TYPICAL STRINGER, GUARDRAIL AND HAND RAIL DESIGN

FRAMING TYPE
TOP RAIL-POSTS-KNEE RAIL
HSS (SQUARE TUBE)
1-1/2x1-1/2x3/16''
2x2x3/16''
AISC HSS PIPE (ROUND)
1 1/4'' SCHD 40
1 1/2'' SCHD 40

PICKET TYPES
SQUARE TUBING
1/2'' 5/8'' 3/4'' 1''
ROUND TUBING
1/2'' 3/4'' 1''

TREAD TYPES
- CONCRETE PAN  PG 1-1
- DIAMOND TREAD  PG 1-2
- SMOOTH PLATE  PG 1-3
- PRECAST OPEN RISER  PG 1-4
- PRECAST CLOSED RISER  PG 1-5
- BAR GRATING  PG 1-6

HANDRAIL TYPE
PIPE 1-1/2''x.095 WALL (STANDARD)
PIPE 1-1/4'' SCH 40 (EXTRA COST)

Holes : 13/16"Ø u/n
Weld : E70XXELECT
Coating : PER SPECS
Date : 5/22/2014

Project : TYPICAL STRINGER, GUARDRAIL AND HAND RAIL
Project No. : GUARDRAIL WELDED TO STRINGER IN FIELD.
Detailer : MT
Checker : BP
Client :
Drawing No. :
Phase :

Lapeyre Stair
1/4" CLOSURE PL. TYP.

1/4" BOLT PLATE

3/4" KWIK BOLT 4" EMBED MIN.

STAIR FOOTING - TYPICAL DETAIL

TYPICAL STAIR CONNECTIONS

TYPICAL STAIR FOOTING AT SLAB

Project: TYPICAL STAIR CONNEXIONS
Project No.: TYPICAL STAIR FOOTING AT SLAB
Detailer: BP
Checker: VB
Client: Lapeyre Stair

Holes: 13/16"Ø u/n
Weld: E70XXELECT
Coating: PER SPECS
Date: 5/21/2014

Drawing No.: R1
STAIR TO INTERMEDIATE PLATFORM - TYPICAL CONNECTION

BOLTS ARE FOR ALIGNMENT PURPOSES ONLY. STAIR MUST BE WELDED TO PLATFORM AFTER INSTALL.

2x PL 1/4"x3"

1/4" CLOSURE PL. TYP.

STRINGER TO PLATFORM - TYP.

STAIR TO INTERMEDIATE PLATFORM CONN. TYPICAL

Lapeyre Stair
STAIR TO FLOOR LEVEL - TYPICAL CONNECTION

TYPICAL STAIR CONNECTIONS

Project No.: TYPICAL STAIR TO FLOOR LEVEL CONNECTION.

Detailer: BP
Checker: VB
Client:

Holes: 13/16"Ø u/n
Weld: E70XXSELECT
Coating: PER SPECS
Date: 5/20/2014

Drawing No.: R3
** DIAMOND PLATE DECKING ALSO AN OPTION **

---

** LAPEYRE STAIR FOLDED PLATE PLATFORM DESIGN **

---

** SECTION A REF. R4 **

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<table>
<thead>
<tr>
<th>Project</th>
<th>SECTION A CONC. FILLED METAL PAN LANDING</th>
</tr>
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<tbody>
<tr>
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<tr>
<td>Detailer</td>
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<td>VB</td>
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<tr>
<td>Client</td>
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SECTION B REF. R4

** DIAMOND PLATE LANDING ALSO AN OPTION **
** DIAMOND PLATE LANDING ALSO AN OPTION **
** DIAMOND PLATE DECKING ALSO AN OPTION **

TYPICAL LANDING PLAN VIEW

METAL PAN LANDING

Project No. : TYPICAL CONCRETE FILLED METAL PAN LANDING - PLAN VIEW

<table>
<thead>
<tr>
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<td>VB</td>
<td>Lapeyre Stair</td>
<td></td>
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Holes : 13/16"Ø u/n
Weld : E70XXELECT
Coating : PER SPECS
Date : 5/20/2014

Drawing No. : R4
Phase : 0
GUARD/ HANDRAIL DETAIL AT END CONNECTION

Project: SQUARE TUBE RAILING END CONDITION
Project No.: SQUARE TUBE RAILING AT FLOOR CONDITION

Details:
- HSS 1 1/2X1 1/2X3/16
- Pipe 1 1/2X.095
- 1/4" CLOSURE PL. TYP.
- PL 1/4"X3"
- RB 1/2
- 11" TYP.
- 12" TYP.

Specifications:
- Holes: 13/16"Ø u/n
- Weld: E70XXELECT
- Coating: SEE SPECS
- Date: 5/20/2014
- Client: Lapeyre Stair
- Drawing No.: R5
- Phase: 0
**SECTION A/R6.1 TYPICAL TRANSITION GUARD/HAND RAIL**

- **HSS 1 1/2X1 1/2X3/16**
- **RB 1/2**
- **4" MAX**
- **KICK PLATE**

**SQUARE TUBE GUARDRAIL**

<table>
<thead>
<tr>
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<th>SQUARE TUBE GUARDRAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project No.</td>
<td>TRANSITION GUARD TYPICAL VIEW</td>
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- **Holes**: 13/16"Ø u/n
- **Weld**: E70XXELECT
- **Coating**: PER SPECS
- **Date**: 5/20/2014
- **Phase**: 0
**Project**: GUARD/ HAND RAIL SIDE VIEW

**Project No.**: GUARD/ HANDRAIL VIEW INTERMEDIATE PLATFORM

**Detailer**: BP  
**Checker**: VB  
**Client**: Lapeyre Stair  
**Drawing No.**: R6  
**Drawing Date**: 5/20/2014

**HSS 1 1/2X1 1/2X3/16**

**Pipe 1 1/2X.095**

**RB 1/2**

**1/4" CLOSURE PL. TYP.**

**GUARD RAIL TO STRINGER**

2 ½” TYP.

2'-10” TYP.

20200715

Guards/Handrail Transition Detail

2@9° 1/16"
PLAN VIEW - HANDRAIL AT TOP OF STAIRWELL

Project: HANDRAIL END CONDITION
Project No.: HANDRAIL ENDING AT TOP OF STAIRWELL TYPICAL
Detailer: BP
Checker: VB
Client: Lapeyre Stair
Holes: 13/16"Ø u/n
Weld: E70XXELECT
Coating: PER SPEC
Date: 5/20/2014
Phase: R7
GUARD/ HANDRAIL DETAIL AT END CONNECTION

Project: SCHEDULE 40 RAILING END CONDITION
Project No.: SCHEDULE 40 RAILING AT FLOOR CONDITION
Checker: VB
Client: Lapeyre Stair
Detailer: BP
Holes: 13/16"Ø u/n
Weld: E70XXELECT
Coating: SEE SPECS
Date: 5/20/2014

1 1/4 Pipe SCH 40

Pipe 1 1/2X.095

PL 3/8"x3"

2" @ 5°
1 1/12 TUBE STEEL GUARDRAIL WITH 12X1/4 FLAT PLATE STRINGER

GUARD/ HANDRAIL DETAIL WITH FLAT PLATE STRINGER

HSS 1 1/2X1 1/2X3/16

Pipe 1 1/2X.095

PL 1/4"x3"

11" TYP.

12" TYP.

1 1/2"

1/4
GUARD/ HANDRAIL TRANSITION DETAIL
WITH FLAT PLATE STRINGER

HSS 1 1/2X1 1/2X3/16

Pipe 1 1/2X.095

Pipe 1 1/2X.095

GUARD/HANDRAIL VIEW INTERMEDIATE PLATFORM

GUARD/HANDRAIL SIDE VIEW-FLT PLT STRINGER

Project: GUARD/HANDRAIL VIEW INTERMEDIATE PLATFORM
Project No.: GUARD/HANDRAIL VIEW-FLT PLT STRINGER
Detailer: BP
Checker: VB
Client: Lapeyre Stair
Holes: 13/16"Ø u/n
Weld: E70XXELECT
Coating: PER SPECS
Date: 5/20/2014
Drawing No.: R10
1 1/12 TUBE STEEL GUARDRAIL
WITH 12X1/4 FLAT PLATE STRINGER

SECTION AT TYPICAL TRANSITION GUARD/HAND RAIL
WITH FLAT PLATE STRINGER

Project : SQ. TUBE GUARDRAIL WITH FLT PLT STRINGER
Project No. : TRANSITION GUARD TYPICAL VIEW
Checker: VB
Details : BP
Weld : E70XXELECT
Coating : PER SPECS
Date : 5/20/2014
Client : PER SPECS
Drawing No. : R11
STAIR TREAD STYLES

- **CONCRETE FILLED TREADS  PG 1-1**
  - Requires field finish poured in place concrete fill (by others)
  - Immediate use of stairs obtainable if wood fillers are used (wood fillers furnished and installed by others)

- **CHECKER/DIAMOND PATTERN TREADS  PG 1-2**
  - No field finish required, provides immediate use of stairs
  - Raised diamond pattern provides slip and wear resistant finish

- **SMOOTH PLATE TREADS  PG 1-3**
  - Provides immediate use of stairs - not slip resistant until coated
  - Useful for carpeted or rubber coated stair designs.
  - Carpet or rubber coating provided/installed by others.

- **DROP IN PRECAST TREADS  PGS 1-4 1-5**
  - Provides immediate use of stairs
  - Precast treads of various design can be used (provide model number of tread before design begins)
  - Can have a closed or open riser system

- **BAR GRATING TREADS  PG 1-6**
  - No field finish required, provides immediate use of stairs
  - Serrated face provides slip resistant finish
  - Can be bolted in field or shipped pre-bolted/welded
NOTE: NO WIRE MESH REQUIRED IN POURED CONCRETE PAN IF CONCRETE HAS A MINIMUM DESIGN STRENGTH OF 4000 PSI.

IF WIRE MESH REQUIRED IT IS TO BE FURNISHED AND INSTALLED BY OTHERS.

NOTE: NO PROVISIONS HAVE BEEN MADE IN ANY LAPEYRE STAIR TREADS FOR ANY LOOSE FIELD POURED TYPE NOSINGS (FURNISHED AND INSTALLED BY OTHERS). IF SUCH PROVISIONS ARE REQUIRED IT WILL BE THE RESPONSIBILITY OF OTHERS TO PROVIDE LAPEYRE STAIR WITH THE PROPER INFORMATION IN ADEQUATE TIME TO MAKE THESE PROVISIONS.
NOTE: IF APPLICABLE SOME TREADS OR RISER PLATES MAY BE SHIPPED LOOSE TO ALLOW FOR FIELD WELDING OF STRINGER TO STEEL PLATFORM OR EMBEDDED STEEL AT FLOOR LEVEL LANDINGS. THEY MUST BE FIELD WELDED WITH $\frac{1}{8}$" WELDS SIMILAR TO DETAIL WELDS BELOW.
NOTE: IF APPLICABLE SOME TREADS OR RISER PLATES MAY BE SHIPPED LOOSE TO ALLOW FOR FIELD WELDING OF STRINGER TO STEEL PLATFORM OR EMBEDDED STEEL AT FLOOR LEVEL LANDINGS. THEY MUST BE FIELD WELDED WITH 1/8" WELDS SIMILAR TO DETAIL WELDS BELOW.

NOTE: RUBBER OR CARPET COATING TO BE FURNISHED AND INSTALLED BY OTHERS.
NOTE: IF APPLICABLE SOME TREADS OR RISER PLATES MAY BE SHIPPED LOOSE TO ALLOW FOR FIELD WELDING OF STRINGER TO STEEL PLATFORM OR EMBEDDED STEEL AT FLOOR LEVEL LANDINGS. THEY MUST BE FIELD WELDED WITH 1/8" WELDS SIMILAR TO DETAIL WELDS BELOW.
NOTE: IF APPLICABLE SOME TREADS OR RISER PLATES MAY BE SHIPPED LOOSE TO ALLOW FOR FIELD WELDING OF STRINGER TO STEEL PLATFORM OR EMBEDDED STEEL AT FLOOR LEVEL LANDINGS. THEY MUST BE FIELD WELDED WITH 1/8" WELDS SIMILAR TO DETAIL WELDS BELOW.
Project: BAR GRATING WITH RISER PLATE
Project No.: TYP. BOLTED BAR GRATING TREAD

Detailer: BP
Checker: VB

Holes: NA
Weld: E70XXELECT
Coating: PER SPECS

Date: 5/19/2014
Client: Lapeyre Stair

Phase: 0

Drawing No.: 1-6
GUARDRAIL STYLES

- SQUARE TUBE PICKET INFILL  PG 2-1
- SQUARE TUBE MULTIPLE LINE  PG 2-2
- SQUARE TUBE MESH INFILL  PG 2-3
- PIPE GUARDRAILS PICKET INFILL  PG 2-4
- PIPE GUARDRAILS MULTIPLE LINE  PG 2-5
- PIPE GUARDRAIL MESH INFILL  PG 2-6
Project: 1 1/2 SQUARE TUBE - PICKET INFILL
Project No.: VARIOUS PICKETS CAN BE USED - TYPICAL DESIGN

Detailer: BP  Checker: VB

Holes: 13/16" u/n  Weld: E70XXELECT
Coating: PER SPECS  Date: 4/4/2014

Client:

Phase: 0
HSS 1 1/2X1 1/2X3/16

LINE OF STRINGER
WELDED WIRE MESH WIRE 2"
CENTER .135 Ø CARBON STEEL

SECTION A-A

1 1/2 SQUARE TUBE - WIRE MESH INFILL PANEL

2"x2"x3/16" (#6 Ga.) WIRE MESH - 1" U CHANNEL FRAME

HSS 1 1/2X1 1/2X3/16

LINE OF STRINGER

Lapeyre Stair

0
1 1/4 Pipe SCH 40

LINE OF STRINGER

Project: PIPE GUARDRAIL - PICKET INFILL
Project No.: VARIOUS PICKETS CAN BE USED - TYPICAL DESIGN

Detailer: BP  Checker: VB
Holes: 13/16" Ø u/n  Weld: E70XXELECT  Coating: PER SPECS
Client: Lapeyre Stair  Date: 4/4/2014

Drawing No.: 2-4  Phase: 0
Project: PIPE GUARDRAIL - MULTIPLE LINE
Project No.: 7 LINE GUARDRAIL SHOWN

Detailer: BP
Checker: VB
Client: Lapeyre Stair

Holes: 13/16"Ø u/n
Weld: E70XXELECT
Coating: PER SPECS
Date: 4/4/2014

Drawing No.: 2-5
Phase: 0
WELDED WIRE MESH WIRE 2"
CENTER .135 Ø CARBON STEEL

SECTION A-A

1 1/4 Pipe SCH 40

2"x2"x3/16" (#6)
WIRE MESH WITH
1" U CHANNEL FRAME

PIECE WELDED TO
RAIL FRAME ALONG
THIS EDGE

LINE OF STRINGER

2-6

Project: PIPE GUARDRAIL - WIRE MESH INFILL PANEL
Project No.: 2"x2"x3/16" (#6 Ga.) WIRE MESH - 1" U CHANNEL FRAME
Detailer: BP
Checker: VB
Client: Lapeyre Stair
Holes: 13/16"Ø u/n
Weld: E70XXELECT
Coating: PER SPECS
Date: 4/4/2014

Drawing No.: 2-6
Phase: 0
LANDING SUPPORT SYSTEMS

- SQUARE TUBE COLUMNS  
  WELDED OR BOLTED TO PLATFORM. CAN BE USED UNDER PLATFORM OR ON THE SIDES.  
  PG 3-1

- SHELF ANGLES  
  ANCHORED TO CONCRETE WALLS USING EXPANSION ANCHORS  
  PG 3-2

- HANGER SYSTEM  
  THREADED RODS/SQUARE TUBE OR PIPE: ANCHORED OR WELDED TO STEEL OR CONCRETE ABOVE.  
  PG 3-3
SLQ. TUBE GUARDRAIL WITH FLT PLT STRINGER
Project No.: TRANSITION GUARD  TYPICAL VIEW

TYPICAL COLUMN DETAIL WITH BASE PLATES

---

**Details:**
- **Holes:** 13/16"Ø u/n
- **Weld:** E70XXELECT
- **Coating:** PER SPECS
- **Date:** 4/2/2014
- **Phase:** 3-1

---
 CONDITIONS FOR ANGLE SUPPORTS:
SOLID CONCRETE WALLS
FILLED CONCRETE BLOCK WALLS

ISO AT UNDERSIDE OF LANDING

LANDING WITH ANGLE SUPPORTS

Project No.: ANGLE SUPPORT DETAIL

<table>
<thead>
<tr>
<th>Detailer: BP</th>
<th>Checker: VB</th>
<th>Client: Lapeyre Stair</th>
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NOT: ALL STEEL WILL BE SIZED TO MEET LOAD REQUIREMENTS

TYP. HANGER ROD DETAIL

TYP. HANGER COLUMN DETAIL

HANGER SUPPORT DETAILS

1 M 3/4"x5" ALL THREAD ROD (2) DOUBLE ADJUSTMENT NUTS

NOTE:

All steel will be sized to meet load requirements.