GENERAL STRUCTURAL NOTES:

I. REINFORCING STEEL

1. REINFORCING TO CONFORM TO THE FOLLOWING, UNLESS OTHERWISE NOTED:

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>REINFORCING STEEL</th>
<th>TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>#7 AND SMALLER</td>
<td>ASTM A615, 60 KSI</td>
<td></td>
</tr>
<tr>
<td>#6 AND LARGER</td>
<td>ASTM A706, 60 KSI</td>
<td></td>
</tr>
</tbody>
</table>

2. MECHANICAL COUPLERS: LENTON THREADED OR INTERLOCK COUPLERS BY ERICO, ICBO #3967, CADWELD BY ERICO, ICBO #3967, OR KENDER BY HEADED REINFORCEMENT CORPORATION, ICBO #5509. COUPLERS FOR BEAM AND SLAB BARS AT FORMED CONSTRUCTION JOINTS MAY BE LENTON FORM SAVERS BY ERICO, ICBO #3967.

3. WELD REINFORCING STEEL IN ACCORDANCE WITH AWS D1.4 USING QUALIFIED WELDERS.

4. TERMINATE REINFORCING STEEL IN STANDARD HOOKS, UNLESS OTHERWISE SHOWN.

5. PROVIDE REINFORCING SHOWN OR NOTED CONTINUOUS IN LENGTHS AS LONG AS PRACTICABLE.

II. CAST-IN-PLACE CONCRETE

1. CONCRETE IS REINFORCED AND CAST-IN-PLACE UNLESS OTHERWISE NOTED. WHERE REINFORCING IS NOT SPECIFICALLY SHOWN OR WHERE DETAILS ARE NOT GIVEN, PROVIDE REINFORCING SIMILAR TO THAT SHOWN FOR SIMILAR CONDITIONS, SUBJECT TO REVIEW BY THE OWNER’S REPRESENTATIVE.

2. ROUGHEN CONCRETE SURFACES OF CONSTRUCTION JOINTS TO 1/4 INCH AMPLITUDE AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES. LOCATE CONSTRUCTION JOINTS AS SHOWN ON THE DRAWINGS. SUBMIT ALTERNATE JOINT LOCATIONS OR JOINTS NOT SHOWN TO THE OWNER’S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO PROCEEDING WITH THE WORK.

3. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS OF ADDITIONAL CONCRETE CURBS AND HOUSEKEEPING PADS NOT SHOWN.

4. CONCRETE TYPE: NORMAL WEIGHT, 28-DAY STRENGTH = 6000 PSI AT ALL LOCATIONS.

III. STRUCTURAL STEEL

1. STRUCTURAL STEEL TO CONFORM TO THE FOLLOWING, UNLESS OTHERWISE NOTED:

<table>
<thead>
<tr>
<th>SECTIONS</th>
<th>TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROLLED SHAPES</td>
<td>ASTM A992</td>
</tr>
<tr>
<td>WIDE FLANGES</td>
<td>ASTM A36</td>
</tr>
<tr>
<td>CHANNELS, ANGLES, &amp; OTHER SHAPES</td>
<td>ASTM A53 GRADE B</td>
</tr>
<tr>
<td>STEEL PIPE</td>
<td>ASTM A53 GRADE B</td>
</tr>
<tr>
<td>COLD FORMED HOLLOW STRUCTURAL SECTION (HSS)</td>
<td>ASTM A490 GRADE B</td>
</tr>
</tbody>
</table>

IV. METAL DECKING

1. ALL FLOOR AND ROOF DECK TO BE GALVANIZED IN ACCORDANCE WITH ASTM A653 COATING CLASS G90. REPAIR DAMAGED COATING.

2. WHERE POSSIBLE, LAY OUT METAL DECK TO SPAN AT LEAST THREE SPANS CONTINUOUSLY. TERMINATE ENDS OVER SUPPORTS EXCEPT AT OPENINGS OR BUILDING EDGES WHERE METAL DECKS MAY BE CANTILEVERED AS SHOWN.

V. UNIT MASONRY

1. MINIMUM COMPRESSIVE STRENGTH OF MASONRY, Fm, EQUAL TO 1500 PSI AT 28 DAYS.

2. MASONRY UNITS: 1" NOMINAL THICKNESS ASTM C-90, GRADE N, TYPE 1, NORMAL WEIGHT, HOLLOW, LOAD BEARING UNITS.

3. MINIMUM COMPRESSIVE STRENGTH: 1900 PSI.

4. FILL ALL CELLS SOLIDLY WITH GROUT. CLEAN CELLS AND BOND BEANS OF MORTAR PROTRUSIONS AND DEBRIS BEFORE GROUTING.

5. PROVIDE VERTICAL CONTROL JOINTS IN THE WALLS AT LOCATIONS SHOWN ON THE DRAWINGS.

VI. MECHANICAL ANCHORS

1. EXPANSION OR WEDGE ANCHORS INTO CONCRETE: KWK BOLT T3 BY HLTI (ICC #ESR-1917), U.O.N. IN THE DRAWINGS. INSTALL ANCHORS IN ACCORDANCE WITH ICC REPORT.

2. ANCHORS INTO GROUT-FILLED CONCRETE MASONRY: KWK BOLT 3 BY HLTI (ICC #ESR-1385), INSTALL ANCHORS IN ACCORDANCE WITH ICC REPORT.

VII. ADHESIVE ANCHORS AND DOWELS

1. ANCHORS AND DOWELS INSTALLED INTO CONCRETE: HIT RE-500-5D BY HLTI (ICC #ESR-2322).

2. ANCHORS INSTALLED INTO GROUT-FILLED MASONRY UNITS: HIT HY 150 MAX BY HLTI (ICC ESR-1967) OR EPOXY-TIE SET BY SIMPSON STRONG-TIE (ICC #ESR-0279).

**COLUMN FOOTINGS: 125#/CY REINF., TYP.**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>PLAN DIMENSIONS</th>
<th>THICKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4' x 4'</td>
<td>18'</td>
</tr>
<tr>
<td>5</td>
<td>5' x 5'</td>
<td>20'</td>
</tr>
<tr>
<td>6</td>
<td>6' x 6'</td>
<td>24'</td>
</tr>
<tr>
<td>7</td>
<td>7' x 7'</td>
<td>30'</td>
</tr>
<tr>
<td>11</td>
<td>11' x 11'</td>
<td>30'</td>
</tr>
<tr>
<td>14</td>
<td>14' x 14'</td>
<td>36'</td>
</tr>
</tbody>
</table>

**FOOTING SCHEDULE**

1/2" = 1'-0"

**BASEMENT WALL @ TUNNEL**

1/8" = 1'-0"

**GRID**

COLUMN BEYOND

6" @ GRID B
10" @ GRIDS C.D. & E

NOTE: BEAMS CONTAIN 340#/CY REINF.

**BEAMS ALONG LETTERED GRIDS**

1 1/2" = 1'-0"

**DETAIL**

1/8" = 1'-0"

**COLUMN, REF. PLAN**

S.O.G.

1ST FLOOR = 0'-0"

(VARIES, REF. PLAN)

REINFORCED CONCRETE TRANSFER GIRDER, 4'-6" DEEP x 2'-6" WIDE W/ 400#/CU.YD. REINF.

30" @ COLUMN

BOT. OF FOOTING EL.: 419'-20"

TUNNEL CEILING VARIES EL.: 428'-26" REF. SURVEY

**LEVEL 1 - FIRST FLOOR**

EL.: 0'-0" (434'-74"

NOTE: VERIFY ALL DIMENSIONS AND ELEVATIONS AND LOCATIONS IN FIELD.

**LEVEL 6 - MECHANICAL**

EL.: -19'-8" (415'-56"

CONTRACTOR TO PROVIDE SHORING AT UNDER PINNING OF TUNNEL

HDR Architecture, Inc. / THA Architecture, Inc.
HDR | 1001 SW 5th Avenue | Suite 1900 | Portland, Oregon 97204 | 503.423.3600
THA | 733 SW Oak Street | Suite 100 | Portland, Oregon 97205 | 503.227.1204

UO LISB
Lewis Integrative Science Building
Preliminary Schematic Design
August 20, 2009

DETAILS
S-501