

6d FOR #3, #4, #5
12d FOR #6, #7, #8

90° HOOK

HOOK
DETAILING
DIMENSION
A OR G

135° HOOK

d = BAR DIAMETER
D = BEND DIAMETER

DETAILING
DIMENSION
A OR G
90° HOOK
D
12d

DETAILING
DIMENSION
A OR G
180° HOOK
D
4d, 2 1/2" MIN

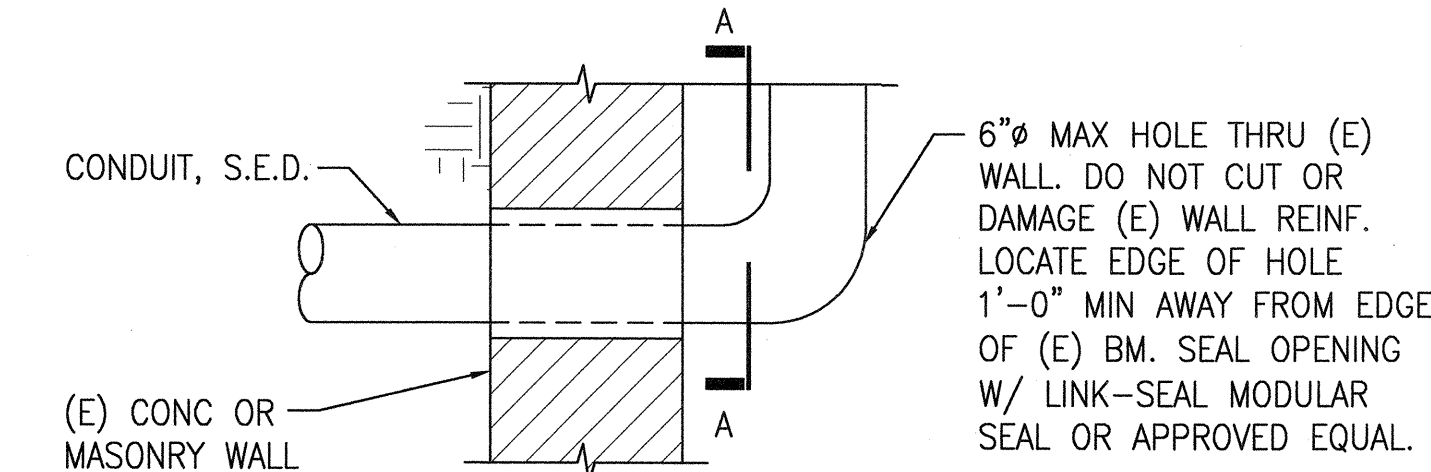
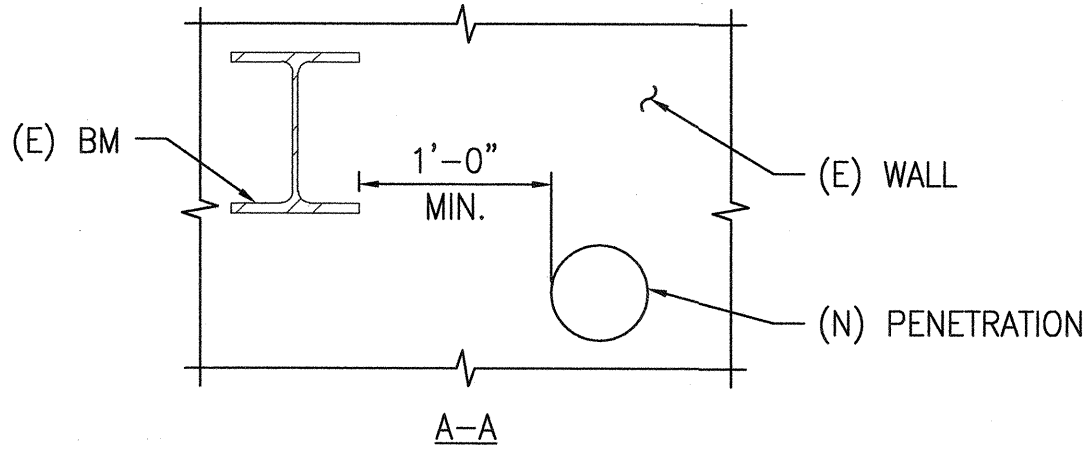
STIRRUP / TIE HOOK				
BAR SIZE	D	90° HOOKS		135° HOOKS
		A OR G	A OR G	APPROX H
#3	1 1/2"	4"	4 1/4"	3"
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	1'-0"	8"	4 1/2"
#7	5 1/4"	1'-2"	9"	5 1/4"
#8	6"	1'-4"	10 1/2"	6"

TYPICAL REINFORCEMENT BAR HOOKS AND BENDS

SCALE: N.T.S.

MAIN REBAR HOOK				
BAR SIZE	D	90° HOOKS		180° HOOKS
		A OR G	J	A OR G
#3	2 1/4"	6"	3"	5"
#4	3"	8"	4"	6"
#5	3 3/4"	10"	5"	7"
#6	4 1/2"	1'-0"	6"	8"
#7	5 1/2"	1'-2"	7"	10"
#8	6"	1'-4"	8"	11"
#9	9 1/2"	1'-7"	11 1/4"	1'-3"
#10	10 3/4"	1'-10"	1'-1 1/4"	1'-5"
#11	1'-0"	2'-0"	1'-2 3/4"	1'-7"
#14	1'-6 1/4"	2'-7"	1'-9 3/4"	2'-3"
#18	2'-0"	3'-5"	2'-4 1/2"	3'-0"

3



(E) WALL PENETRATION DETAIL

SCALE: N.T.S.

4

BAR SIZE	f'c = 3,000 PSI				
	MIN DEVELOPMENT LENGTH		MIN LAP SPlice LENGTH		
	STRAIGHT	HOKED	TOP	OTHER	
#3	1'-10"	1'-5"	0'-9"	2'-4"	1'-10"
#4	2'-5"	1'-10"	0'-11"	3'-1"	2'-5"
#5	3'-0"	2'-4"	1'-2"	3'-11"	3'-0"
#6	3'-7"	2'-9"	1'-5"	4'-8"	3'-7"
#7	5'-3"	4'-0"	1'-8"	6'-9"	5'-3"
#8	6'-0"	4'-7"	1'-10"	7'-9"	6'-0"
#9	6'-9"	5'-2"	2'-1"	8'-9"	6'-9"
#10	7'-6"	5'-10"	2'-4"	9'-10"	7'-6"
#11	8'-5"	6'-6"	2'-7"	10'-11"	8'-5"

1. ALL REINFORCING BARS SHALL BE DEVELOPED OR LAP SPICED AS SHOWN, U.O.N.
2. LAP SPICE LOCATIONS SHALL BE STAGGERED WHENEVER POSSIBLE.
3. TOP BARS ARE HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST BELOW THE LAP SPICE.

DEVELOPMENT LENGTH & LAP SPICE SCHEDULE

SCALE: N.T.S.

2

BAR SIZE	f'c = 4,000 PSI				
	MIN DEVELOPMENT LENGTH		MIN LAP SPlice LENGTH		
	STRAIGHT	HOKED	TOP	OTHER	
#3	1'-7"	1'-3"	0'-8"	2'-0"	1'-7"
#4	2'-1"	1'-7"	0'-10"	2'-8"	2'-1"
#5	2'-7"	2'-0"	1'-0"	3'-5"	2'-7"
#6	3'-1"	2'-5"	1'-3"	4'-1"	3'-1"
#7	4'-6"	3'-6"	1'-5"	5'-11"	4'-8"
#8	5'-2"	4'-0"	1'-7"	6'-9"	5'-2"
#9	5'-10"	4'-6"	1'-10"	7'-7"	5'-10"
#10	6'-7"	5'-1"	2'-1"	8'-6"	6'-7"
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DEVELOPMENT LENGTH & LAP SPICE SCHEDULE

SCALE: N.T.S.

1

NO.	DATE	DESCRIPTION	BY	APP.
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION				

REFERENCE INFORMATION
& FILE NO. OF SURVEYS



DESIGN AND
ENGINEERING DIVISION
PUBLIC WORKS
CITY & COUNTY OF SAN FRANCISCO
30 VAN NESS AVENUE, 5TH FLOOR
SAN FRANCISCO, CA 94102 - 6028

Section Mgr: RAYMOND LUI
Deputy Division Mgr: FERNANDO CISNEROS
Division Mgr: PATRICK RIVERA

Date:

DESIGNED: JN
DRAWN: VY
CHECKED: JS
REVIEWED:
RECOMMENDED:
APPROVED:
DATE:

SCALE:

AS SHOWN

SHEET OF SHEETS

2ND STREET STREETSCAPE
IMPROVEMENTS PROJECT

TYPICAL DETAILS

SPECIFICATION NO.
1064J (R)
DRAWING NO.
S-005
FILE NO.
106,295
REV. NO.