BID SHALL ALLOW THE CITY TO INCREASE THE RCV AND LATERAL MAIN PIPING SIZE BY ONE PIPE SIZE WITHOUT ADDITIONAL COST TO THE CITY.
8. NOTIFY THE CITY REPRESENTATIVE IN WRITING PRIOR TO BEGINNING WORK IF THERE IS A DIFFERENCE OF 12- FEET OR GREATER IN ELEVATION BETWEEN ANY SPRINKLERS ON A PARTICULAR LATERAL.

PLANTING AREA SPRINKLER LAYOUT DETAIL (23)



PLAN VIEW (PLANT ROWS WITH TRIANGULAR SPACING)  
(LATERAL PIPING NOT SHOWN)



PLAN VIEW (PLANT ROWS WITH SQUARE SPACING)  
(LATERAL PIPING NOT SHOWN)

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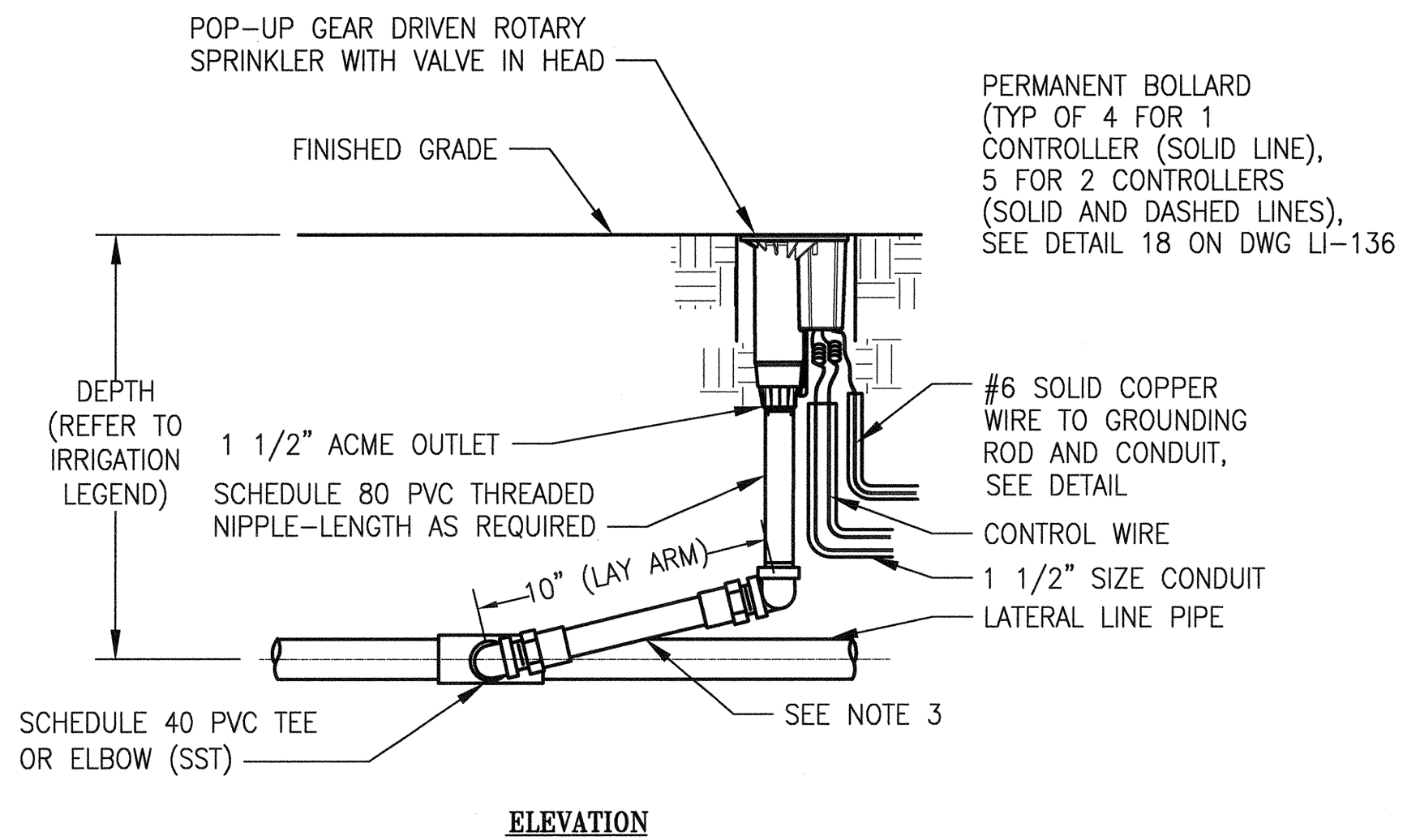
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DIVISION MANAGER: DATE:

SCALE: NONE  
SHEET OF SHEETS

MUNI BUS RAPID TRANSIT SYSTEM  
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT  
LANDSCAPE IRRIGATION SYSTEMS  
NEW WORK - DETAILS VII

JOB ORDER NO. 2106J  
DRAWING NO. LI-138  
FILE NO. 102,656  
REV. NO. 0

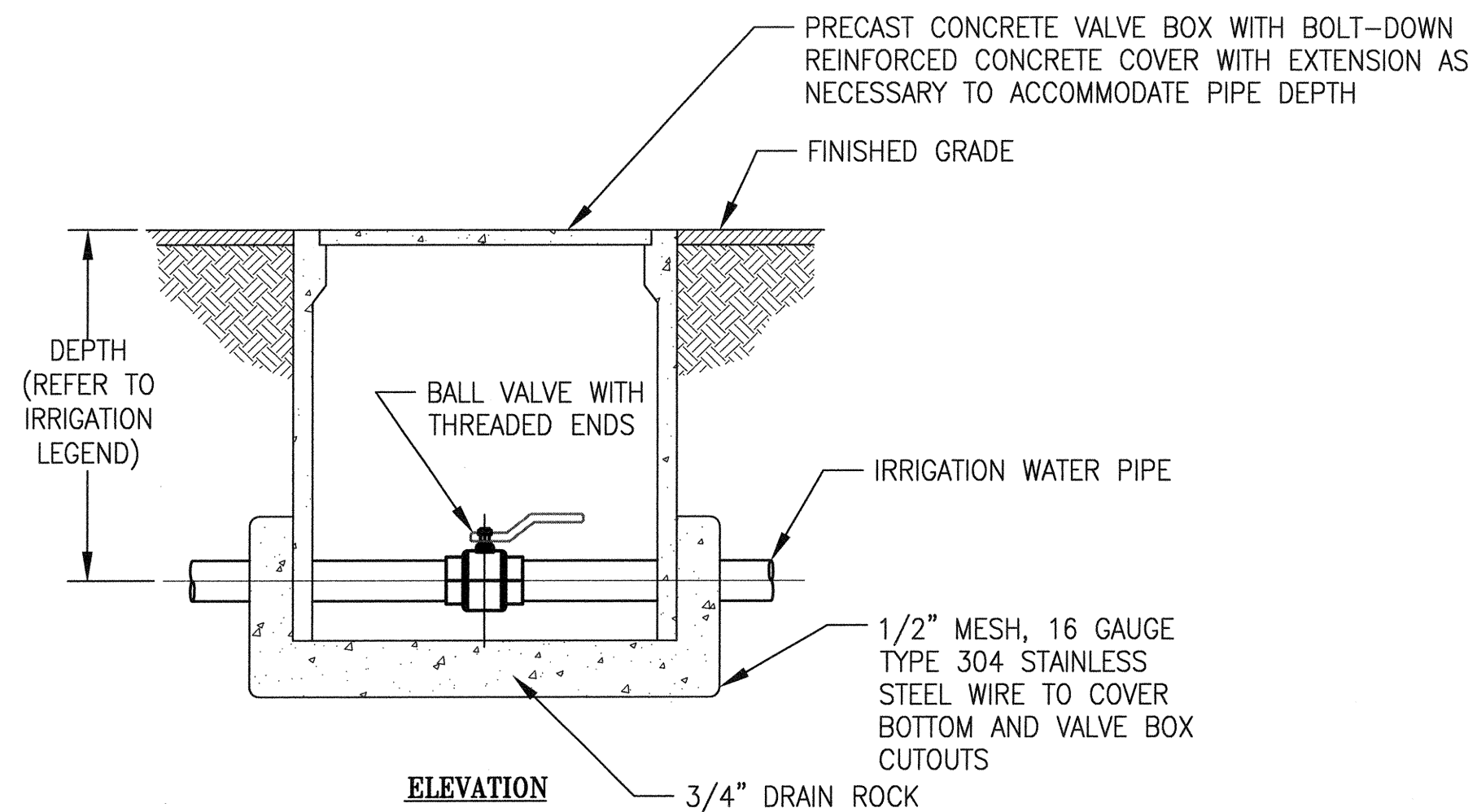
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 Measurement Units are English



**NOTES:**

- UNLESS OTHERWISE NOTED, PIPE AND FITTINGS ARE THE SAME PIPE SIZE AS THE SPRINKLER INLET PIPE SIZE.
- SPRINKLER SHALL BE INSTALLED PERPENDICULAR TO EXISTING GRADE UNLESS FIELD CONDITIONS REQUIRE ADJUSTMENT.
- SWING JOINT ASSEMBLY:  
A. FINGER TIGHTEN O-RING JOINTS AND BACK-OFF ONE FULL TURN TO ALLOW SWING ACTION.  
B. PROVIDE 10 INCHES BETWEEN CENTER LINES OF ELBOWS ON SWING ARM.  
C. FOLLOW APPROVED PROCEDURES FOR SOLVENT WELDING AS PER ASTM D2855-11.  
D. INSTALL THE SWING JOINT LAY ARM AT AN ANGLE BETWEEN 30° AND 45° OF THE LATERAL IN ORDER TO ABSORB DOWNWARD IMPACT.
- CONDUIT SHALL BE SEALED WITH AN APPROVED SEALANT/CAPPED END.

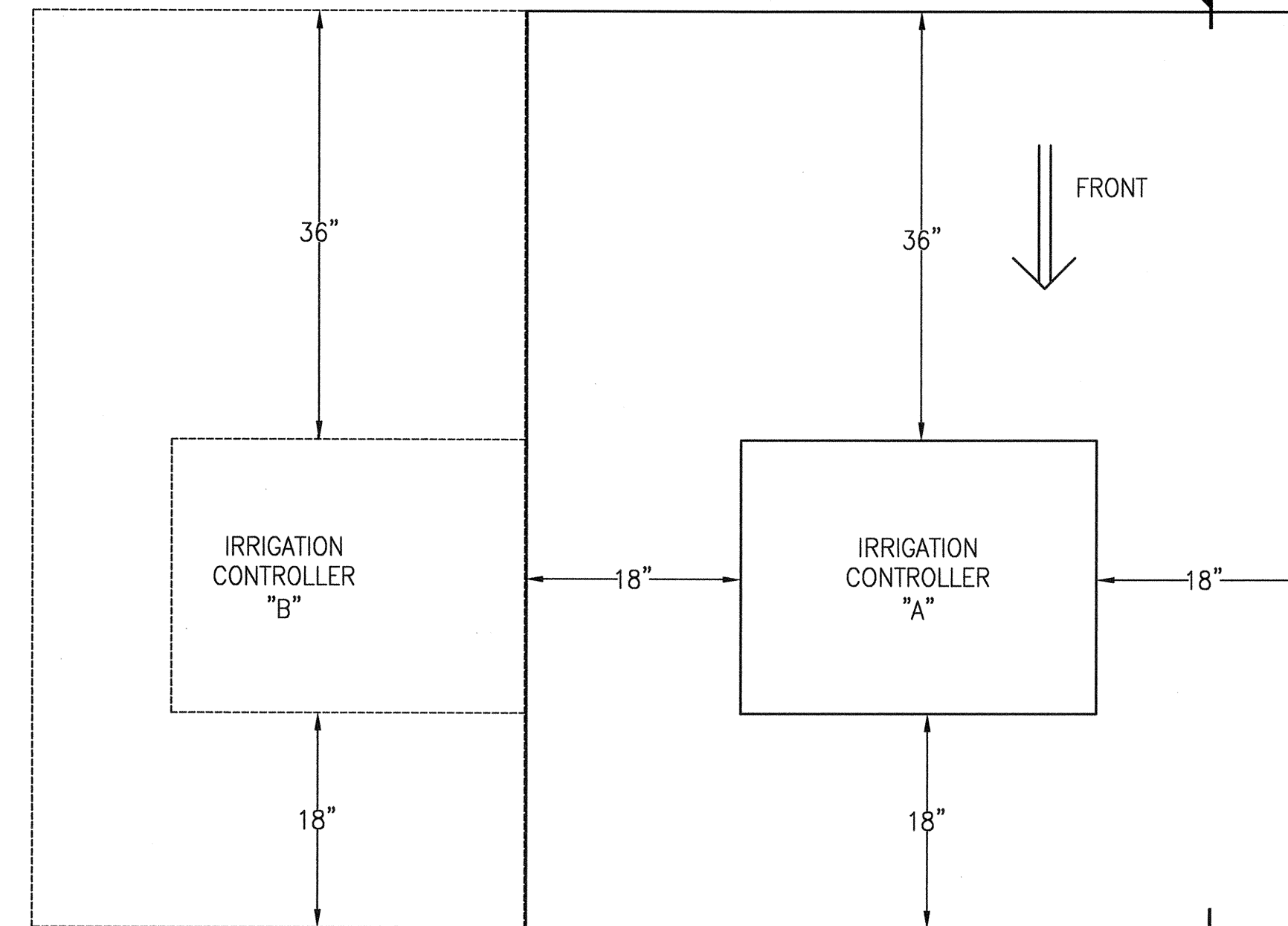
**ROTARY SPRINKLER WITH SOLENOID VALVE IN HEAD DETAIL** (24)



**VALVE BOX WITH BOLT-DOWN REINFORCED CONCRETE COVER** (25)

**NOTES:**

- LID SHALL HAVE CAST IN 1" HIGH LETTERS THE APPROPRIATE WORDING: "IRRIGATION" ON TOP SURFACE, 3/16" ABOVE PARENT SURFACE.
- VALVE BOX AND LID SHALL BE RATED FOR H-20 LOADING.

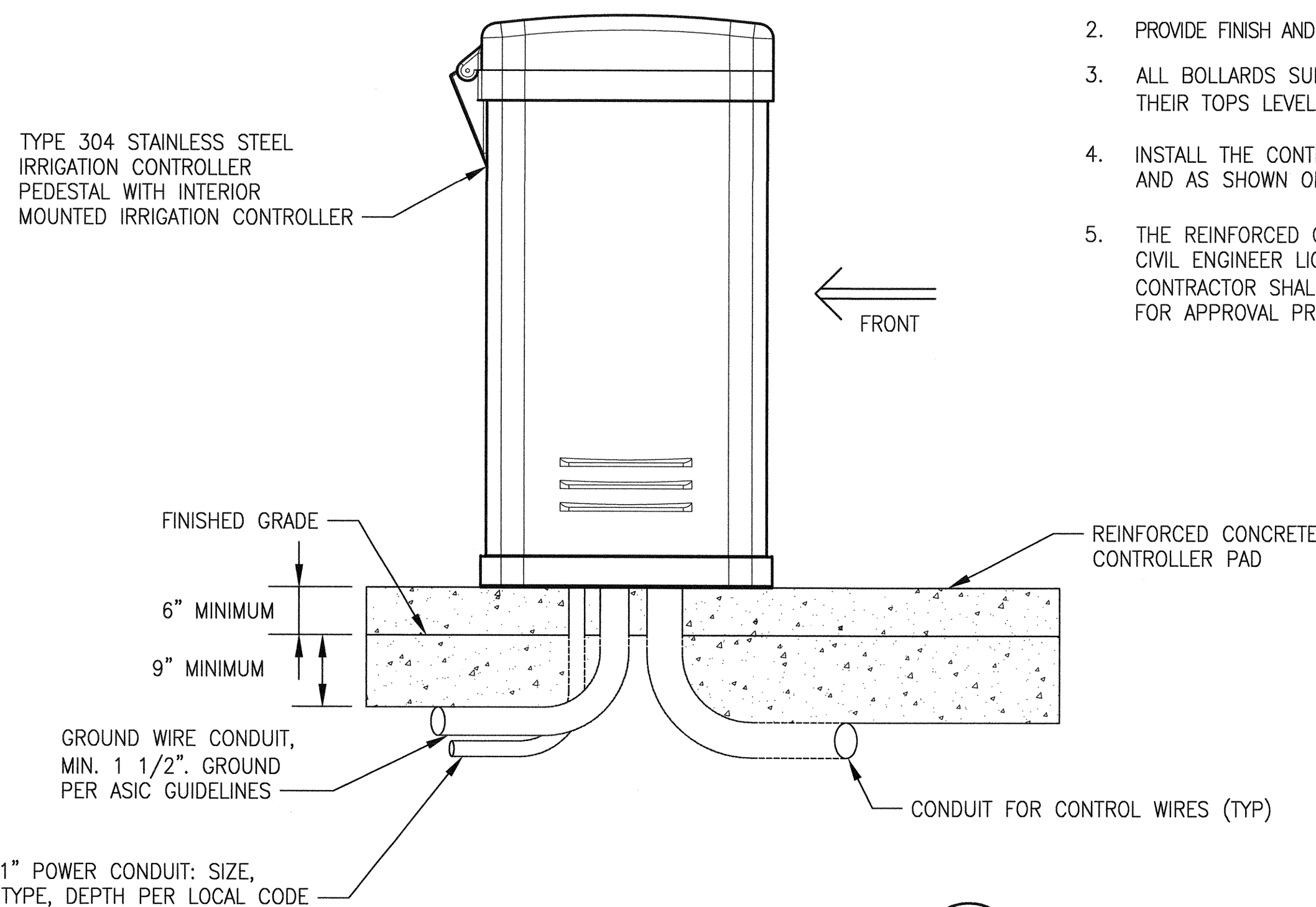


**NOTES:**

- INSTALL SLAB LEVEL AND PROVIDE 1/8" PER FOOT SLOPE TO TOP OF SLAB SURFACE FOR DRAINAGE.
- PROVIDE FINISH AND COLOR TO CONCRETE PER THE CITY REPRESENTATIVE'S APPROVAL.
- ALL BOLLARDS SURROUNDING THE CONTROLLER CONCRETE PAD SHALL HAVE THEIR TOPS LEVEL WITH ADJACENT BOLLARDS WITHIN 1/2".
- INSTALL THE CONTROLLER AS DIRECTED BY THE CONTROLLER MANUFACTURER, AND AS SHOWN ON THE DWGS.
- THE REINFORCED CONCRETE PAD SHALL BE DESIGNED BY THE CONTRACTOR'S CIVIL ENGINEER LICENSED TO PRACTICE IN THE STATE OF CALIFORNIA. THE CONTRACTOR SHALL SUBMIT THE SIGNED (STAMPED) DWGS TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLING THE PAD.

APPLICABLE WHEN TWO (2) IRRIGATION CONTROLLERS ARE SHOWN TO BE INSTALLED

TYPE 304 STAINLESS STEEL IRRIGATION CONTROLLER PEDESTAL WITH INTERIOR MOUNTED IRRIGATION CONTROLLER



**IRRIGATION CONTROLLER "A"** (26)

NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/22/15 14:44, BY: leeno				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE: M SMITH 07/2015  
 DRAWN: DATE: LEE/MV 07/2015  
 CHECKED: DATE: M CHEE 07/2015

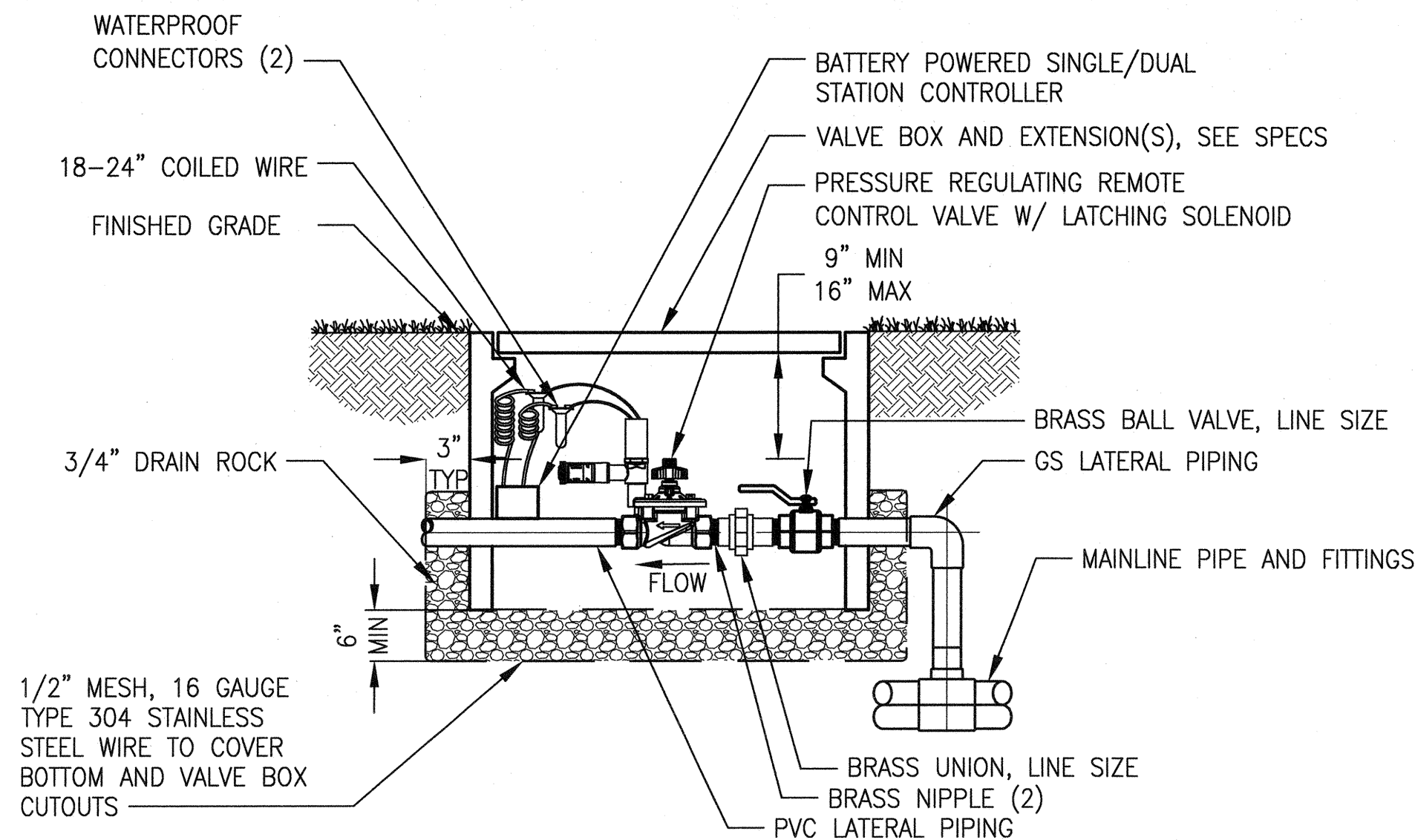
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 SECTION MANAGER  
 DEPUTY DIVISION MANAGER DATE: [Signature] 7/21/15  
 DIVISION MANAGER DATE:

SCALE: NONE  
 SHEET OF SHEETS

**MUNI BUS RAPID TRANSIT SYSTEM**  
**VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT**  
**LANDSCAPE IRRIGATION SYSTEMS**  
**NEW WORK - DETAILS VIII**

JOB ORDER NO. 2106J  
 DRAWING NO. LI-139  
 FILE NO. 102,657  
 REV. NO. 0

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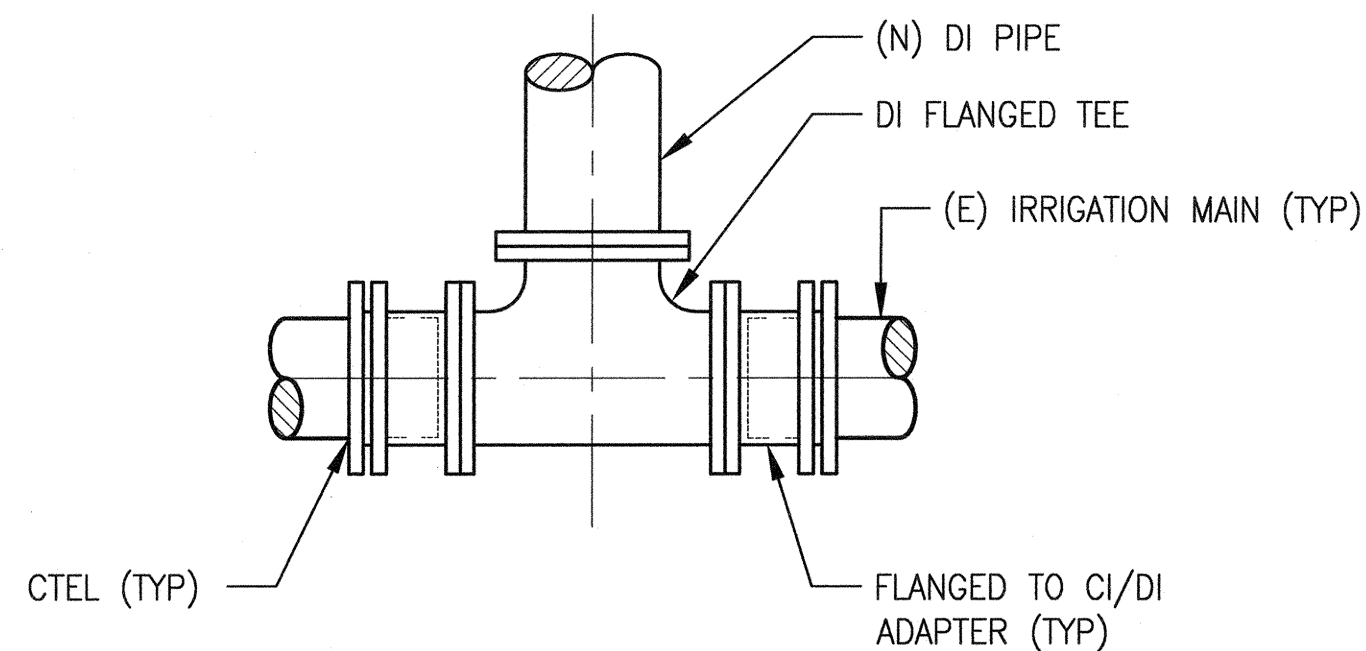


**ELEVATION**  
(FRONT ENCLOSURE NOT SHOWN FOR CLARITY)

**NOTES:**

- COVER FOR IRRIGATION PIPING DOWNSTREAM OF RCV SHALL TRANSITION TO 24".
- EACH IRRIGATION LATERAL SHALL BE CONNECTED SEPARATELY TO THE MAIN LINE WITH A TEE OR SERVICE SADDLE WHERE APPROVED BY THE CITY REPRESENTATIVE OR SHOWN ON THE PLAN DRAWINGS FOR MULTIPLE LATERALS OFF ONE MAIN LINE CONNECTION POINT, THE CONTRACTOR SHALL SIZE ALL UPSTREAM PIPING TO THE MAIN PER THE "SPRINKLER/BUBBLER LATERAL PIPE SIZING" TABLE ON DWG MI-2.3 BASED ON COMBINED TOTAL FLOW RATES FOR ALL LATERALS IN OPERATION AT THE SAME TIME.
- BATTERY POWERED IRRIGATION CONTROLLER SHALL BE MOUNTED TO THE PVC PIPE DOWNSTREAM OF THEIR RCV.
- EACH BATTERY OPERATED CONTROLLER SHALL BE INSTALLED WITH A CONNECTING MOISTURE SENSOR THAT SHALL BE LOCATED 3'± OUTSIDE THE VALVE BOX. SUBMIT SENSOR SPECIFICATION TO THE CITY REPRESENTATIVE FOR APPROVAL PRIOR TO ORDERING.

**REMOTE CONTROL VALVE/BATTERY POWERED CONTROLLER DETAIL** (27)

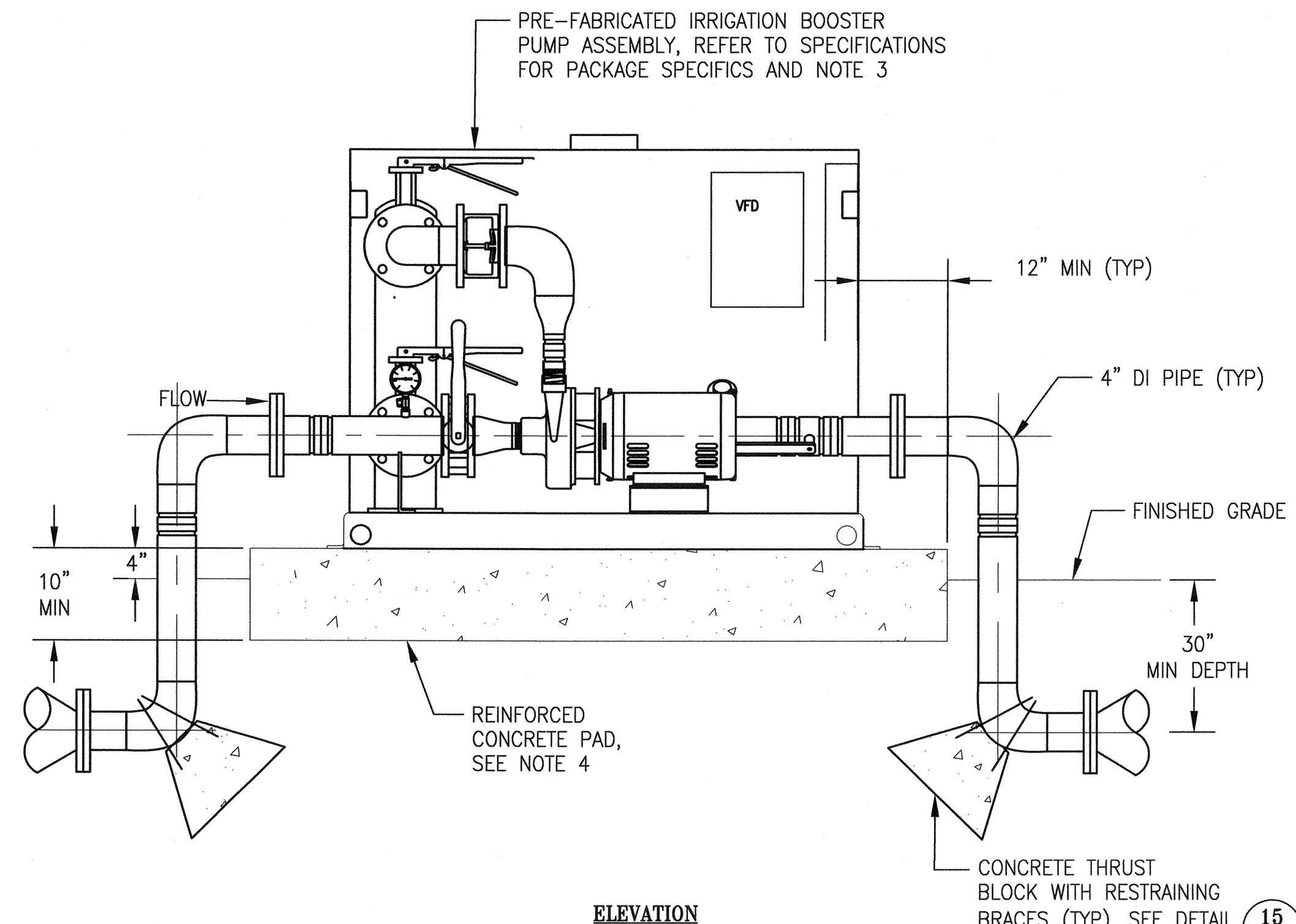


**PLAN**

**NOTES:**

- CUT (E) PIPE PER THE ADAPTER MANUFACTURER'S RECOMMENDATIONS FOR INSTALLING TEE.

**CONNECTION INTO EXISTING PIPING DETAIL** (28)



**ELEVATION**

**NOTES:**

- REFER TO MECHANICAL IRRIGATION PLAN DWGS FOR INSTALLATION LOCATION.
- REFER TO ELECTRICAL DWGS FOR ELECTRICAL POWER SUPPLY WIRING/CONDUIT REQUIREMENTS.
- IRRIGATION BOOSTER PUMP ASSEMBLY SHALL BE A PRE-FABRICATED/TESTED UNIT INCLUDING MOTOR, PUMP, VFD, PIPING AND CONTROLS. THE CONTRACTOR SHALL REFER TO THE MANUFACTURER'S INSTALLATION INSTRUCTION FOR INLET/OUTLET PIPE HEIGHTS, ELECTRICAL CONNECTIONS, ENCLOSURE SIZE AND DIMENSIONS FOR THE REINFORCED CONCRETE PAD'S MINIMUM DIMENSIONS. SUBMIT SHOP DWGS FOR CONCRETE PAD AND GENERAL ARRANGEMENT OF EQUIPMENT AND PIPING FOR APPROVAL OF THE ENGINEER PRIOR TO PROCUREMENT/CONSTRUCTION.
- SUBMIT DWGS OF THE REINFORCED CONCRETE PAD STAMPED/SIGNED BY A CIVIL ENGINEER LICENSED TO PRACTICE IN THE STATE OF CALIFORNIA FOR APPROVAL BY THE ENGINEER.
- FURNISH/INSTALL FLANGED FLEXIBLE PIPES AS RECOMMENDED BY THE MANUFACTURER ON THE INLET/OUTLET PIPES.
- UNIT SHALL HAVE PRESSURE GAUGE ON INLET AND OUTLET PIPING AND BE LOCATED WITHIN THE ENCLOSURE.

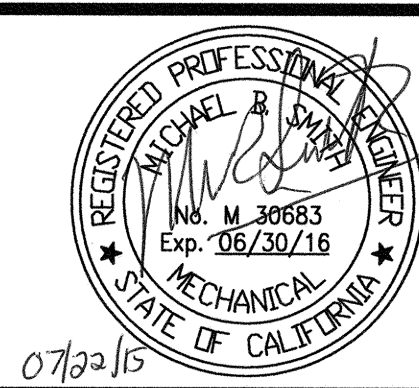
**IRRIGATION BOOSTER PUMP DETAIL** (29)

NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
THIS DRAWING WAS LAST MODIFIED: 07/23/15 11:15, BY: leeno				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**DESIGN AND ENGINEERING**  
**SAN FRANCISCO PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**



DESIGNED: DATE: M SMITH 07/2015  
DRAWN: DATE: MM/AH 07/2015  
CHECKED: DATE: M CHEE 07/2015

APPROVED: DATE: *Mark* JUL 23 2015  
SECTION MANAGER: DATE: *Dianna* 7/29/15  
DEPUTY DIVISION MANAGER: DATE: *Michael Smith* 7/27/15  
DIVISION MANAGER: DATE:

SCALE: NONE  
SHEET OF SHEETS

MUNI BUS RAPID TRANSIT SYSTEM  
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT  
LANDSCAPE IRRIGATION SYSTEMS  
NEW WORK - DETAILS IX

JOB ORDER NO. 2106J  
DRAWING NO. LI-140  
FILE NO. 102,658  
REV. NO. 0

Xrefs: V:\2020V\AlamoSquare\_RestroomAndIrrigation\Project\2\_Design\Working\_Drawings\EME\_Current\BDC\_22234\_TBD\_EME.dwg  
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