

715 SW MORRISON ST DEF S-01 FA11-103548

DFS 01 FA 11-103.548

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CITY OF PORTLAND, OREGON - BUREAU OF DEVELOPMENT SERVICES

1900 SW Fourth Avenue, Suite 5000 Portland, Oregon 97201 • www.portlandonline.com/bds • Fax 503-823-7425



Facility Permit Plan Intake Form

FOR INTAKE, STAFF USE ONLY

Date Received _____	Building/Mechanical _____ <i>Over</i>
Building Registration # _____	Electrical _____
Fixed Bid _____	Plumbing _____
Bin # <i>B2</i>	Fire _____
Building Permit # <i>11-103548-01</i>	Planning _____
Mechanical # _____	BES _____
Plumbing Permit # _____	PDOT _____
Electrical Permit # _____	Structural _____ <i>Fire</i>
	Other _____

APPLICANT: Complete all sections below that apply to the project. Please print legibly.

Print Name *Gleann Whitefield* Sign Name *Gleann Whitefield*

Street Address *600 SW 10th Ave, Suite 310*

City *Portland* State *OR* Zip Code *97205*

Day Phone *503-743-5558* FAX *503-223-2874* email *gleann.whitefield@leawebuilds.com*

Plans / permits available for pick up at 1900 SW 4th Avenue, 2nd floor between 8:00 am to 5:00 pm

Contact Name for plan/permit pick up *Gleann Whitefield*

Day Phone *503-743-5558* email *gleann.whitefield@leawebuilds.com*

Project Building Name / # _____

Project Address or Location *509 SW Harrison*

Project Name and Description *Reinforce existing concrete beam floor over stairs*

Total Project Value *\$150,000* Project Reference #/Billing ID # _____

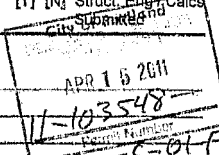
Building Contractor *Lease Center Lewis* CCB # *52919*

Mechanical Contractor _____ CCB # _____

Electrical Contractor _____ CCB # _____ License # _____

Plumbing Contractor _____ CCB # _____ License # _____

☐ Building Permit	☐ [Y] [N] Alarms Required	☐ Electrical Permit
No. of Stories _____	☐ [Y] [N] Smoke Det. Req'd	Please provide a completed standard electrical permit application form. You may mail or deliver it to 1900 SW 4th Avenue, Portland, Oregon or FAX to 503-823-7425.
Const. Type _____	☐ [Y] [N] Sprinklers Req'd	
	☐ [Y] [N] Struct. Eng. / Calcs	☐ Plumbing Permit
	<i>Submitted</i>	Number of Fixtures _____
☐ Mechanical Permit		Back Flow Devices _____
Mechanical Valuation _____		Water Service (# of Feet) _____
Description _____		Medical Gas _____
		Other _____



MICRO

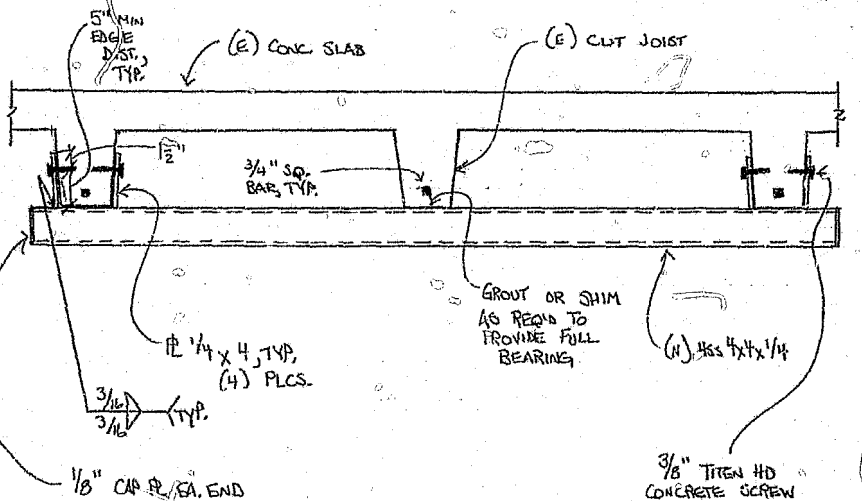
11-103548-01-FA

kpi

Consulting Engineers

Portland, Oregon

Project	PIONEER PARK	EC AC	Sheet No.
Location	PDX	Date	3/10/11
Client	LCL	Revised	Job No.
		Date	



Note: Protect steel
with 2 mil. protection.

Weld 3/2 P/11

JOIST HEADER DETAIL



Consulting Engineers

March 29, 2011

Mr. Glenn Whitfield
Lease Crutcher Lewis
600 SW 10th Avenue, Suite 310
Portland, OR 97205

RE: Pioneer Park - Joist Header

Dear Glenn:

Attached please find calculation sheets 1 through 9, dated March 10, 2011, which verify the structural adequacy of the joist header detail, as shown on drawing SK-1, dated March 10, 2011. Design is based on the requirements of the 2010 Oregon Structural Specialty Code, based on the 2009 International Building Code.

If you have any questions or need further information, please call me.

Sincerely,

Andi Camp

Andi Camp, P.E.

Attachments



EXPIRES: 12-31-2012

[\\LJL21100-calc-9-29-11.docx]

11 SW Fifth Avenue, Suite 2500 Portland, Oregon 97204-3028 (503) 227-3251 Fax (503) 227-7980

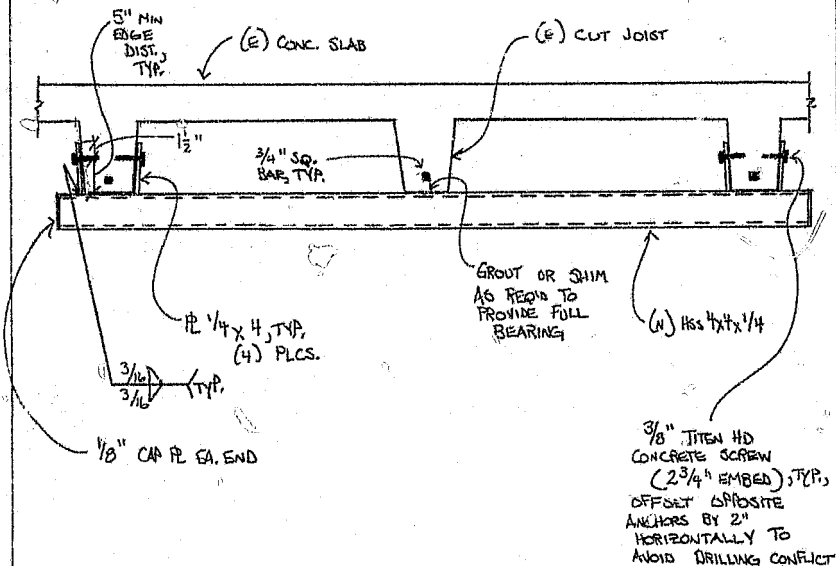
Seattle Tacoma Portland Eugene San Francisco Sacramento Los Angeles Irvine San Diego Phoenix Denver St. Louis New York

kplf

Consulting Engineers

Portland, Oregon

Project	PIONEER PARK	By	AC	Sheet No.
Location	PDX	Date	3/10/11	
Client	LCL	Revised		JOB NO.
		Date		



SK-1

JOIST HEADER DETAIL



Consulting Engineers

Portland, Oregon

Project

PIONEER PARK

Location

PDX

Client

LCL

By

AC

Date

3/10/11

Revised

Date

Sheet No.

1

Job No.

(E) JOIST CAPACITY

$$a = A_s f_y = .5625 \text{ in}^2 = .40 \text{ ksi}$$

$$\frac{.85 f'_c b}{.85 (2.5 \text{ ksi}) (41.75)} = .25 \text{ in}$$

$$\phi M_n = .9 \cdot 40 \text{ ksi} \left(9.5 \text{ in} - \frac{.25}{2} \right) = 837.5 \text{ k-in}$$

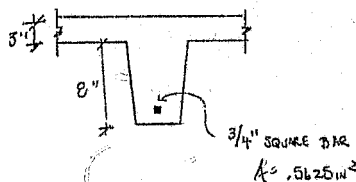
$$\text{SELF WT} = \left(\frac{3}{12} \cdot 150 \text{ pcf} \right) + \left(\frac{8 \cdot 5.5}{144} \cdot 150 \text{ pcf} \right) / 2.5$$

$$= 59.8 \text{ psf}$$

$$1.2 (59.8 + 10) + 1.6 (100) = 239 \text{ psf} \cdot 2.5' = 598 \text{ plf}$$

$$\text{SPAN} = 15'$$

$$M_u = 598 \text{ plf} (15')^2 / 8 = 201.8 \text{ k-in} \cdot 1.5 = 302.7 \text{ k-in}$$



EX. NEIGHBORING JOIST TAKES
50% MORE LOAD DUE TO
CUT JOIST

$$302.7 \text{ k-in} < 837.5 \text{ k-in} \quad \underline{\text{OK}}$$

CHECK SHEAR

$$\phi V_c = .75 \cdot 2 \sqrt{2500} \cdot (8 \cdot 6 + 3 \cdot 41.75) = 13.0 \text{ k}$$

$$V_u = 598 \text{ plf} \cdot 15' / 2 + \frac{1}{2} \cdot 598 \cdot 15' / 2 = 6.7 \text{ k}$$

$$6.7 / 13 = .51 \text{ } \leftarrow 1\% \text{ OVER } 50\% \text{ NEGLECTING SHEAR REINF. } \underline{\text{OK}}$$

Kills 4x4 TO SPAN 5'

$$598 \text{ plf} \cdot 15' / 2 = 4485 \text{ lbs}$$

$$4485 \text{ lbs} \cdot 5' / 4 = 5.61 \text{ k-ft} = 67.3 \text{ k-in}$$

$$\text{REQ'D } Z_x = 67.3 \text{ k-in} / .9 \cdot 46 \text{ ksi} = 1.63 \text{ in}^3$$

$$\text{HSS } 4 \times 4 \times 1/4 \quad Z = 4.69 \text{ in}^3 \quad \underline{\text{OK}}$$



Consulting Engineers

Portland, Oregon

Project	PIONEER PARK	By	AC	Sheet No.
Location	PAY	Date	3/10/11	2
Client	LCL	Reviewed		Job No.
		Date		

ANCHORS TO (E) JOIST

$$598 \cdot \frac{1}{2} = 4485 \text{ lbs} / 2 = 2242.5 \text{ lbs}$$

FACTORED
REACTION AT CONNECTION

$$2242.5 / 2 \text{ ANCHORS} = 1121.25 \text{ lbs SHEAR PER ANCHOR}$$

 $\frac{3}{8}$ " TITEN HD, $2\frac{3}{4}$ " EMBED

SEE ATTACHED SIMPSON OUTPUT

Anchor Calculations

Anchor Selector (Version 4.3.0.0)

Job Name :

Date/Time : 3/29/2011 9:36:38 AM

1) Input

Calculation Method : ACI 318 Appendix D For Cracked Concrete

Calculation Type : Analysis

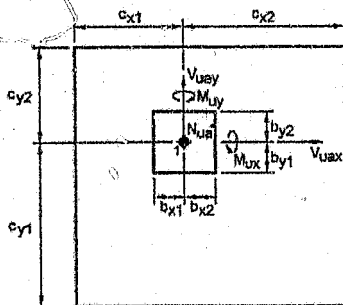
a) Layout

Anchor : 3/8" Titen HD

Number of Anchors : 1

Embedment Depth : 2.75 in

Built-Up Grout Pads : No



1 ANCHOR

*NUM IS POSITIVE FOR TENSION AND NEGATIVE FOR COMPRESSION.

+ INDICATES CENTER OF THE ANCHOR

Anchor Layout Dimensions :

c_{x1} : 18 in

c_{x2} : 18 in

c_{y1} : 5.5 in

c_{y2} : 5 in

b_{x1} : 1.5 in

b_{x2} : 1.5 in

b_{y1} : 1.5 in

b_{y2} : 1.5 in

b) Base Material

about:blank

Concrete: Normal weight

Cracked Concrete: Yes

Condition: B tension and shear

Thickness, h : 6.5 in

Supplementary edge reinforcement: No

c) Factored Loads

Load factor source: ACI 318 Section 9.2

N_{ua} : 0 lb

V_{uay} : 1121.25 lb

M_{uy} : 0 lb*ft

e_x : 0 in

e_y : 0 in

Moderate/high seismic risk or intermediate/high design category: Yes

Apply entire shear load at front row for breakout: No

f'_c : 2500.0 psi

Ψ_{cV} : 1.00

ϕF_p : 1381.3 psi

V_{uax} : 0 lb

M_{ux} : 0 lb*ft

d) Anchor Parameters

From [C-SAS-2009]:

Anchor Model = THD37 $d_o = 0.375$ in

Category = 1 $h_{ef} = 1.98$ in

$h_{min} = 4.167$ in $c_{ac} = 3$ in

$c_{min} = 1.75$ in $s_{min} = 3$ in

Ductile = No

2) Tension Force on Each Individual Anchor

Anchor #1 $N_{ua1} = 0.00$ lb

Sum of Anchor Tension $\Sigma N_{ua} = 0.00$ lb

$a_x = 0.00$ in

$a_y = 0.00$ in

$e'_{Nx} = 0.00$ in

$e'_{Ny} = 0.00$ in

3) Shear Force on Each Individual Anchor

Resultant shear forces in each anchor:

Anchor #1 $V_{ua1} = 1121.25$ lb ($V_{ua1x} = 0.00$ lb, $V_{ua1y} = 1121.25$ lb)

Sum of Anchor Shear $\Sigma V_{uax} = 0.00$ lb, $\Sigma V_{uay} = 1121.25$ lb

$e'_{Vx} = 0.00$ in

$$e'_{vy} = 0.00 \text{ in}$$

4) Steel Strength of Anchor in Tension [Sec. D.5.1]

$$N_{sa} = n A_{se} f_{uta} \text{ [Eq. D-3]}$$

Number of anchors acting in tension, $n = 0$

$$N_{sa} = 10890 \text{ lb (for a single anchor) [C-SAS-2009]}$$

$$\phi = 0.65 \text{ [D.4.4]}$$

$$\phi N_{sa} = 7078.50 \text{ lb (for a single anchor)}$$

5) Concrete Breakout Strength of Anchor in Tension [Sec. D.5.2]

$$N_{cb} = A_{Nco} / A_{Nco} \Psi_{ed,N} \Psi_{c,N} \Psi_{cp,N} N_b \text{ [Eq. D-4]}$$

Number of influencing edges = 0

$$h_{ef} = 1.98 \text{ in}$$

$$A_{Nco} = 35.28 \text{ in}^2 \text{ [Eq. D-6]}$$

$$A_{Nc} = 35.28 \text{ in}^2$$

Smallest edge distance, $c_{a,min} = 5.00 \text{ in}$

$$\Psi_{ed,N} = 1.0000 \text{ [Eq. D-10 or D-11]}$$

Note: Cracking shall be controlled per D.5.2.6

$$\Psi_{c,N} = 1.0000 \text{ [Sec. D.5.2.6]}$$

$$\Psi_{cp,N} = 1.0000 \text{ [Eq. D-12 or D-13]}$$

$$N_b = k_c \sqrt{f'_c} h_{ef}^{1.5} = 2368.19 \text{ lb [Eq. D-7]}$$

$$k_c = 17 \text{ [Sec. D.5.2.6]}$$

$$N_{cb} = 2368.19 \text{ lb [Eq. D-4]}$$

$$\phi = 0.65 \text{ [D.4.4]}$$

$$\phi_{seis} = 0.75$$

$$\phi N_{cb} = 1154.49 \text{ lb (for a single anchor)}$$

6) Pullout Strength of Anchor in Tension [Sec. D.5.3]

$$N_{eq} = 1723 \text{ lb } (f'_c / 2,500 \text{ psi})^{0.5} = 1723.00 \text{ lb}$$

$$\phi = 0.65$$

$$\phi_{seis} = 0.75$$

$$\phi N_{eq} = 839.96 \text{ lb (for a single anchor)}$$

7) Side Face Blowout of Anchor in Tension [Sec. D.5.4]

Concrete side face blowout strength is only calculated for headed anchors in tension close to an edge, $c_{a1} < 0.4h_{ef}$. Not applicable in this case.

8) Steel Strength of Anchor in Shear [Sec D.6.1]

$$V_{eq} = 2855.00 \text{ lb (for a single anchor) [C-SAS-2009]}$$

$$\phi = 0.60 \text{ [D.4.4]}$$

$$\phi V_{eq} = 1713.00 \text{ lb (for a single anchor)}$$

9) Concrete Breakout Strength of Anchor in Shear [Sec D.6.2]

Case 1: Anchor checked against total shear load
In x-direction...

$$V_{cbx} = A_{vcx}/A_{vcx} \Psi_{ed,V} \Psi_{c,V} V_{bx} \text{ [Eq. D-21]}$$

$$c_{a1} = 4.33 \text{ in (adjusted for edges per D.6.2.4)}$$

$$A_{vcx} = 68.25 \text{ in}^2$$

$$A_{vcx} = 84.50 \text{ in}^2 \text{ [Eq. D-23]}$$

$$\Psi_{ed,V} = 0.9308 \text{ [Eq. D-27 or D-28]}$$

$$\Psi_{c,V} = 1.0000 \text{ [Sec. D.6.2.7]}$$

$$V_{bx} = 7(l_e/d_o)^{0.2} \sqrt{d_o} \sqrt{f_c(c_{a1})^{1.5}} \text{ [Eq. D-24]}$$

$$l_e = 1.98 \text{ in}$$

$$V_{bx} = 2696.77 \text{ lb}$$

$$V_{cbx} = 2027.36 \text{ lb [Eq. D-21]}$$

$$\phi = 0.70$$

$$\phi_{seis} = 0.75$$

$$\phi V_{cbx} = 1064.37 \text{ lb (for a single anchor)}$$

In y-direction...

$$V_{cby} = A_{vcy}/A_{vcy} \Psi_{ed,V} \Psi_{c,V} V_{by} \text{ [Eq. D-21]}$$

$$c_{a1} = 5.00 \text{ in}$$

$$A_{vcy} = 97.50 \text{ in}^2$$

$$A_{vcy} = 112.50 \text{ in}^2 \text{ [Eq. D-23]}$$

$$\Psi_{ed,V} = 1.0000 \text{ [Eq. D-27 or D-28]}$$

$$\Psi_{c,V} = 1.0000 \text{ [Sec. D.6.2.7]}$$

$$V_{by} = 7(l_e/d_o)^{0.2} \sqrt{d_o} \sqrt{f_c(c_{a1})^{1.5}} \text{ [Eq. D-24]}$$

$$l_e = 1.98 \text{ in}$$

$$V_{by} = 3342.45 \text{ lb}$$

$$V_{cby} = 2896.79 \text{ lb [Eq. D-21]}$$

$$\phi = 0.70$$

$$\phi_{\text{seis}} = 0.75$$

$$\phi V_{\text{cby}} = 1520.82 \text{ lb (for a single anchor)}$$

Case 2: This case does not apply to single anchor layout

Case 2: Anchor checked for parallel to edge condition

Check anchors at c_{x1} edge

$$V_{\text{cbx}} = A_{\text{vcx}} / A_{\text{vcx}} \Psi_{\text{ed,V}} \Psi_{\text{c,V}} V_{\text{bx}} \text{ [Eq. D-21]}$$

$$c_{a1} = 4.33 \text{ in (adjusted for edges per D.6.2.4)}$$

$$A_{\text{vcx}} = 68.25 \text{ in}^2$$

$$A_{\text{vcx}} = 84.50 \text{ in}^2 \text{ [Eq. D-23]}$$

$$\Psi_{\text{ed,V}} = 1.0000 \text{ [Sec. D.6.2.1(c)]}$$

$$\Psi_{\text{c,V}} = 1.0000 \text{ [Sec. D.6.2.7]}$$

$$V_{\text{bx}} = 7(l_e/d_o)^{0.2} \sqrt{d_o} \sqrt{f_c(c_{a1})^{1.5}} \text{ [Eq. D-24]}$$

$$l_e = 1.98 \text{ in}$$

$$V_{\text{bx}} = 2696.77 \text{ lb}$$

$$V_{\text{cbx}} = 2178.16 \text{ lb [Eq. D-21]}$$

$$V_{\text{cby}} = 2 * V_{\text{cbx}} \text{ [Sec. D.6.2.1(c)]}$$

$$V_{\text{cby}} = 4356.32 \text{ lb}$$

$$\phi = 0.70$$

$$\phi_{\text{seis}} = 0.75$$

$$\phi V_{\text{cby}} = 2287.07 \text{ lb (for a single anchor)}$$

Check anchors at c_{y1} edge

$$V_{\text{cby}} = A_{\text{vcy}} / A_{\text{vcy}} \Psi_{\text{ed,V}} \Psi_{\text{c,V}} V_{\text{by}} \text{ [Eq. D-21]}$$

$$c_{a1} = 5.50 \text{ in}$$

$$A_{\text{vcy}} = 107.25 \text{ in}^2$$

$$A_{\text{vcy}} = 136.13 \text{ in}^2 \text{ [Eq. D-23]}$$

$$\Psi_{\text{ed,V}} = 1.0000 \text{ [Sec. D.6.2.1(c)]}$$

$$\Psi_{\text{c,V}} = 1.0000 \text{ [Sec. D.6.2.7]}$$

$$V_{\text{by}} = 7(l_e/d_o)^{0.2} \sqrt{d_o} \sqrt{f_c(c_{a1})^{1.5}} \text{ [Eq. D-24]}$$

$$l_e = 1.98 \text{ in}$$

$$V_{\text{by}} = 3856.16 \text{ lb}$$

$$V_{cby} = 3038.18 \text{ lb [Eq. D-21]}$$

$$V_{cbx} = 2 * V_{cby} \text{ [Sec. D.6.2.1(c)]}$$

$$V_{cbx} = 6076.37 \text{ lb}$$

$$\phi = 0.70$$

$$\phi_{seis} = 0.75$$

$$\phi V_{cbx} = 3190.09 \text{ lb (for a single anchor)}$$

Check anchors at c_{x2} edge

$$V_{cbx} = A_{vcx} / A_{vcox} \Psi_{ed,V} \Psi_{c,V} V_{bx} \text{ [Eq. D-21]}$$

$$c_{a1} = 4.33 \text{ in (adjusted for edges per D.6.2.4)}$$

$$A_{vcx} = 68.25 \text{ in}^2$$

$$A_{vcox} = 84.50 \text{ in}^2 \text{ [Eq. D-23]}$$

$$\Psi_{ed,V} = 1.0000 \text{ [Eq. D-27 or D-28] [Sec. D.6.2.1(c)]}$$

$$\Psi_{c,V} = 1.0000 \text{ [Sec. D.6.2.7]}$$

$$V_{bx} = 7(l_e/d_o)^{0.2} \sqrt{d_o} \sqrt{f_c(c_{a1})^{1.5}} \text{ [Eq. D-24]}$$

$$l_e = 1.98 \text{ in}$$

$$V_{bx} = 2696.77 \text{ lb}$$

$$V_{cbx} = 2178.16 \text{ lb [Eq. D-21]}$$

$$V_{cby} = 2 * V_{cbx} \text{ [Sec. D.6.2.1(c)]}$$

$$V_{cby} = 4356.32 \text{ lb}$$

$$\phi = 0.70$$

$$\phi_{seis} = 0.75$$

$$\phi V_{cby} = 2287.07 \text{ lb (for a single anchor)}$$

Check anchors at c_{y2} edge

$$V_{cby} = A_{vcoy} / A_{vcby} \Psi_{ed,V} \Psi_{c,V} V_{by} \text{ [Eq. D-21]}$$

$$c_{a1} = 5.00 \text{ in}$$

$$A_{vcoy} = 97.50 \text{ in}^2$$

$$A_{vcby} = 112.50 \text{ in}^2 \text{ [Eq. D-23]}$$

$$\Psi_{ed,V} = 1.0000 \text{ [Sec. D.6.2.1(c)]}$$

$$\Psi_{c,V} = 1.0000 \text{ [Sec. D.6.2.7]}$$

$$V_{by} = 7(l_e/d_o)^{0.2} \sqrt{d_o} \sqrt{f_c(c_{a1})^{1.5}} \text{ [Eq. D-24]}$$

$$l_e = 1.98 \text{ in}$$

$V_{by} = 3342.45 \text{ lb}$

$V_{cby} = 2896.79 \text{ lb [Eq. D-21]}$

$V_{cby} = 2 * V_{cby} \text{ [Sec. D.6.2.1(c)]}$

$V_{cbx} = 5793.59 \text{ lb}$

$\phi = 0.70$

$\phi_{seis} = 0.75$

$\phi V_{cbx} = 3041.63 \text{ lb (for a single anchor)}$

10) Concrete Pryout Strength of Anchor in Shear [Sec. D.6.3]

$V_{cp} = k_{cp} N_{cb} \text{ [Eq. D-29]}$

$k_{cp} = 1 \text{ [Sec. D.6.3.1]}$

$N_{cb} = 2368.19 \text{ lb (from Section (5) of calculations)}$

$V_{cp} = 2368.19 \text{ lb}$

$\phi = 0.70 \text{ [D.4.4]}$

$\phi_{seis} = 0.75$

$\phi V_{cp} = 1243.30 \text{ lb (for a single anchor)}$

11) Check Demand/Capacity Ratios [Sec. D.7]

Tension

- Steel : 0.0000

- Breakout : 0.0000

- Pullout : 0.0000

- Sldeface Blowout : N/A

Shear

- Steel : 0.2546

- Breakout (case 1) : 0.7373

- Breakout (case 2) : N/A

- Breakout (case 3) : 0.4903

- Pryout : 0.9018

$T_{Max(0)} \leq 0.2 \text{ and } V_{Max(0.9)} \leq 0.0 \text{ [Sec D.7.2]}$

Interaction check: PASS

Use 3/8" diameter Titen HD anchor(s) with 2.75 in. embedment

BRITTLE FAILURE GOVERNS: Governing anchor failure mode is brittle failure. Per 2006 IBC Section 1908.1.16, anchors shall be governed by a ductile steel element in structures assigned to Seismic Design Category C, D, E, or F. Alternatively the minimum design strength of the anchor(s) shall be at least 2.5 times the factored forces or the anchor attachment to the structure shall undergo ductile yielding at a load level less than the design strength of the anchor(s). Designer must exercise own judgement to determine if this design is suitable.



CITY OF PORTLAND, OREGON - BUREAU OF DEVELOPMENT SERVICES

1900 SW Fourth Avenue, Suite 5000 • Portland, Oregon 97201 • www.portlandonline.com/bds



Structural Special Inspection and Observation Program Checklist

The registered design professional in responsible charge shall prepare and submit a special inspection and structural observation program in accordance with IBC Sections 1704.1.1, 1705.2, and 106.3.4.1, and confirm that the special inspection and structural observations noted below are indicated on the drawings.

~ Please Note that separate Soils and Life Safety Inspection Checksheets may also be required ~

Instructions - Part D and E of this Checksheet must be fully completed by the Owner (or Architect or Engineer acting as the owner's agent) in order to obtain your permit.

When complete, return this form to BDS Permitting Services. You may return it in person at 1900 SW 4th Ave, by fax to (503) 823-7425, or by email to fpspecialinspectionschecksheets@portlandoregon.gov

Application # 11-103548-DFS-01-FA Date: April 4, 2011
 Project Name: BW-DFS-01 SHAVING 3035228: Pioneer Pk
: Pioneer PK
 Site Address: 715 SW MORRISON ST
 Architect of Record (Firm) None Phone # N/A
 Engineer of Record (Firm) KPFF Phone # 503-227-3251

The following special inspections and structural observations shall be performed according to the State Building Code and City of Portland Special Inspection Program Administrative Rules unless a program of inspections is submitted by the Engineer of Record and approved by Bureau of Development Services.

A. REQUIRED SPECIAL INSPECTIONS FOR ALL BUILDING TYPES

- | | | | |
|--|---|--|--|
| ☒ Steel Construction | ☐ Concrete Construction | ☐ Anchors - Adhesive | ☐ Wood Construction |
| ☐ Curtain Wall | ☐ Prestressed Concrete | ☐ Anchors - Cast-in-place | ☐ Masonry |
| ☐ Structural Silicone Glazing | ☐ Shotcrete | ☐ Anchors - Expansion | ☐ Cold Formed Steel Framing |
| Special Cases: | ☒ Screw Anchors | ☐ | ☐ |

B. REQUIRED SPECIAL INSPECTIONS FOR CATEGORY III AND IV BUILDINGS (in addition to those noted above.)

- | | | | |
|---|---|--|---|
| ☐ Seismic Force Resist. System | ☐ Storage Racks | ☐ Access Floors | ☐ Suspended Ceilings |
| ☐ Mechanical Components | ☐ Electrical Components | ☐ Cladding | ☐ Veneer |
| ☐ Nonbearing Walls | ☐ Seismic Isolation System | ☐ | ☐ |
| Special Cases: | ☐ | ☐ | ☐ |

C. STRUCTURAL OBSERVATION

- ☐ Required (The stages of construction at which structural observation is to occur shall be indicated on the drawings.)

D. APPROVED SPECIAL INSPECTOR OR INSPECTION AGENCY (To be completed by the applicant.)

Indicate the City approved special inspector or special inspection agency to perform the required special inspections noted in parts A. and B. above:

- | | | |
|--|---|---|
| ☒ Carlson Testing (503) 684-3460 | ☐ Northwest Geotech (503) 682-1880 | ☐ PSI (503) 289-1778 |
| ☐ Mayes Testing, Inc. (503) 281-7515 | ☐ Clair Company (800) 383-8855 | ☐ Krazan & Assoc. (503) 665-3574 |
| ☐ ACS (503) 443-3799 | ☐ | ☐ Other: |

E. To be completed by the applicant.

By completing Part E the project owner (or the Architect or Engineer acting as the Owner's Agent) hereby agrees to employ the special inspector or inspection agency and/or engineer of record for the above noted special inspections and/or structural observations. (Contractors are NOT authorized to agree for the Owner.)

Print Name CHRISTOPHER M KOPKA Date 4/7/11
 (Project Owner or the Architect or Engineer acting as the Owner's Agent)

Firm CONCRETE PILING & FOUNDATION INC Phone 503-519-4480

The project owner shall provide a copy of this checksheet to the special inspections agency and engineer of record.

Plans Examiner: Eric Thomas

APPLICANT - COMPLETE PARTS D & E