

Engineering Design Report Addendum North Lot Development Seattle, Washington

February 28, 2014

Prepared for

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1.0 INTRODUCTION

This Engineering Design Report (EDR) Addendum documents certain changes to the EDR (Landau Associates 2011a) for the North Lot Property (Property). The revisions herein affect only the cleanup action plan for the East Parcel of the Property. North Lot Development (NLD) is developing the West Parcel of the Property as planned, and no changes are proposed to the remedial activities for the West Parcel as set forth in the original Remedial Investigation (RI), Feasibility Study (FS), Cleanup Action Plan (CAP), and EDR reports.

The Property is located in the south end Central Business District, southeast of the intersection of South King Street and Occidental Avenue South in Seattle, Washington (Figure 1). 255 S. King Street LP purchased the East Parcel of the Property from NLD on August 30, 2013, and will execute a development plan that will include construction of a high-rise hotel and commercial/retail building with one level of below-ground parking and associated uses.

The 2011 RI and FS reports (Landau Associates 2011b,c) and Cleanup Action Plan (CAP; Landau Associates 2011d) for the Property were prepared to be consistent with NLD's development plan at the time the reports were prepared. The CAP for the Property was adopted on August 12, 2011. The CAP described the history and physical conditions of the Property, and identified the Property-specific cleanup standards.

The information regarding the Property history, physical conditions, and cleanup standards presented in the CAP and EDR has not changed since 2011, and is still applicable to this EDR Addendum. This information is summarized in the sections below, as appropriate. As with the CAP Addendum (Landau Associates 2013), this EDR Addendum specifically identifies and addresses only the elements of 255 S. King Street LP's proposed cleanup action plan for the East Parcel of the Property, and the associated monitoring to document that the cleanup activities have been completed.

This EDR Addendum accompanies the FS Addendum (Landau Associates 2012a) and CAP Addendum (Landau Associates 2013) that have been prepared specifically for the East Parcel of the Property. 255 S. King Street LP's proposed excavation for construction of the below-ground parking and associated uses represents a "substantial change" [as defined in Section XVI of the existing Prospective Purchaser Consent Decree (PPCD; Ecology 2009) for the Property] from the development plan identified by NLD for the East Parcel. The FS Addendum, CAP Addendum, and this EDR Addendum have been prepared to document and support the proposed changes in the cleanup action for the East Parcel resulting from the change in ownership and a change in the proposed development plan.

The following sections present a summary of the information specified by the Model Toxics Control Act (MTCA) [Washington Administrative Code (WAC) 173-340-380] to be included in the EDR

Addendum for the East Parcel of the Property. The information presented in this EDR Addendum for the East Parcel of the Property is based on the information presented in the CAP Addendum and evaluations and analyses developed and presented in the RI and FS reports, the FS Addendum, the CAP, and the CAP Addendum. As documented in the FS Addendum and CAP Addendum, the proposed cleanup action for the East Parcel will comply with WAC 173-340-360.

As noted above, cleanup will be conducted as part of construction for development of the East Parcel of the Property. The purposes of this EDR Addendum are to document additional details of the East Parcel cleanup action outlined in the CAP Addendum, and confirm that the cleanup action will be performed in a manner that is consistent with accepted engineering practices. This EDR Addendum includes the following elements:

- Construction soil excavation (Section 2.0)
- Environmental remediation engineering plans (Section 3.0)
- Conceptual groundwater treatment contingency plan (Section 4.0)
- Environmental worker health and safety plan (Section 5.0).

1.1 SUMMARY OF EAST PARCEL DEVELOPMENT PROJECT

The East Parcel of the Property currently remains a paved parking lot pending commencement of development activities. The development proposed by 255 S. King Street LP for the East Parcel will include a high-rise hotel and commercial/retail building with one below-ground level of parking and associated uses. The specifics of the design for the high-rise building are still in development.

The additional remedial actions for the East Parcel, as outlined in the FS Addendum report, include excavation and off-Property disposal of soil from 0 to approximately 17.5 feet (ft) below ground surface (BGS) within the building footprint. The current shoring plan for the proposed development on the East Parcel involves installation of a steel sheetpile wall around the perimeter of the building footprint to aid in construction, including soil excavation and associated dewatering, with the sheetpile wall remaining in place as part of the building structure. A conceptual plan for the East Parcel development is shown on Figure 2.

The East Parcel surface will be capped by the building foundation. Outside of the building foundation footprint, added measures will be implemented to prevent contact with shallow contaminated soil (i.e., concrete pavement in walkways and driveways or soil cover in landscaped areas). The size of the building footprint within the parcel will be maximized, leaving limited area for walkways or driveways and landscaping. The excavation will be deeper than 17.5 ft BGS in localized areas for installation of pile caps, elevator pits, grade beams, and other building components.

1.2 PROPERTY DESCRIPTION AND HISTORY

The Property is known as the “North Lot Property” and is located in Seattle, Washington’s south end Central Business District adjacent to CenturyLink Field and Event Center, as shown on Figure 1. The Property consists of 3.85 acres, and is located southeast of the intersection of South King Street and Occidental Avenue South in Seattle, Washington (Figure 2 of the CAP). The West Parcel of the Property is currently under development; the East Parcel of the Property consists of a paved parking lot, which is currently used for commuter parking and parking for events at CenturyLink Field and Event Center.

Based on a Phase I Environmental Site Assessment completed by Landau Associates (2007), the Property was originally undeveloped tideflats of Elliott Bay. The Property was filled in the late 1890s and early 1900s, and was operated as a rail yard from the late 1800s until the late 1960s. The fill material underlying the Property is composed of remnants of the former rail yard operations and construction debris (i.e., brick, metal, and concrete). Prior to filling, the area that includes the Property was initially developed with streets, buildings, and railroad tracks elevated on and supported by pilings. Several sets of railroad tracks were formerly present on the Property. Structures associated with the rail yard included engine maintenance buildings, paint shops, track switching areas, and materials storage areas. In addition, two gasoline stations were formerly located in the northwestern portion of the Property at different times between the late 1930s and approximately 1966. King County purchased the Property in the 1970s to facilitate construction of the Kingdome stadium to the south of the Property, which was later demolished and replaced with the current CenturyLink Field and Event Center development.

The Property has been used as a parking lot since the 1970s (Landau Associates 2007). The Property is served by various utilities including a stormwater drainage system that consists of a series of storm drain pipelines running north to south across the Property. A storm drain pipeline also runs approximately northwest to southeast across the East Parcel of the Property. The King County main storm drain runs along King Street to the north of the Property, and the King County combined sewer main runs along Occidental Avenue to the west of the Property. Existing Property features on the East Parcel include asphalt paving, the stormwater drainage system, site lighting, and below-grade utilities on and adjacent to the Property.

1.3 PROPERTY CHARACTERIZATION

The environmental investigations conducted at the Property from 2008 through 2010 are summarized in the 2011 RI and FS reports (Landau Associates 2011b,c) and include the Phase II investigation, the RI field investigation, the supplemental investigation, and the data gaps investigation. An investigation of soil vapor in the northwestern portion of the Property was also conducted as part of the FS (Landau Associates 2011c). The investigations of the Property included a review of the Property’s

industrial history to confirm that the investigations included all areas likely to have contamination; an evaluation of soil and groundwater conditions; and laboratory analysis of soil, groundwater, and soil vapor samples to document the nature and extent of contamination.

The investigations included the sampling of soil, groundwater, and/or soil vapor from more than 70 borings and the installation and sampling of 20 groundwater monitoring wells. The soil, groundwater, and soil vapor samples collected during the various investigations were submitted for selected laboratory analysis for a comprehensive list of analytical parameters including:

- Total petroleum hydrocarbons (TPH)
- Gasoline-range total petroleum hydrocarbons (TPH-G)
- Diesel-range total petroleum hydrocarbons (TPH-D)
- Motor oil-range total petroleum hydrocarbons (TPH-O)
- Metals (including arsenic, cadmium, chromium, copper, lead, mercury, and zinc)
- Benzene, toluene, ethylbenzene, and xylenes (BTEX)
- Polycyclic aromatic hydrocarbons (PAHs)
- Semivolatile organic compounds
- Volatile organic compounds
- Polychlorinated biphenyls (PCBs)
- Dioxins/furans.

Soil quality was evaluated during the RI by area based on the operational history and the findings of the various investigations. The areas on the West Parcel of the Property requiring remedial action have been addressed by the completed cleanup action elements during the building construction that is currently underway. The locations where soil samples were collected on the East Parcel of the Property and the areas of soil contamination to be addressed, based on the RI and FS, are shown on Figure 5 of the CAP Addendum (Landau Associates 2013). The constituents of concern identified in the RI for the East Parcel of the Property include TPH, benzene, PAHs, and arsenic. The analytical data indicated that the extent of impacts to groundwater from the soil contamination at the Property is limited and that contamination in groundwater did not pose a threat to human health or the environment.

The Property consists of heterogeneous fill that was placed over the native tideflat surface to allow development of the area in the vicinity of the Property. The soil contamination in the East Parcel of the Property includes one distinct, localized area of creosote-like material present at the base of the fill in the northeastern corner. Within this localized area, the contaminant concentrations are above the cleanup levels due to the creosote-like material, which is a remnant of historical operations. Property-wide concentrations of PAHs and arsenic that are associated with the heterogeneous fill material are also above

the cleanup levels. PAHs have been detected in various shallow soil samples (0 to 2 ft BGS), but are also anticipated to be dispersed throughout the fill.

As mentioned above, the extent of impacts to groundwater from soil contamination is limited. There is no evidence of soil contaminants leaching to groundwater, or of contaminants in groundwater migrating off-Property at concentrations greater than the cleanup levels. On the East Parcel, arsenic was the only analyte detected in groundwater at concentrations greater than the cleanup level at multiple locations. The locations where arsenic has been detected at concentrations greater than the cleanup level in the East Parcel are hydraulically upgradient, and, as discussed in the RI report, the arsenic concentrations are the result of migration from off-Property sources (Landau Associates 2011b).

As identified in the RI and FS reports, concentrations of benzene and gasoline above the cleanup levels are locally present in deeper (approximately 20 ft BGS) soil and groundwater in the northeastern portion of the East Parcel adjacent to the creosote layer at the base of the fill material. These concentrations of benzene and gasoline pose a potential vapor intrusion threat to users of the below-ground parking garage proposed for the East Parcel. As discussed in Section 3.1, the potential for vapor intrusion will be addressed as part of the planned building construction.

In summary, the nature and extent of contamination on the East Parcel of the Property is discussed in the 2011 RI and FS reports, based on the operational history of the Property and the analytical results for the soil and groundwater samples, and is as follows:

- Creosote-like material was encountered at the base of the fill material in the northeastern portion of the East Parcel, and where creosote-related constituents have locally been detected in soil and groundwater
- Various constituents have been detected in soil across the East Parcel (and Property-wide) that are interpreted to be related to the presence of the fill placed over the native tideflat surface during the development of the area or that may be related to historical activities that occurred Property-wide, such as the rail yard operations.

Groundwater elevations have been measured throughout the Property on six separate occasions (November 24, 2008; January 16, 2009; June 3, 2009; August 25, 2009; February 24, 2010; and April 22, 2010). Groundwater elevations at wells located at the Union Station site, which is located to the east and hydraulically upgradient of the Property, were also measured during the June 3, 2009; February 24, 2010; and April 22, 2010 monitoring events. In February 2010, information from the King Street Center building located at 201 South Jackson Street (immediately to the north of the Property) verified the presence of a foundation drain system at the building. The drain system passively collects groundwater along the building foundation. The water that collects in the drain system is pumped to the sanitary sewer system for disposal. The groundwater elevation contours for all six monitoring events are provided on Figures 6 through 11 of the CAP Addendum (Landau Associates 2013).

1.4 PLANNED EAST PARCEL CLEANUP ACTION

The selection of the preferred alternative in the FS included an extensive and detailed disproportionate cost analysis (DCA). The DCA was conducted as part of the comparative analysis of the cleanup action alternatives to determine which alternative is permanent to the maximum extent practicable for the Property. Based on the evaluations in the FS, including the DCA, the preferred cleanup action alternative for the Property was Alternative 3. Alternative 3 was deemed to be compatible with the development planned for the Property at the time the FS was completed.

The purchase of the East Parcel of the Property by 255 S. King Street LP has necessitated revisions to Alternative 3 to address the revised development plan and the additional remediation for the East Parcel of the Property. After additional review and analysis, it has been confirmed that Alternative 3 is still the preferred cleanup action alternative for the Property because Alternative 3 is compatible with the revised development plan and meets applicable MTCA requirements.

As detailed in the FS Addendum and CAP Addendum reports (Landau Associates 2012a, 2013), the revised Alternative 3 adds the following elements with regard to the East Parcel of the Property:

- Excavation and off-Property disposal of soil from 0 to approximately 17.5 feet (ft) below ground surface (BGS) within the building footprint
- Installation of a vapor barrier with the building foundation to address potential vapor intrusion into the below-ground parking garage
- Capping of most of the East Parcel surface by the building foundation
- Additional capping measures consisting of concrete pavement on walkways and driveways, excavation to 5 ft BGS, and soil cover in landscaped areas to prevent contact with shallow contaminated soil in areas outside the building foundation footprint
- Implementation of institutional controls
- Groundwater Compliance Monitoring.

The goals of the cleanup action are to adhere to the cleanup standards developed in the RI and FS, and implement the preferred cleanup action alternative selected in the FS and FS Addendum, which is protective of human health and the environment, per MTCA requirements. The cleanup action goals are described in detail in the CAP and CAP Addendum (Landau Associates 2011d, 2013).

1.5 CONTRACTOR SPECIFICATION PLANS

The contractor has prepared the following construction specification plans that are applicable to the planned remediation and construction activities for the East Parcel of the Property:

- Dust Suppression Plan
- Soil and Water Handling and Disposal Plan
- Stormwater Pollution Prevention Plan (SWPPP).

These plans are provided in Appendix A.

2.0 CONSTRUCTION SOIL EXCAVATION

Project construction includes removal of soil across the East Parcel to a depth of approximately 1.5 ft BGS (including existing asphalt, associated subgrade, and shallow soil/fill) and off-Property disposal to prepare the parcel for development. Additional below-grade excavation on the East Parcel includes excavation to approximately 17.5 ft BGS in the area of the building footprint. The excavation will go deeper in localized areas for installation of pile caps, elevator pits, grade beams, and other building components, primarily within the building foundation footprint.

Based on current construction estimates, approximately 33,400 cubic yards (measured in place) of existing material will be excavated as part of the proposed construction. This volume does not include the 1.5 ft of material that will be excavated as part of the preparation for East Parcel construction or the additional soil that will be excavated below 17.5 ft BGS in localized areas for the below-ground building components listed above. As discussed in Section 3.2, additional soil will also be excavated to a depth of 5 ft BGS in any landscaped areas outside the building footprint that are not capped with concrete. Excavated material, including shallow contaminated soil, removed during construction will be disposed of off-Property in a manner consistent with MTCA and other applicable regulations.

Based on available analytical data for the Property presented in the RI and FS reports, the construction excavation will remove soil on the East Parcel with concentrations of contaminants above cleanup levels to a depth of at least 17.5 ft BGS, and measures will be implemented to prevent contact with the soil remaining in place (i.e., capping). Therefore, no soil confirmation samples will be collected during construction soil excavation activities. Compliance sampling will include indoor air sampling and groundwater monitoring as described in the following sections. Soil waste characterization samples will be collected as required by the construction contractor and related waste disposal facilities.

3.0 ENVIRONMENTAL REMEDIATION ENGINEERING PLANS

3.1 CONSTRUCTION TECHNIQUES AND ELEMENTS TO PROHIBIT VAPOR INTRUSION

As outlined in the CAP Addendum, the water barrier included with the building design will also serve as a barrier to mitigate the potential for vapor intrusion. The current construction plans indicate that the building will be constructed with a completed integrated, contained, and welded steel sheetpile wall that will extend to a depth of 40 ft BGS and a minimum 26-inch-thick (impermeable/watertight) seal-slab concrete floor slab system (Appendix B). The top 12 inches of the seal-slab system will consist of an impermeable Hycrete concrete floor slab that will connect to the perimeter sheetpile walls and form an impermeable seal using bentonite plugs and bands. The details of the system are provided in Appendix B.

The ventilation system for the below-ground parking garage will also be designed to allow for proper ventilation and to allow the space to be operated under positive pressure. The compliance monitoring plan (Appendix C of the CAP Addendum) includes baseline indoor air sampling and analysis to document conditions following construction and to assess the need for additional mitigation or monitoring, as warranted, to protect users of the below-ground garage and associated uses (see Appendix C of the CAP Addendum).

3.2 PROTECTIVE SURFACE CAP

The cleanup action includes the placement of a protective cap on the East Parcel to prevent contact with soil remaining in place at the Property following the cleanup and construction activities associated with property development. The cap will consist primarily of the building foundations that will be constructed as part of Property development. In areas outside of the footprint of the building foundations, but within the Property boundary that will not be landscaped, an impermeable concrete cap will be installed. In the planned landscaped areas (where exposure to soil will not be prevented by a concrete cap or building foundation), soil will be excavated to 5 ft BGS, a geotextile fabric barrier will be placed at the bottom of the excavation, and the excavated area will be backfilled with clean soil. The landscaped areas where soil will be excavated to 5 ft BGS and the areas where protective pavement will be placed are shown on Figure 3.

The building foundation, concrete paving/cap, and landscaping plans are being prepared by the 255 S. King Street LP project team for the East Parcel. Selected construction permit design plans, including the survey, civil, and landscape plans, are provided in Appendix C.

3.2.1 OPERATION AND MAINTENANCE PROCEDURES

Scheduled operation and maintenance of the protective surface cap will ensure the ongoing performance of the cap and maintain its intended function. The general approach to long-term maintenance of the protective cap will include:

- Conducting routine, visual, periodic inspection and monitoring to identify any problems or areas of concern in a timely manner
- Evaluating each identified problem, and, if required, identifying appropriate, cost-effective mitigation measures
- Implementing repairs or corrective actions.

Cap inspections will be conducted at least annually, and after significant earthquakes, to identify the need for any maintenance or repair activities. The cap surface and adjacent areas will be inspected to identify conditions that may indicate potential or actual damage to the cap. Items and conditions that will be noted during the cap inspections will include:

- Integrity of the concrete pavement (including the presence of visible cracking and significant erosion or settlement)
- Presence of differential settlement and ponding of stormwater on top of or directly adjacent to the cap
- Visual surface inspection of the condition of stormwater collection, conveyance, and discharge structures.

If a significant problem with the cap, or associated drainage structures (or other pertinent Property features) is identified, 255 S. King Street LP will make arrangements to evaluate and correct the problem(s). Significant cracks or any conditions observed that adversely affect the performance of the cap will be evaluated and repaired as necessary.

4.0 CONCEPTUAL GROUNDWATER TREATMENT CONTINGENCY PLAN

A contingency for groundwater treatment is included in the cleanup action. Under current Property conditions, contamination in groundwater does not pose a threat to human health or the environment. Therefore, groundwater treatment options were not evaluated in the cleanup alternatives.

In the event that compliance groundwater monitoring shows a significant increase in contaminant concentrations in groundwater and evidence of off-Property migration of groundwater with contaminant concentrations greater than the cleanup levels or a significant change in Property conditions, groundwater treatment options such as a groundwater extraction system will be evaluated to prevent contaminated groundwater from migrating beyond the conditional point of compliance.

Since the contaminants that could require treatment have not been detected in groundwater above cleanup levels at the downgradient boundaries of the Property, a detailed design of extraction system components is neither practicable nor appropriate at this time. If a groundwater extraction system becomes necessary in the future based on the results of compliance monitoring, it would likely be constructed in the northeastern corner of the Property on the East Parcel, either outside, adjacent to the northeastern corner of the building, or in the northeastern corner of the parking garage. Areas for placement of the groundwater treatment system and access for construction/installation will be considered during development of the East Parcel building foundation construction plans to allow for the system components to be installed if groundwater remediation becomes necessary.

A future extraction system could include extraction of groundwater from wells, treatment of the collected water using a granular-activated carbon treatment system, and discharge of the water to the sanitary sewer system for further treatment and disposal. The possible locations for the extraction wells and placement of the treatment system are shown on Figure 4. The actual number of wells, their locations, and the size, type, and location of the treatment system, along with the needed piping, would be designed once the need for and type of remedial action system has been identified and approved by Ecology.

The list of potential contaminants that could require remediation is provided in the Groundwater Compliance Monitoring Plan, Appendix C of the CAP Addendum, and includes TPH, metals, BTEX, and PAHs. The degree to which Property groundwater will have to be treated to address these contaminants will depend on the intended point of discharge (sanitary sewer, storm sewer, or reinjection well), and the discharge criteria enforced by the regulating agency at the time the treatment is required. As described above, it is anticipated that any required groundwater treatment could be accomplished using a granular-activated carbon treatment system and that the treated water would be discharged to the sanitary sewer for

further treatment and disposal. A skid-mounted system would likely occupy the space of a typical parking stall.

5.0 ENVIRONMENTAL WORKER HEALTH AND SAFETY PLAN

A project health and safety plan (HASP) for implementation of typical environmental field activities conducted at the North Lot Development Property is provided in Appendix D. Landau Associates employees will follow the procedures described in this HASP. 225 S. King Street LP's contractors will prepare their own health and safety plans, which will be at least as protective as the HASP in Appendix D, or choose to adopt the HASP prepared by Landau Associates. A Worker Safety and Health Plan prepared by 255 S. King Street LP's construction contractor is also provided in Appendix D.

6.0 REPORTING AND DATA SUBMISSION

As noted above, an East Parcel Cleanup Action Report will be prepared to document the East Parcel cleanup action. The report will include appropriate information to document the cleanup action. The cleanup action will be implemented according to the schedule included in the CAP Addendum. A schedule for completion of the Cleanup Action Report will be developed following initiation of the cleanup action. The Cleanup Action Report will be submitted to Ecology following review by 255 S. King Street LP.

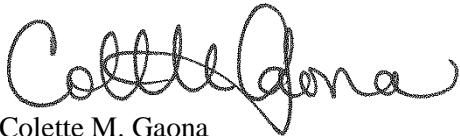
As outlined in the CAP Addendum, the planned cleanup action will be implemented following the effective date of the PPCD and will be conducted as part of redevelopment of the East Parcel. The cleanup activities will begin with the removal and off-Property disposal of the approximately 1.5 ft of surface material that will be excavated as part of site preparation. The remaining cleanup action elements will be implemented as appropriate, as development construction progresses. A detailed schedule is provided in Appendix D of the CAP Addendum.

Groundwater/vapor intrusion compliance monitoring as mentioned above and described in Appendix C of the CAP Addendum will begin following completion of construction on the East Parcel of the Property, which includes the installation of the additional compliance groundwater monitoring wells. Any wells that are damaged or destroyed as part of construction in the eastern portion of the Property will be replaced. Capping (via installation of building foundations and added concrete in areas outside of the building foundation footprints), will be accomplished in conjunction with the construction for Property development. The contingency for groundwater treatment will remain in effect for the duration of the groundwater compliance monitoring.

7.0 USE OF THIS DOCUMENT

This report was prepared for the exclusive use of North Lot Development, LLC, 255 S. King Street LP, and applicable regulatory agencies, for specific application to the North Lot Property, including review by the public. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau Associates. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied. This document was prepared under the supervision and direction of the undersigned.

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CMG/PMR/TLS/ccy

8.0 REFERENCES

Ecology. 2012. Letter: *Cleanup Action Report Review for the Cleanup at the West Block of the North Lot Development Cleanup Action North Lot Development Site, 201 South King Street, Seattle, WA 98104, Cleanup ID#: 1966, Prospective Purchaser Consent Decree No. 11-2-27892-1*. From Russell E. Olsen, MPA, Toxics Cleanup Program, Washington State Department of Ecology, to Alan Cornell, Daniels Real Estate. December 3.

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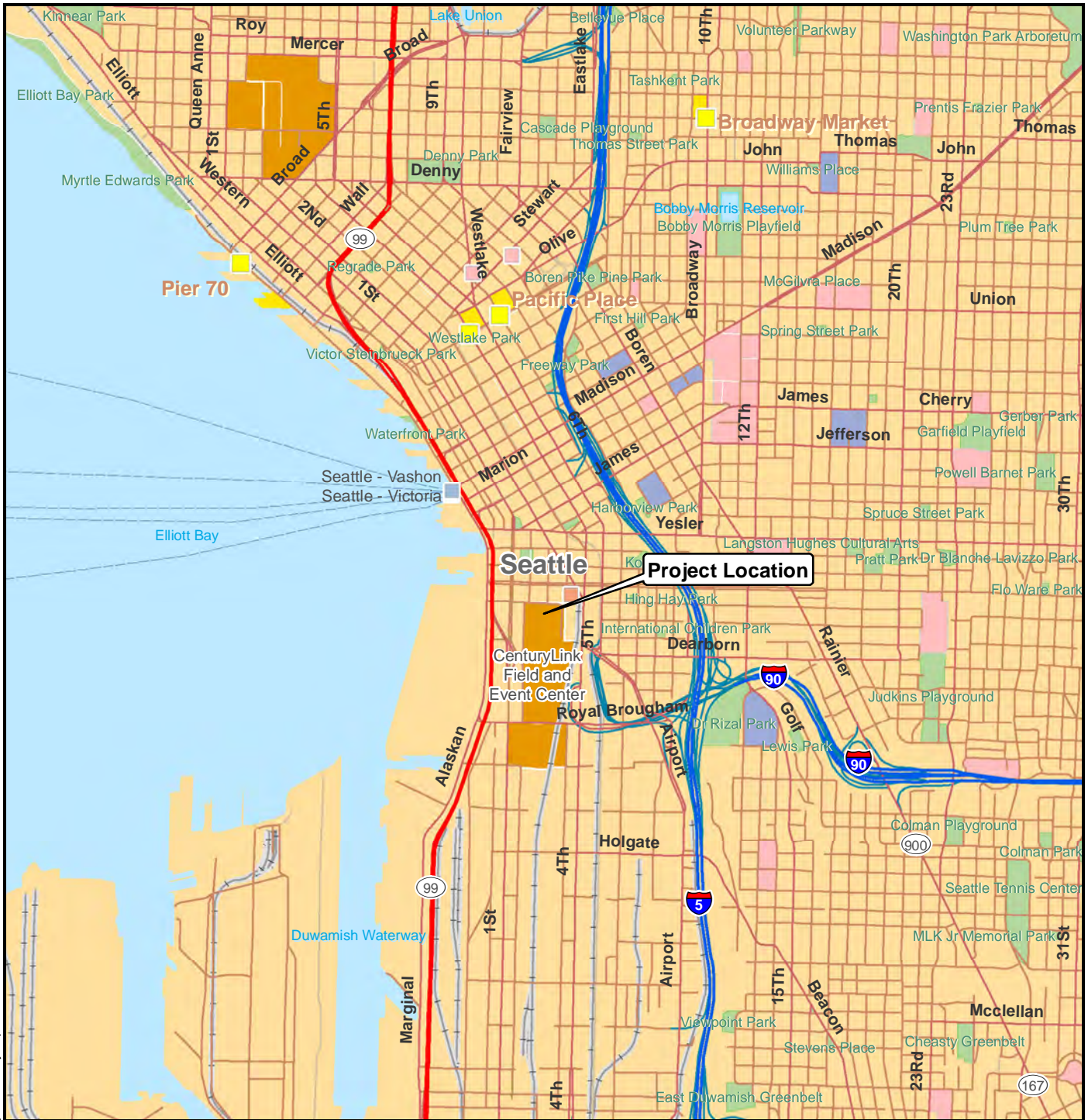
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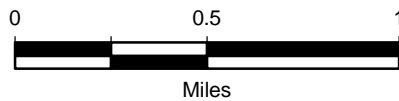
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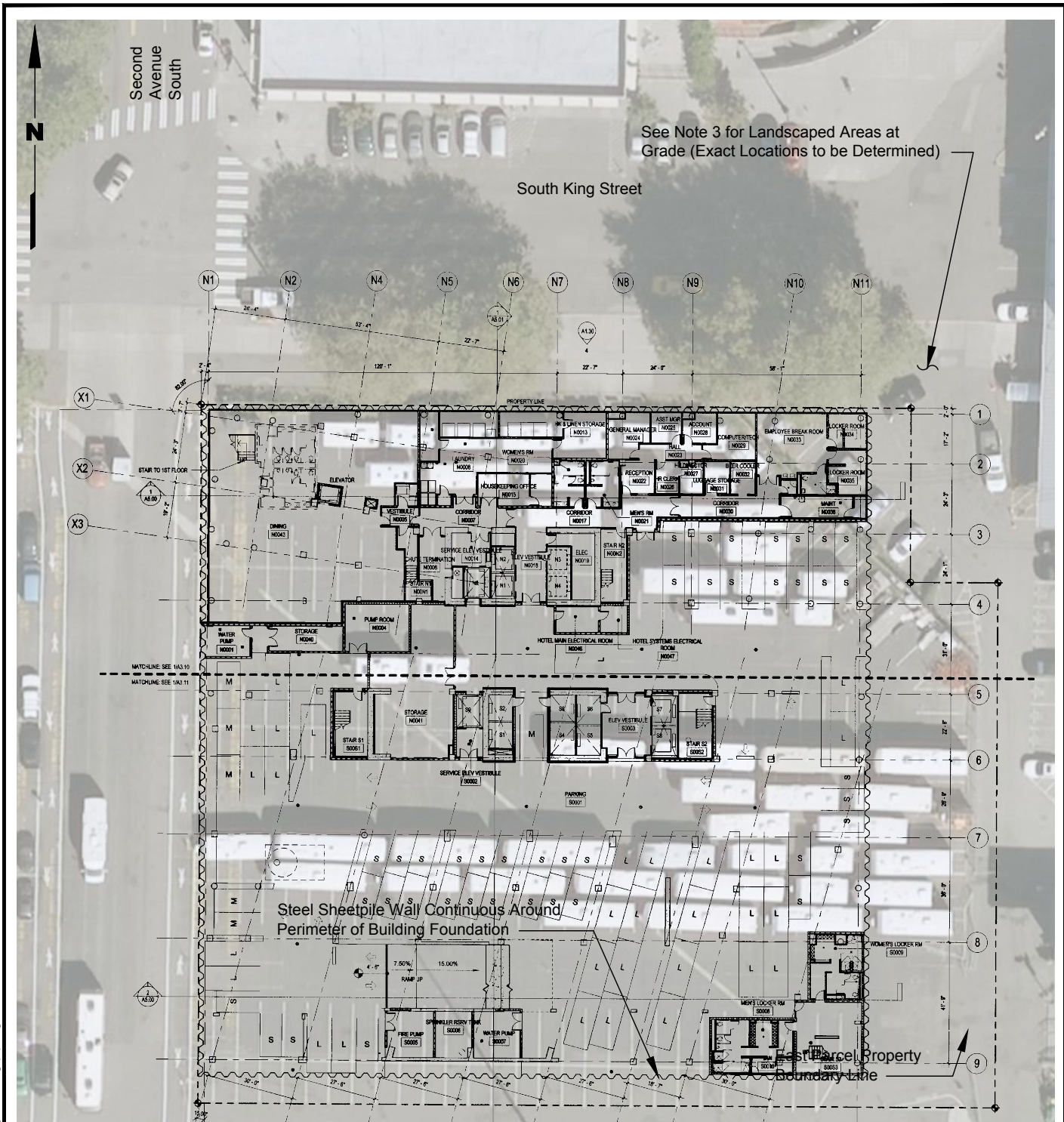


Data Source: ESRI 2008

<p>North Lot Development Property Seattle, Washington</p>	<p>Vicinity Map</p>	<p>Figure 1</p>
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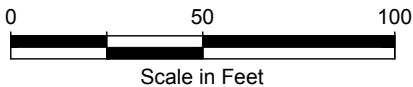


North Lot | G:\Projects\1307\001010\14\Figure 2.dwg (A) Figure 2" 2/19/2014



Notes

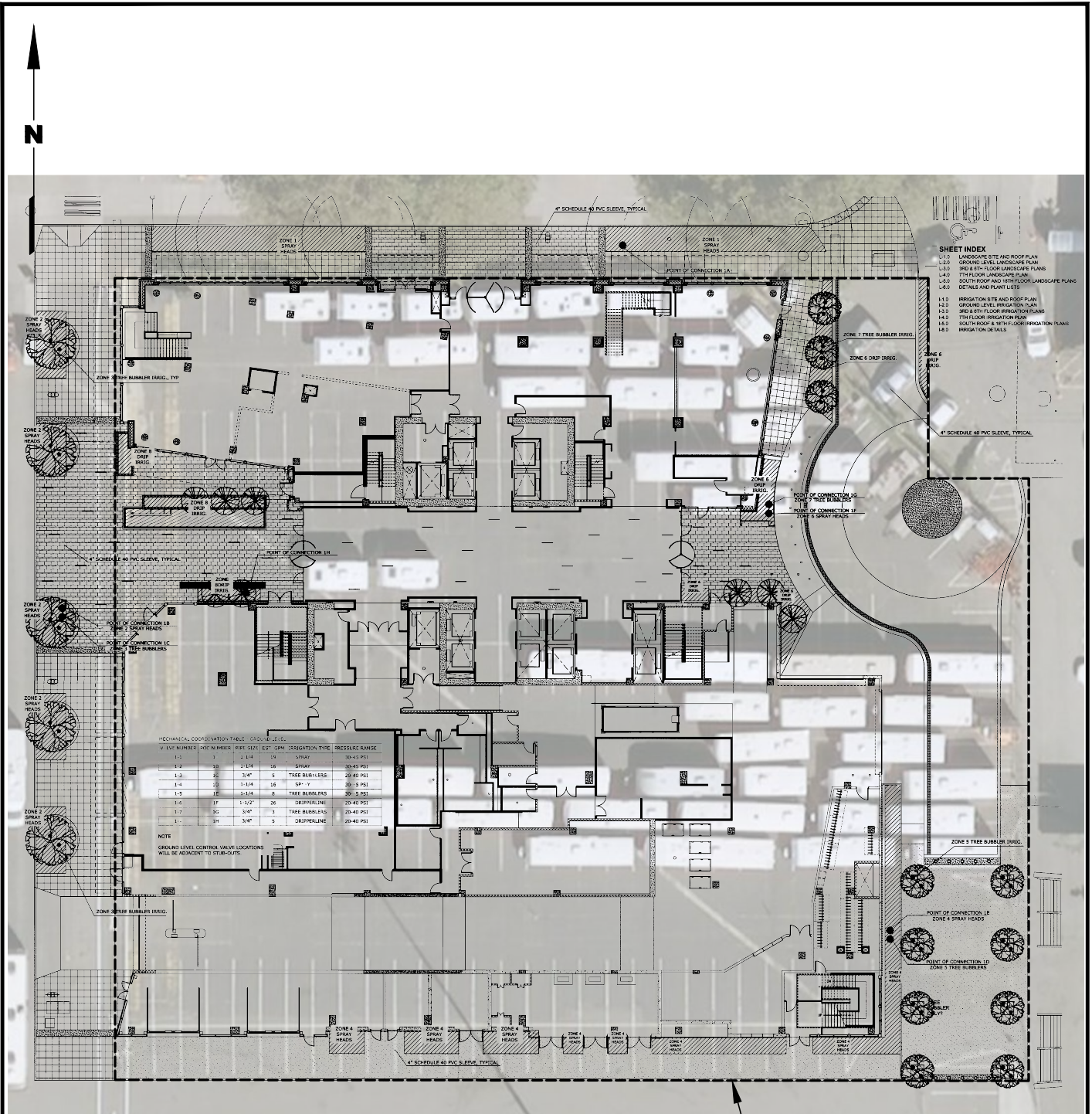
1. Excavation within building footprint for below-ground parking garage shall be approximately 17.5 ft BGS.
2. Approximately 18 inches of material to be removed across entire site. Cap non-landscaped areas outside of building footprint with concrete.
3. Landscaped areas - excavate to 5 ft BGS and provide membrane. Fill with clean soil.
4. Scope of work is within property line.



Source: © 2013 Google; FHO Architects 2013



<p>North Lot Development Property Seattle, Washington</p>	<p>Conceptual East Parcel Plan Development - Below-Ground Foundation Footprint</p>	<p>Figure 2</p>
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- I1.1 IRRIGATION SITE AND ROOF PLAN
- I1.2 GROUND LEVEL IRRIGATION PLAN
- I1.3 3RD & 4TH FLOOR IRRIGATION PLANS
- I1.4 5TH FLOOR IRRIGATION PLAN
- I1.5 SOUTH ROOF & 18TH FLOOR IRRIGATION PLANS
- I1.6 IRRIGATION SCHEDULES

MECHANICAL COORDINATION TABLE - CONTINUED

W/101 NUMBER	POI NUMBER	PIPE SIZE	EST. QPM	IRIGATION TYPE	PRESSURE RANGE
1-1	1	2 1/4"	15	SPRAY	30-45 PSI
1-2	2	2 1/4"	15	SPRAY	30-45 PSI
1-3	3	3/4"	5	TREE BURLERS	20-40 PSI
1-4	4	1-1/4"	16	SP-Y	20-35 PSI
1-5	5	1-1/4"	16	TREE BURLERS	20-35 PSI
1-6	6	1-1/2"	26	DRIP/PERLINE	20-40 PSI
1-7	7	3/4"	5	TREE BURLERS	20-40 PSI
1-8	8	3/4"	5	DRIP/PERLINE	20-40 PSI

NOTE
GROUND LEVEL CONTROL VALVE LOCATIONS WILL BE ADJACENT TO STUB-OUTS

No Scale

East Parcel Property Boundary Line

Source: Integrated Site Design 2013

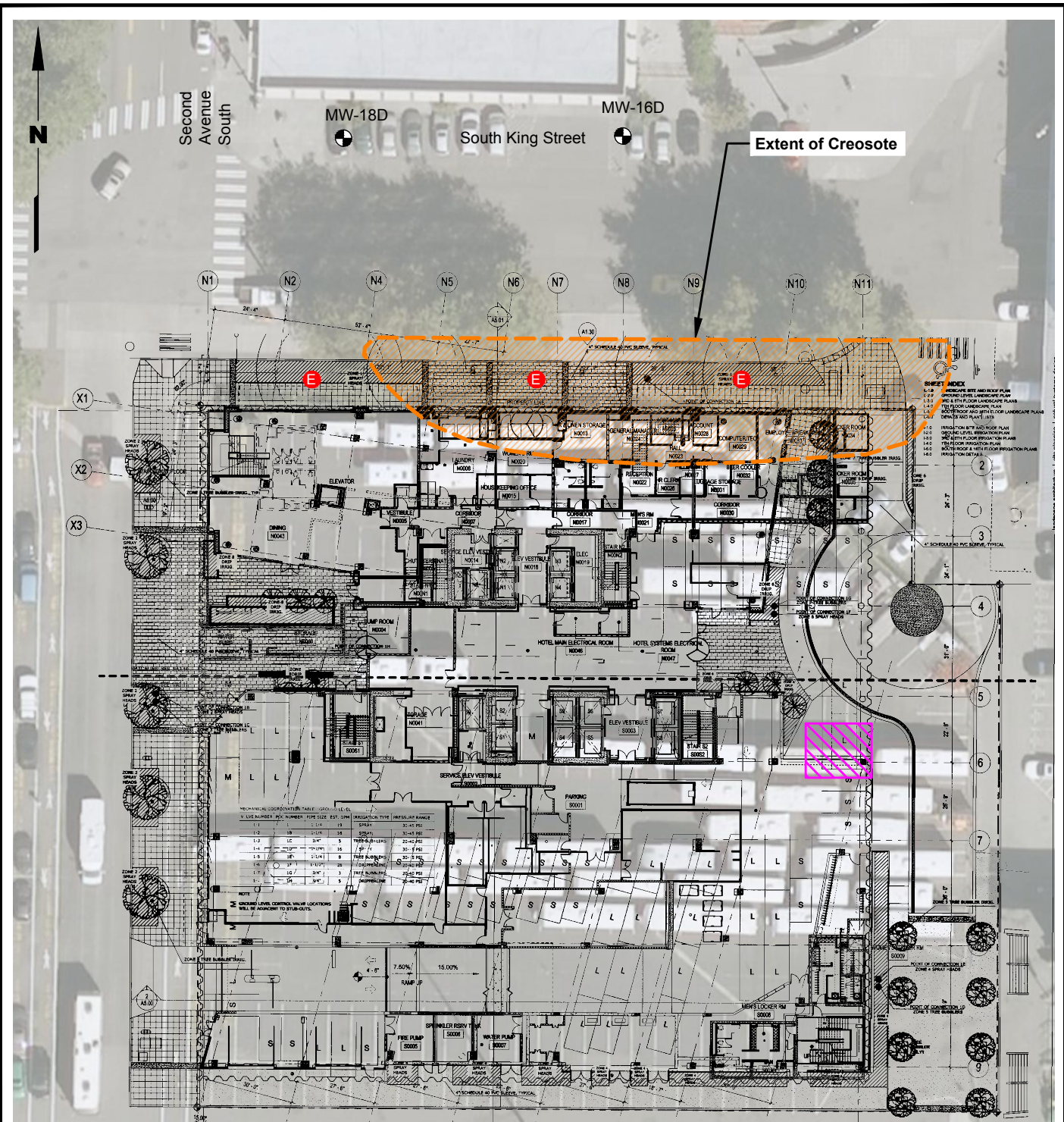


North Lot
Development Property
Seattle, Washington

**Planned Cleanup Action: East Parcel
Areas of Soil Overexcavation
and Protective Pavement at Grade**

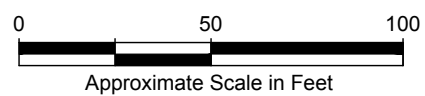
Figure
3

LANDAU ASSOCIATES, INC. | G:\Projects\130700\101014\Figure 4.dwg (A) "Figure 4" 2/19/2014



Legend

- E Possible Extraction Well Location (Actual location dependent on final design and presence of utilities)
- MW-16D Monitoring Well Location and Designation
- Treatment Unit Location (Actual location dependent on final building design. Location would be in northeast corner of first parking level.)



Base map source: Integrated Site Design 2013; FHO Architects 2013



North Lot
Development Property
Seattle, Washington

**Conceptual Groundwater Extraction
and Treatment Layout**

Figure
4

Contractor Specification Plans



255 South King Street **DUST SUPPRESSION PLAN**

February 25, 2014

Owner: 255 S King Street LP

Environmental Consultant: Landau Associates

General Contractor: Sodo Builders, LLC

Site Address: 255 S King Street, Seattle, WA 98134

INTRODUCTION

This plan was developed in order to mitigate and control fugitive dust from construction activities during building of a 23-story hotel tower and 18-story office tower at 255 South King Street in Seattle, WA. The site is currently covered with asphalt and is used as a parking lot for CenturyLink Field and event center.

Construction will require peeling the existing asphalt off the subsurface to allow for installation of shoring elements and excavation of a basement. Soils removed during excavation will be primarily non-engineered fill that was placed during the late 1800s and early-1900s to bring the area's elevation above tide levels. Construction on the development is slated to begin about June 1, 2014.

DUST SUPPRESSION MEASURES

Mitigation Measures for Site

- The contractor will keep dust from escaping the site by keeping trucks on pavement at all times. Trucks will not run through the dirt.
- Cover construction entries/exits with aggregates and steel plates.
- As soils are hauled from the site, they will be wet down if needed to prevent airborne dust.

Mitigation Measures for Paved Roadways

Control methods for track out onto paved roadways include:

- Promptly remove mud, dirt, or similar debris from the paved road inadvertently spilled on paved roadways.
- Control runoff from haul routes, stockpiles, and staging areas.
- Coordinate removal of asphalt necessary for excavation with all disciplines to limit duration of dirt exposure.
- Existing asphalt and concrete will be cut using a wet saw to limit airborne dust whenever possible.
- A vacuum sweeper truck will be employed for street cleaning and dust suppression as necessary.

Mitigation Measures for Unpaved Haul Roads

Fugitive dust control methods from unpaved haul roads include:

- Apply water to the surface of the unpaved haul roads, stockpiles, and transfer points. Control runoff so it does not saturate the surface of the unpaved haul road and cause

track out. If runoff is not or cannot be controlled, try applying gravel to the surface of the unpaved haul road over an area sufficient to control track out.

- Limit vehicle traffic on unpaved haul roads, if necessary, place speed limit signs.
- Aggressively pursue activities that will limit fugitive dust (e.g. aggregates, paving, topsoil, hydro-seeding).
- All excavated soils will be hauled to an appropriate disposal site.
- A gravel pad will be built at the bottom of excavation in order to provide a pad for foundation-installation vehicles to drive on and limit airborne dust.
- Stockpiles of soil will be kept moist or covered if left onsite for any duration before removal or placement. Stockpiling of contaminated soils is not planned.
- A water truck will be employed for dust suppression as necessary.



255 South King Street **SOIL & WATER HANDLING & DISPOSAL PLAN**

February 25, 2014

Owner: 255 S King Street LP

Environmental Consultant: Landau Associates

General Contractor: Sodo Builders, LLC

Site Address: 255 S King Street, Seattle, WA 98134

INTRODUCTION

This report covers excavation, removing, hauling, handling, contamination characterization, transport, and disposal of soils encountered within the limits of the work required to construct the 23-story hotel tower and 18-story office tower at 255 South King Street in Seattle, Washington.

Excavation and off-property disposal of soil is from 0.0 feet to approximately 17.5 feet (ft) below ground surface (BGS) within the building footprint. The excavation will be deeper than 17.5 ft BGS in localized areas for installation of pile caps, elevator pits, and other building components.

Environmental assessments have been performed by Landau Associates, indicating that petroleum, benzene, Polycyclic Aromatic Hydrocarbons (PAHs), and arsenic contaminated soils are anticipated to be encountered within the work area.

SOIL HANDLING & DISPOSAL MEASURES

1. Soil Handling – Education & Oversight
 - a. Each worker will have 40 hours of hazardous material training prior to handling contaminated soils in “Hot Zone”.
 - b. The environmental consultant will have onsite field rep during soil handling in or near “Hot Zone”.
 - c. Regular onsite meetings will be held by property owner, environmental consultant, general contractor, and earthwork subcontractor representative.
2. Soil Handling – Procedures
 - a. Contaminated soils will be excavated directly into trucks and hauled to an approved disposal facility.
 - b. Stockpiling of contaminated soils is not planned.
 - c. Remove contaminated soils from equipment before leaving contaminate zone.
 - d. Air quality monitoring will be conducted during excavation operations by the Environmental Consultant.
 - e. Procure applicable permits/licenses/registrations for vehicles carrying contaminates.
 - a. Collect non-reusable/disposal PPE or materials at completion of remediation and dispose properly. Install a temporary fence around the contaminated site and flag or cone off area of contaminates until they are removed.
 - f. Excavate, transport, and dispose of contaminated soils per applicable rules and regulations.
 - g. Class I and Class IV contaminates are to be disposed of at Cemex of Everett, Allied Waste of Seattle, and Waste Management of Seattle.
 - h. If hazardous soils are found, they will be disposed of at Chemical Waste Management Facility (Columbia Ridge Landfill in Arlington, Oregon).

WATER HANDLING & DISPOSAL MEASURES

1. Water Handling – Procedures
 - a. Sediment trap, filter fence, brush barrier, gravel filter berm, and straw wattles to be used, as necessary, to protect downstream properties
 - b. A Stormwater Pollution Prevention Plan (SWPPP) permit and plan will be available onsite prior to earthwork operations. GC and earthwork subcontractor to jointly manage and implement SWPPP.
 - c. Collect groundwater and surface rain water onsite via Baker Tanks. The water will be tested and disposed of in approved manner via SPU discharge permit. The Environmental Consultant will determine if treatment is necessary and which hazardous treatment to perform. The GC will provide CESCL approved testing.
 - d. Storm drain inlet protection and cleaning of inlets and catch basins procedures to be used to protect existing storm drains.

INSPECTION & MAINTENANCE

1. Environmental Consultant, GC, earthwork subcontractor (project team) will regularly inspect and verify Best Management Practices (BMPs) have been installed prior to commencement.
2. Report air quality issues immediately during excavations.
3. Coordinate contaminants and hazardous substance disposal with approved disposal form and appropriate jurisdiction.
4. Implement Spill Prevention, Control, and Countermeasures Plan (SPCC) when required.



255 South King Street **STORMWATER POLLUTION PREVENTION PLAN**

February 25, 2014

Owner: 255 S King Street LP

Environmental Consultant: Landau Associates

General Contractor: Sodo Builders, LLC

Site Address: 255 S King Street, Seattle, WA 98134

INTRODUCTION

This stormwater pollution prevention plan (SWPPP) establishes the procedures and requirements to reduce pollutants during clearing, grading, excavating, and stockpiling for construction of the 23-story hotel tower and 18-story office tower at 255 South King Street in Seattle, Washington.

This SWPPP has been prepared to comply with the Seattle Stormwater Manual Volume 2 (SMC Chapters 22.800-22.808).

PROJECT TEAM

OWNER

255 South King Street LP
270 South Hanford Street, Suite 100
Seattle, WA 98134

ARCHITECT

Freiheit & Ho Architects, Inc., P.S.
5209 Lake Washington Blvd NE, Suite 200
Kirkland, WA 98033

GENERAL CONTRACTOR

Sodo Builders, LLC
270 South Hanford Street, Suite 100
Seattle, WA 98134

STRUCTURAL ENGINEER

DCI Engineers
818 Stewart Street, Suite 1000
Seattle, WA 98101

CIVIL ENGINEER

D.R. Strong
10604 N.E. 38th Place, Suite 101
Kirkland, WA 98033-7903

STORMWATER TEAM

PATRICK NICKERSON

Construction Manager
patn@sodobuilders.net
(206) 349-4050

Role/Responsibility: Weekly site inspections, record keeping, and monitor compliance with SWPPP

RAY PINNEY

Assistant Superintendent, Lead CESCL

rayp@sodobuilders.net

(206) 245-0502

Role/Responsibility

- Assist in monitoring compliance with SWPPP

DISCHARGE INFORMATION

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)?
Yes No

Are there any surface waters that are located within 50 feet of your construction disturbances?

Yes No

NATURE OF THE CONSTRUCTION ACTIVITY

General Description of Project

A high-rise development including a 23-story hotel tower and 18-story office tower connected by a common atrium and one story of underground parking. Gross foundation footprint is approximately 51,535 square feet.

Size of Construction Project

What is the size of the property (in acres), the total area expected to be disturbed by the construction activities (in acres), and the maximum area expected to be disturbed at any one time?

PROPERTY SIZE: 1.476 acres

TOTAL AREA OF CONSTRUCTION DISTURBANCES: 1.476 acres

MAXIMUM AREA TO BE DISTURBED AT ANY ONE TIME: 1.476 acres

18 BMP ELEMENTS (PER SMC 22.805.020.D)

This project is identified as a Large Project, having more than 1 acre of land disturbing activity. The 18 elements are required by the Stormwater Code (SMC 22.805.020.D) and are further detailed in the following Checklist:

18 ELEMENTS

CHECKLIST TO SELECT LARGE PROJECT CONSTRUCTION BMPs

		Project Name: <u>255 South King Street</u>	
Element	Element	Large Project ^a (check selection)	If not applicable, describe why in the space below.
1	Mark Clearing Limits and Sensitive Areas	Required BMPs: <input checked="" type="checkbox"/> E1.30 Preserving Natural Vegetation <input checked="" type="checkbox"/> E1.35 Buffer Zones	
2	Retain Top Layer	Required BMP: <i>Within the boundaries of the project site, the duff layer, top soil, and native vegetation, if there is any, shall be retained in an undisturbed state to the maximum extent feasible. If it is not feasible to retain the top layer in place, it should be stockpiled on-site, covered to prevent erosion, and replaced immediately upon completion of the ground disturbing activities to the maximum extent feasible.</i>	Top layer removal to be coordinated with perimeter sheet piling to limit dust. Top 17.5 feet to be excavated and disposed of per applicable rules and regulations. Stockpiling of contaminated soils is not planned.
3	Establish Construction Access	Required BMPs: <input checked="" type="checkbox"/> E2.10 Stabilization Construction Entrance <input type="checkbox"/> E2.15 Tire Wash <input checked="" type="checkbox"/> E2.20 Construction Road Stabilization	
4	Protect Downstream Properties and Receiving Waters	Required BMP: <input type="checkbox"/> E3.45 Temporary Sediment Pond (or Basin)	Sediment trap to be used.
5	Prevent Erosion and Sediment Transport from the Site	Required BMPs: <input type="checkbox"/> E3.10 Filter Fence <input type="checkbox"/> E3.15 Brush Barrier <input type="checkbox"/> E3.20 Gravel Filter Berm AND <input checked="" type="checkbox"/> E3.40 Sediment Trap OR <input type="checkbox"/> E3.45 Temporary Sediment Pond (or Basin) OR <input type="checkbox"/> E3.50 Portable Sediment Tank Additional recommended BMPs: <input type="checkbox"/> E2.95 Turbidity Curtain <input type="checkbox"/> E3.30 Vegetated Strip <input checked="" type="checkbox"/> E3.35 Straw Wattles, Compost Socks, and Compost Berms <input type="checkbox"/> E3.55 Construction Stormwater Chemical Treatment <input type="checkbox"/> E3.60 Construction Stormwater Filtration	
6	Prevent Erosion and Sediment Transport From the Site by Vehicles	Required BMPs: <input type="checkbox"/> E3.65 Cleaning Inlets and Catch Basins <input checked="" type="checkbox"/> E3.70 Street Sweeping and Vacuuming	Storm drain inlet protection to be used.
7	Stabilize Soils	Required BMPs for all exposed soils and stockpiles – one or more of the following: <input type="checkbox"/> E1.10 Temporary Seeding <input type="checkbox"/> E1.15 Mulching, Matting, and Compost Blankets <input checked="" type="checkbox"/> E1.20 Clear Plastic Covering <input type="checkbox"/> E1.25 Polyacrylamide for Soil Erosion Protection <input type="checkbox"/> E1.40 Permanent Seeding and Planting <input type="checkbox"/> E1.45 Sodding <input type="checkbox"/> E1.50 Topsoiling <input checked="" type="checkbox"/> E2.45 Dust Control <input type="checkbox"/> E2.50 Gradient Terracing <input type="checkbox"/> E2.75 Surface Roughening	
8	Protect Slopes (refer to the Environmentally Critical Areas ordinance [SMC 25.09.180] for additional requirements and development standards for steep slopes)	Required BMPs – one or more of the following: <input type="checkbox"/> E2.30 Level Spreader <input type="checkbox"/> E2.35 Check Dams <input type="checkbox"/> E2.40 Triangular Silt Dike (Geotextile-Encased Check Dam) <input type="checkbox"/> E2.50 Gradient Terraces <input type="checkbox"/> E2.55 Bioengineered Protection of Very Steep Slopes <input type="checkbox"/> E2.65 Pipe Slope Drains <input type="checkbox"/> E2.70 Subsurface Drains <input type="checkbox"/> E2.75 Surface Roughening <input type="checkbox"/> E2.80 Earth Dike and Drainage Swale <input type="checkbox"/> E2.90 Grass-Lined Channels	Project is on level site with adjacent properties. There is no environmentally critical area within the site.

9	Protect Storm Drains	Required BMPs: <input checked="" type="checkbox"/> E3.25 Storm Drain Inlet Protection <input checked="" type="checkbox"/> E3.65 Cleaning Inlets and Catch Basins <input type="checkbox"/> E3.25 Street Sweeping and Vacuuming	Storm drain inlet protection to be used.
10	Stabilize Channels and Outlets	Required BMPs – one or more of the following: <input checked="" type="checkbox"/> E2.25 Water Bars <input type="checkbox"/> E2.30 Level Spreader <input type="checkbox"/> E2.35 Check Dams <input type="checkbox"/> E2.60 Channel Lining <input type="checkbox"/> E2.80 Earth Dike and Swale <input checked="" type="checkbox"/> E2.85 Outlet Protection <input type="checkbox"/> E2.90 Grass-Lined Channels	
11	Control Pollutants (also refer to Volume 1, the Source Control Technical Requirements Manual)	Required BMPs: <input checked="" type="checkbox"/> C1.15 Material Delivery, Storage and Containment <input checked="" type="checkbox"/> C1.20 Use of Chemicals During Construction <input type="checkbox"/> C1.25 Demolition of Buildings <input checked="" type="checkbox"/> C1.30 Building Repair, Remodeling, and Construction <input checked="" type="checkbox"/> C1.35 Sawcutting and Surfacing Pollution Prevention <input checked="" type="checkbox"/> C1.45 Solid Waste Handling and Disposal <input type="checkbox"/> C1.50 Disposal of Asbestos and Polychlorinated biphenols (PCBs) <input type="checkbox"/> C1.55 Airborne Debris Curtain	No existing buildings to demo. Water to be used to wet down soil to limit dust production.
12	Control Dewatering	Required BMP: <input checked="" type="checkbox"/> C1.40 Temporary Dewatering	
13	Maintain BMPs	Required BMP: <input checked="" type="checkbox"/> All temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as needed to assure continued performance of their intended function.	
14	Inspect BMPs	Required BMP: <input checked="" type="checkbox"/> All BMPs shall be inspected, maintained, and repaired as needed to assure continued performance of their intended function. For projects over one (1) acre, inspections shall be conducted by the Certified Erosion and Sediment Control Lead identified in the Large Project Construction Stormwater Control Plan.	
15	Execute Construction Stormwater Control Plan	Required BMPs: Implement and Maintain an Updated Construction Stormwater Control Plan <input checked="" type="checkbox"/> The Large Project Construction Stormwater Control Plan shall be retained on-site or within reasonable access to the site, and shall be modified as needed. Coordination with Utilities and Other Contractors <input checked="" type="checkbox"/> The primary project proponent shall evaluate, with input from utilities and other contractors, the stormwater management requirements for the entire project, including the utilities, when preparing the Small Project Construction Stormwater Control Plan. Project Close-out <input checked="" type="checkbox"/> All temporary erosion and sediment control BMPs must be removed within 5 business days after final site stabilization is achieved, or after they are no longer needed, whichever is later.	
16	Minimize Open Trenches	Required BMP: In the construction of underground utility lines, where feasible, no more than one hundred and fifty (150) feet of trench shall be opened at one time, unless soil is replaced within the same working day, and where consistent with safety and space considerations, excavated material shall be placed on the uphill side of trenches. Trench dewatering devices shall discharge into a sediment trap or sediment pond.	
17	Phase the Project	Required BMPs: Construction Phasing <input checked="" type="checkbox"/> Phase development projects where feasible in order to prevent soil erosion and, to the maximum extent practicable, the transport of sediment from the site during construction. Seasonal Work Limitations <input checked="" type="checkbox"/> From October 1 through April 30, clearing, grading, and other soil disturbing activities will be subject to additional limitations.	
18	Install Permanent Flow Control and Water Quality Facilities	See Volume 3 for applicable minimum requirements and BMPs.	

SEQUENCE & ESTIMATED DATES OF CONSTRUCTION ACTIVITIES

The construction schedule is as follows:

- Establish stabilized site access and install BMPs, estimated in Summer 2014
- Demolish and remove asphalt to extent needed to drive sheet piles around perimeter of site, marking footprint of foundation, estimated 1 month after construction start
- Temporary site stabilization measures
- Install storm drainage system, including Baker tanks to collect site dewatering
- Mass excavation/tiebacks/excavation for pile caps and obstructions, estimated 12 months after construction start
- Drive piles, estimated 12 months after site preparation
- Finish site grading
- Utility installation
- Construct concrete slab and vapor barrier, estimated 2 months after pile driving
- Remove 5 feet of soil in landscape/planter areas, estimated 24 months after site preparation
- Construction concrete barrier/surface cap, estimated 24 months after construction start
- Complete landscaping

ALLOWABLE NON-STORMWATER DISCHARGES

List of Allowable Non-Stormwater Discharges Present at the Site

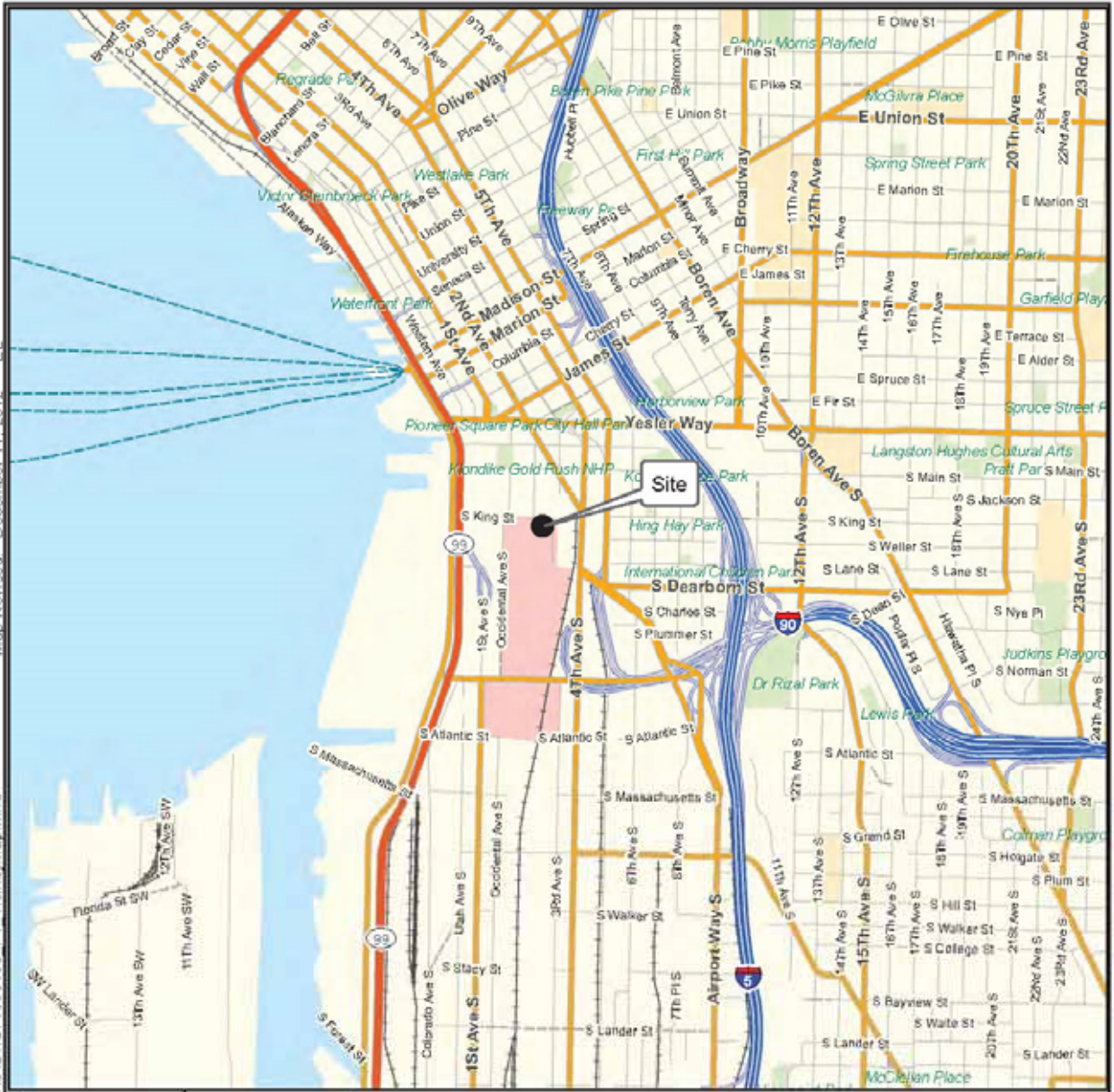
Type of Allowable Non-Stormwater Discharge	Likely to be Present at Your Site?	
Discharges from emergency fire-fighting activities	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
Fire hydrant flushings	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
Landscape irrigation	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
Waters used to wash vehicles and equipment	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
Water used to control dust	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
Potable water including uncontaminated water line flushings	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
Routine external building wash down	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
Pavement wash waters	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
Uncontaminated air conditioning or compressor condensate	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
Uncontaminated, non-turbid discharges of ground water or spring water	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
Foundation or footing drains	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
Construction dewatering water	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO

SITE VICINITY

Map Revised: December 14, 2012

Path: \\red\projects\19\19716001\GIS\1971600100_F1_VicinityMap.mxd

Office: Redmond



Notes

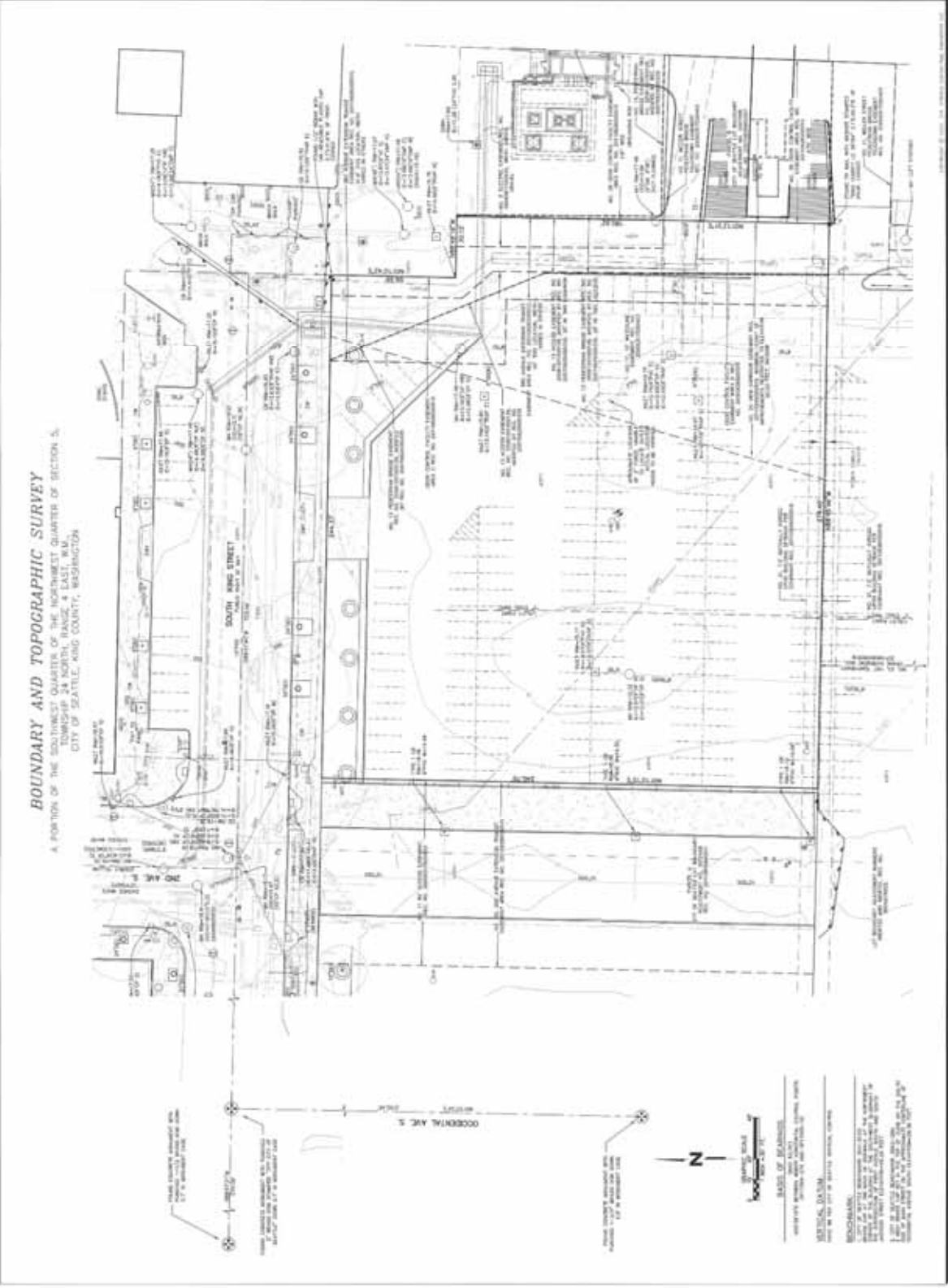
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission.

Data Sources: ESRI Data & Maps, Street Maps 2005
 Transverse Mercator, Zone 10 N North, North American Datum 1983
 North arrow oriented to grid north

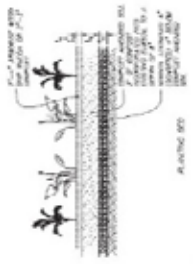
Vicinity Map	
Century Link Field North Lot Phase 2 Project Seattle, Washington	
GEOENGINEERS 	Figure 1

TOPOGRAPHY DRAWING

 <p>DRS DIXIE STRONG CONSULTING ENGINEERS 1000 1st Avenue, Suite 1000 Seattle, WA 98101 Tel: 206.461.1000</p>	<p>NORTH LOT</p>	<p>255 KING STREET SOUTH LP SEATTLE, WASHINGTON 98101 255-251-1000</p>		<p>DATE: 08/20/2014 PROJECT NO.: 140000</p>	<p>PROJECT: 255 KING STREET SOUTH LP SHEET NO.: 201 DATE: 8/20/14 PROJECT NO.: 140000</p>
	<p>SEATTLE, WASHINGTON 98101 KING COUNTY PARCEL NO.</p>	<p>255-251-1000</p>			



TEMPORARY EROSION & SEDIMENTATION CONTROL PLANS



- NOTES:
1. RETAINING WALL SHALL BE CONSTRUCTED AS SHOWN.
 2. SEE GENERAL NOTES FOR DETAILS.

SEE ASSUMPTIONS

TEMPORARY EROSION/STABILIZATION CONTROL (E.S.C.) NOTES

1. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

2. EROSION CONTROL MEASURES SHALL BE DESIGNED TO PREVENT EROSION OF EXPOSED SOILS AND TO STABILIZE EXPOSED SOILS.

3. EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

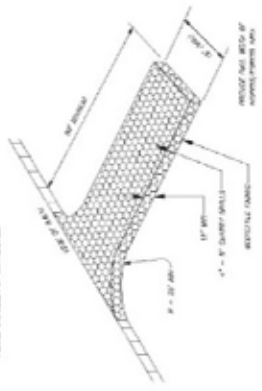
CONSTRUCTION DETAILS

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

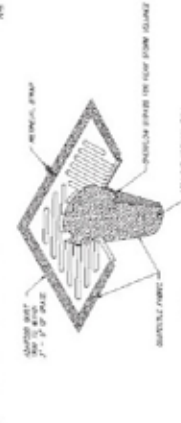
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

- RETAINING WALL CONSTRUCTION DETAILS**
1. RETAINING WALL SHALL BE CONSTRUCTED AS SHOWN.
 2. SEE GENERAL NOTES FOR DETAILS.



SEE ASSUMPTIONS



- NOTES:
1. RETAINING WALL SHALL BE CONSTRUCTED AS SHOWN.
 2. SEE GENERAL NOTES FOR DETAILS.

SEE ASSUMPTIONS

SOIL TYPES

TABLE C-2. SUMMARY OF SOIL PROFILE

Depth (ft)	Material Type	γ (pcf)	Lower Bound V_s (ft/s)	Best Estimate V_s (ft/s)	Upper Bound V_s (ft/s)	Shear Modulus Reduction/Damping Curves
0-10	Sand Fill	100	285	285	350	EPRI: Deep, Cohesionless soils: 0-20 feet
10-30	Sand Fill	110	350	350	400	EPRI: Deep, Cohesionless soils: 0-20 feet
30-40	Dense Sand	125	600	800	900	EPRI: Deep, Cohesionless soils: 21-50 feet
40-50	Glacially Consolidated	130	600	1200	1200	EPRI: Deep, Cohesionless soils: 121-250 feet
50-60	Glacially Consolidated	130	700	1300	1300	EPRI: Deep, Cohesionless soils: 121-250 feet
60-80	Glacially Consolidated	130	1400	1400	1400	EPRI: Deep, Cohesionless soils: 121-250 feet
80-100	Glacially Consolidated	130	1525	1525	1525	EPRI: Deep, Cohesionless soils: 121-250 feet
100-115	Glacially Consolidated	130	1650	1650	1650	EPRI: Deep, Cohesionless soils: 251-500 feet
115-145	Glacially Consolidated	130	1775	1775	1775	EPRI: Deep, Cohesionless soils: 251-500 feet
145-180	Glacially Consolidated	130	2000	2000	2000	EPRI: Deep, Cohesionless soils: 251-500 feet
180-200	Glacially Consolidated	130	2000	2000	2000	EPRI: Deep, Cohesionless soils: 251-500 feet
> 200	Glacially Consolidated	135	2250	2250	2250	Visco-elastic half-space (assumed bedrock)

Notes:

ft = feet

pcf = pounds per square foot

ft/s = feet per second

EROSION & SEDIMENT CONTROLS

Buffer Compliance Alternatives

Are there any surface waters within 50 feet of your project's earth disturbances? YES NO

Perimeter Controls

Silt fence

Silt Fence



The purpose of silt fence is to prevent the flow of sediment from leaving the desired site and entering natural drainage ways or storm drainage systems by slowing storm water runoff and causing the deposition of sediment at the structure. Silt fencing encourages sheet flow and reduces the potential of developing ruts and gullies.

BMP wholesales silt fence custom made to our specifications and colours. Black and Orange fabric is stocked in both large master rolls and smaller length rolls for silt plow and field application.

Sediment Track-Out

Quarry spill entrance and exit to be installed.

Stockpiled Sediment or Soil

See Soil & Water Handling & Disposal Plan.

Minimize Dust

See Dust Suppression Plan.

Soil Compaction

See GeoEngineers geotechnical report dated 1/25/13.

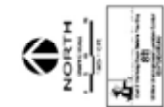
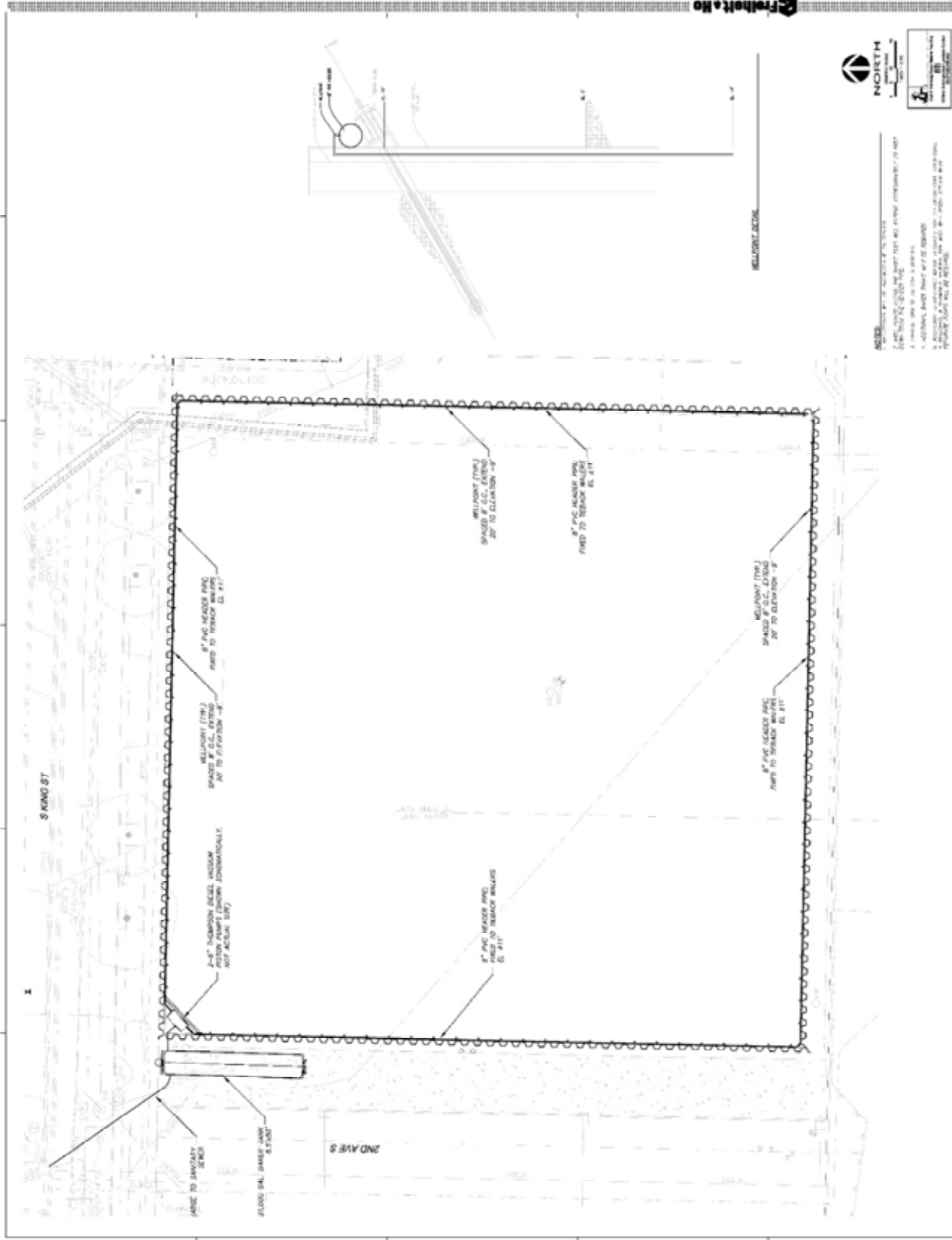
Storm Drain Inlets

SILT SAC



DEWATERING PLAN

Dewater by pump to holding tank (Baker sediment tank) check for turbidity and PH to meet EPA standard before discharge to storm system



- NOTES:
1. DEMONSTRATION BUILDING TO BE DEMOLISHED.
 2. ALL EXISTING UTILITIES TO BE REMOVED.
 3. ALL EXISTING FOUNDATIONS TO BE REMOVED.
 4. ALL EXISTING STRUCTURES TO BE DEMOLISHED.
 5. ALL EXISTING UTILITIES TO BE REMOVED.
 6. ALL EXISTING FOUNDATIONS TO BE REMOVED.
 7. ALL EXISTING STRUCTURES TO BE DEMOLISHED.
 8. ALL EXISTING UTILITIES TO BE REMOVED.
 9. ALL EXISTING FOUNDATIONS TO BE REMOVED.
 10. ALL EXISTING STRUCTURES TO BE DEMOLISHED.

Safety > Spill Control Supplies > Spill Kits and Stations

OIL-DRI Spill Kit, 55 gal., Universal, Can

☆☆☆☆☆ | [Write a Review](#) | [Read all Reviews](#) | [Read all Ask & Answer](#)

[Share This Product](#)

Spill Kit, Container Type Drum, Container Size 65 gal., Volume Absorbed Per Pkg. 55 gal., Fluids Absorbed Universal, Includes (20) Universal Socks (48" L), (6) Universal Pillows, (75) Universal Bonded Pads, (6) Disposal Bags with Ties, Protective Gloves, Goggles, Emergency Response Guide Book, Overpack (65 gal.)

Grainger Item #	4DKV1
Price (ea.)	\$607.50
Brand	OIL-DRI
Mfr. Model #	L90965
UNSPSC #	47131905
Ship Qty.	1
Sell Qty. (Will-Call)	1
Ship Weight (lbs.)	74.0
Availability	Typically in Stock
Catalog Page No.	2853
Country of Origin	USA
<small>(Country of Origin is subject to change.)</small>	



[Enlarge Image](#)

Washing of Equipment and Vehicles

Broom and shovel use to clean to clean equipment and tracks (metal tractor), no chemicals beyond vehicle windshield cleaning. Minimum washing of tires before equipment leaves site.

Hazardous or Toxic Waste

See Soil & Water Handling & Disposal Plan.

PERMITTEE NAME/ADDRESS (Include Facility Name and Address if Different)
 NAME _____
 ADDRESS _____

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
 DISCHARGE MONITORING REPORT (DMR)
 (10-96)

Form Approved
 OMB No. 2040-0004
 Approval expires 05-31-98

PERMIT NUMBER _____
 DISCHARGE NUMBER _____

FACILITY LOCATION _____

MONITORING PERIOD
 FROM YEAR MO DAY TO YEAR MO DAY
 (20-21) (22-23) (24-25) (26-27) (28-29) (30-31)

Check here if No Discharge
 NOTE: Read instructions before completing this form

PARAMETER (32-37)	X	(3 Caret Only) QUANTITY OR LOADING (33-35)			(4 Caret Only) QUALITY OR CONCENTRATION (36-41)				NO. EX. (42-43)	FREQUENCY OF ANALYSIS (44-46)	SAMPLE TYPE (49-50)
		AVERAGE (33-34)	MAXIMUM (35-36)	UNITS (37-38)	MINIMUM (39-40)	AVERAGE (41-42)	MAXIMUM (43-44)	UNITS (45-46)			
	SAMPLE MEASUREMENT										
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	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER TYPED OR PRINTED	<small>VERIFY ACCURACY OF ALL DATA AND ATTACHMENTS AND PREPARED FOR SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT. THE SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT IS REQUIRED FOR ALL REPORTS. THE SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT IS REQUIRED FOR ALL REPORTS. THE SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT IS REQUIRED FOR ALL REPORTS. THE SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT IS REQUIRED FOR ALL REPORTS.</small>	TELEPHONE	DATE	
		NUMBER	YEAR	MO

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

GeoEngineers Vapor Intrusion Evaluation

May 21, 2013

255 South King Street LP
c/o SODO Builders LLC
270 S Hanford Street, #100
Seattle, Washington 98134

Attention: Cathy Poshusta

Subject: Vapor Intrusion Evaluation
255 S King Street Project
Seattle, Washington
File No. 19716-001-01

INTRODUCTION AND SCOPE OF SERVICES

This letter summarizes GeoEngineers, Inc. (GeoEngineers) review of vapor intrusion mitigation recommendations at the planned 255 S King Street redevelopment project in Seattle, Washington. The purpose of our services was to evaluate environmental site characterization data and provide an opinion and recommendation related to gasoline and benzene vapor intrusion (if any) and mitigation (if necessary) for the proposed building that will occupy this property.

The services provided by GeoEngineers, Inc. consisted of:

1. Review environmental reports prepared by others, vapor barrier recommendations as outlined by others and Washington State Department of Ecology opinions related to vapor mitigation. We reviewed the following reports:
 - a. Consent Decree, North Lot Development Site; no date and unsigned.
 - b. Consent Decree Exhibits A, B, C, D, E, F, G (Site Diagram; Cleanup Action Plan dated July 2011, Cleanup Action Plan Addendum undated, unsigned draft; Environmental Covenant undated and unsigned; Public Participation Plan dated 2013; Legal Description; Form Agreement [Agreement of Successors], unsigned and undated).
 - c. Remedial Investigation Report, dated May 23, 2011 by Landau Associates.
 - d. Feasibility Study, dated May 23, 2011 by Landau Associates. This report includes a Focused Soil Vapor Investigation.
 - e. Ecology Review Draft No. 2, Revised Cleanup Action Plan, dated August 1, 2012.



- f. Ecology Opinion dated September 6, 2012.
 - g. Final Feasibility Study Addendum, dated September 27, 2012, by Landau Associates.
 - h. Site Survey by DR Strong dated October 19, 2012.
 - i. Draft Cleanup Action Plan Addendum, undated, unsigned, circa February 2013.
 - j. Overall Elevations (North, East and South, West) by Freiheit & Ho dated April 16, 2013.
 - k. Conversations with 255 S King St LP regarding construction techniques, May 2013.
2. Identify whether a design alternative to vapor mitigation is feasible.
 3. Attend up to two meetings with representatives of 255 S. King Street LP.
 4. Prepare a letter report summarizing our review and opinion related to a vapor mitigation strategy that matches development plans.

REVIEW FINDINGS AND OPINION

Based on our review it is unclear that vapor intrusion risk exists for the 255 S. King Street subject parcel (aka East Parcel of the North Lot Development) and the recommendation for a vapor barrier appears unnecessary. Our opinion is based on three elements as outlined below:

1. **Volatile Sources Are Limited.** We understand that a recommendation was made to mitigate the potential for volatiles emanating from benzene and gasoline contamination alleged to be present on the 255 S King Street parcel. Landau Associates (Landau) indicated in the September 7, 2012 Final Feasibility Study Addendum that “concentrations of benzene and gasoline above the cleanup levels are locally present in soil adjacent to the creosote layer at the base of the fill material and could pose a vapor intrusion risk to users of the below-ground parking structure (pg 2-2).” Ecology agreed with this recommendation in their September 6, 2012 opinion letter. It appears that some of the concern related to volatiles which were extensive on the West Parcel may have carried over to the East Parcel as these two properties were divided when new ownership took over development of the East Parcel. This “carry-over” may have biased decision-making for an appropriate remedy on the East Parcel.
 - a. Data indicate that hydrocarbons were not detected in soil samples obtained within the upper 15 feet of the East Parcel (the upper portion of which is the vadose/unsaturated where soil vapors would be expected to be highest, but in this case, a source does not appear to be present).
 - b. Data indicate that even though hydrocarbons were present in soil at concentrations above cleanup levels below 15 feet (four samples); only one sample, B-38, significantly exceeds the MTCA cleanup level. The soil data below 15 feet at the East Parcel show that the source material is localized and submerged below water. A “deep” groundwater sample at this location (MW-9D, with well screen from 15 to 20 ft) has only slightly exceeded the MTCA cleanup level for the vapor intrusion pathway (13 to 16 µg/l of benzene detected in groundwater vs. a cleanup level of 10.5 µg/l as calculated by Landau for the occupational groundwater to vapor intrusion scenario). Landau, Nov 19, 2010 Focused Soil Vapor Investigation, calculated a cleanup level of 10.5 µg/l by establishing a modified Method B indoor air cleanup level of 1.4 µg/m³ based on the occupational scenario (note that the

- MTCA Method B cleanup level for the groundwater to indoor air for unrestricted use is 2.4 µg/l). Therefore the potential for vapor intrusion risk appears low based on the Landau-collected site data and analysis.
- c. Additionally, hydrocarbons were only detected in groundwater at one “deep” well location (MW-9D, screened from 15 to 20 ft) at the East Parcel. Neither benzene, nor gasoline were detected in the shallow groundwater sample (MW-9S, screened from 5 to 15 ft) obtained from this same location (assumed to be directly above the “creosote layer”). Therefore, the groundwater results at the East Parcel indicate that only one exceedance occurred out of 13 wells tested within or immediately adjacent to the East Parcel. The hydrocarbon exceedance in groundwater appears to be from a sample obtained directly within the “creosote layer” in the northeast corner of the parcel. Therefore, it is our opinion that the soil and groundwater data suggest that vapor intrusion risk is very low.
2. **Vapor Analysis Based on Worst Case Scenario Shows Limited Threat.** Landau, November 19, 2010 Focused Soil Vapor Investigation, evaluated the vapor intrusion potential by collecting three soil vapor samples from the NW portion of the West Parcel, where hydrocarbon concentrations were highest (for soil across both the West and East Parcels). Their study concluded, “Using the soil vapor screening level developed in accordance with Ecology’s draft guidance with a modified vapor attenuation factor (VAF) of 0.01 (i.e. soil vapor screening level of 140 µg/m³), all of the benzene soil vapor concentrations detected at the Property are less than the screening level and, therefore, remedial action would not be required. The results of the recent soil and soil vapor sampling indicate that the benzene contamination in soil at the Property does not pose a potential vapor intrusion risk.” Landau then recommended that “in an effort to avoid prolonged technical discussions with Ecology that could impact the schedule for development of the Property, NLD (North Lot Development LLC) proposed to move forward with proposed hotspot excavation (pg 4-1).” This recommendation resulted in additional excavation on the West Parcel to remove the hydrocarbon source.
- a. As GeoEngineers has outlined in elements 1 and 2 of this letter, the data and analysis provided by Landau concluded that “remedial action would not be required” related to vapor intrusion risk. Their vapor sampling results represent a worst case scenario (from testing completed at the West Parcel, where the maximum concentration of benzene on the West Parcel is 10 times greater than the maximum benzene concentration on the East Parcel). The Landau analysis focused on the vadose zone at the West Parcel where vapors could readily accumulate, which similarly would reflect a worst case scenario. The source of contamination on the East Parcel is submerged below water, limiting the vapor migration potential. Additionally, whereas Landau and the West Parcel developer were able to make a conservative decision to excavate volatile hydrocarbon-contaminated soil in the shallow vadose zone on the West Parcel “to avoid prolonged technical discussions with Ecology,” it is GeoEngineers opinion based on the data that we reviewed, that it is more appropriate to select a remedy that is based on technical data that has been acquired for this site and make that case to Ecology. In our opinion, there is sufficient evidence based on the data obtained, vapor intrusion analysis prepared by Landau and the construction techniques for the building (element 3 below) to show that a vapor barrier above and beyond the sheet pile barrier walls and seal-slab-system is not necessary for the East Parcel.



3. **Construction Techniques and Elements Prohibit Vapor Intrusion.** Based on our conversations with 255 S King Street LP, we understand that the building will be constructed as follows: Completely integrated, contained and welded steel-sheet-pile wall that will extend to depths of 40 feet below ground surface and a minimum 26-inch-thick (impermeable/watertight) seal-slab concrete floor slab system. The top 12 inches of the seal-slab system consists of an impermeable hycrete concrete floor slab that will connect to the perimeter sheet pile walls and form an impermeable seal using bentonite plugs and bands. The objective of this garage system is to prevent water from entering the walls, floor slab and/or any joints. Barrier and joint details are provided in Appendix A. This below grade structure will extend 10+ feet below the water table and has been designed to be watertight. An element of the hycrete concrete product is that the supplier provides a warranty to fill cracks that may develop in order to maintain the watertight nature of the facility. We understand that after expiration of a 10-year warranty 255 S King Street LP will operate under an operations and maintenance plan to maintain the integrity of the watertight barrier/floor.
 - a. Based on the products used (steel walls and hycrete floor) and watertight design, it is GeoEngineers' opinion that this is a highly impermeable system that not only will prevent water, but also vapor intrusion. The recommendation to add a vapor barrier to this system adds unnecessary construction logistical burden and a complexity that will result in significant additional cost for very little, if any, additional environmental benefit.

LIMITATIONS

We have prepared this data report for 255 S King Street LP for the 255 S King Street project. 255 S King St LP may distribute copies of this report to 255 S King Street LP and 255 S King Street LP authorized agents and regulatory agencies as may be required for the project.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted practices for environmental services in this area at the time this report was prepared.

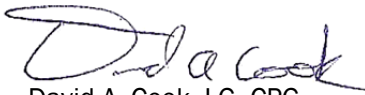
Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments should be considered a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Please refer to Appendix B titled "Report Limitations and Guidelines for Use" for additional information pertaining to use of this report.



We appreciate the opportunity to submit this report. Please contact us if you have any questions related to this review or require additional information.

Sincerely,
GeoEngineers, Inc.



David A. Cook, LG, CPG
Principal

DAC:CSV

Attachments:

Appendix A. Hycrete Joint Details

Appendix B. Report Limitations and Guidelines for Use

Disclaimer: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

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APPENDIX A
Hycrete Joint Details

PROJECT: HOME PLATE CENTER PHASE 2



HYCRETE JOINT DETAILS

Contacts:

Randy Cooley 425-213-9818
Nelson Macalintal 425-679-1485
www.hycrete.com
June 27, 2012

WATER STOP JOINING INSTRUCTIONS

Water stops are the most important segment for 100 % hydrophobic concrete system. Waterstops are used to make watertight joints around penetrations and construction joints.

Due to site requirements and different application, some time we can come across joining of waterstop ends.

Fig (A), Fig (B), Fig (C) shows the most common wrong ways to join the water stop



Figure A



Figure B



Figure C

For proper joining, cut ends with sharp tool at 45 degree angle, and then place ends over one another, as shown in Fig (D), Fig (E), Fig (F)



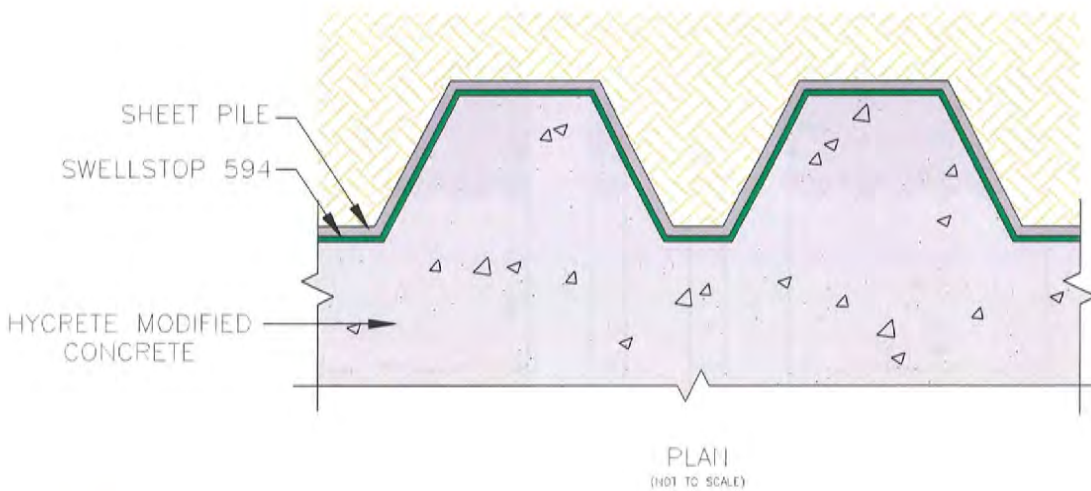
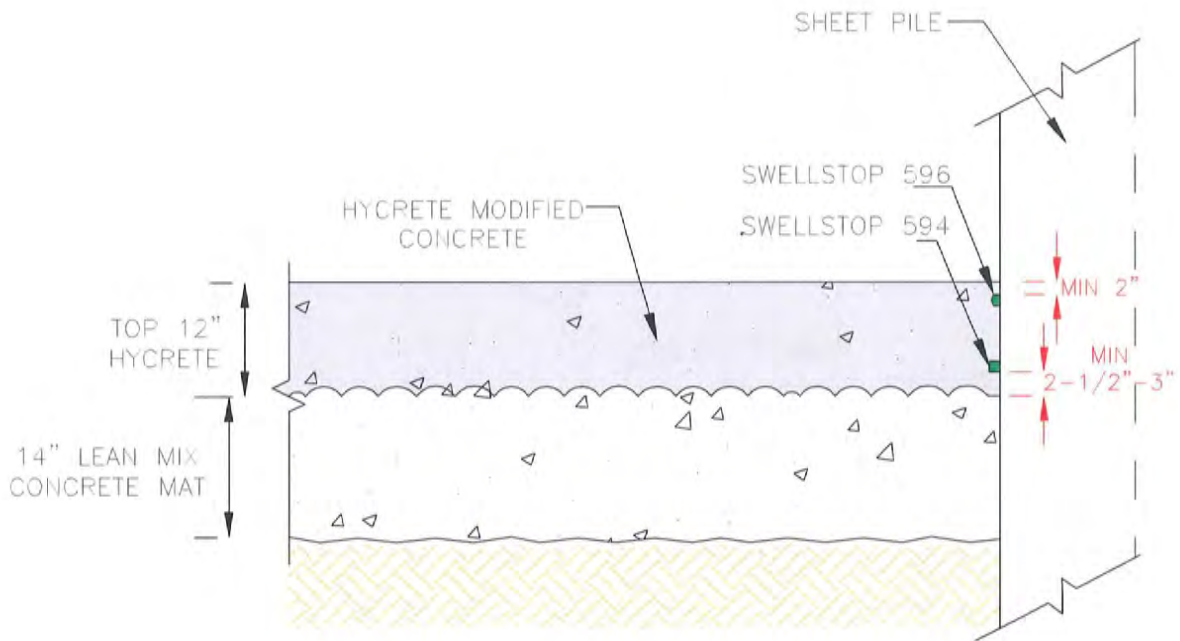
Figure D



Figure E




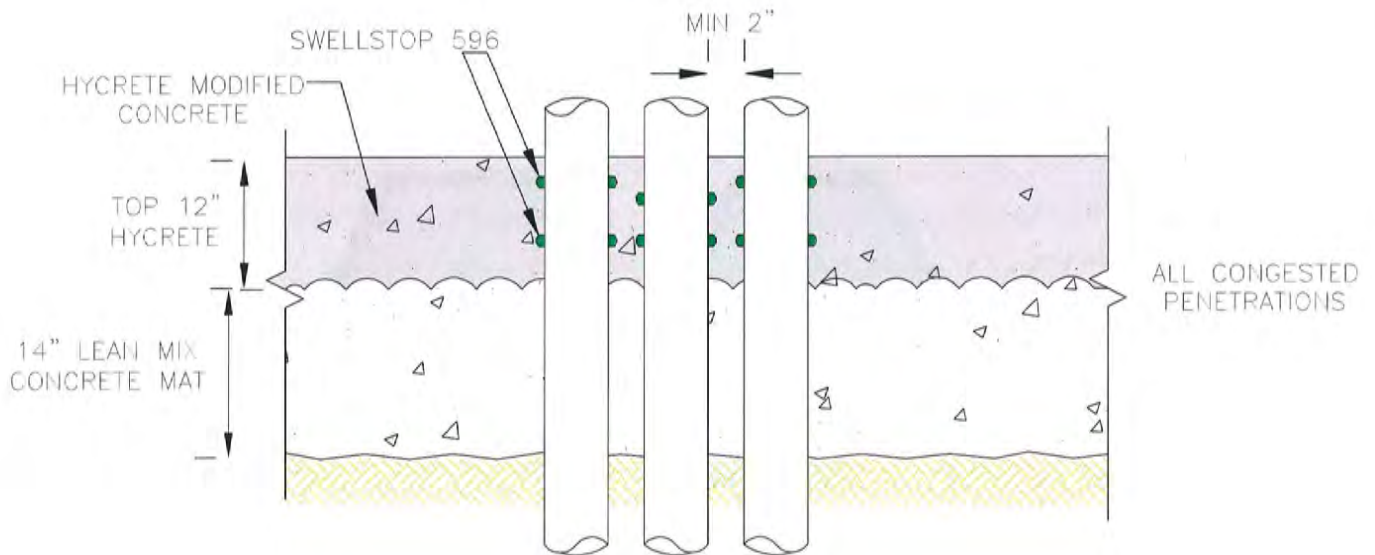
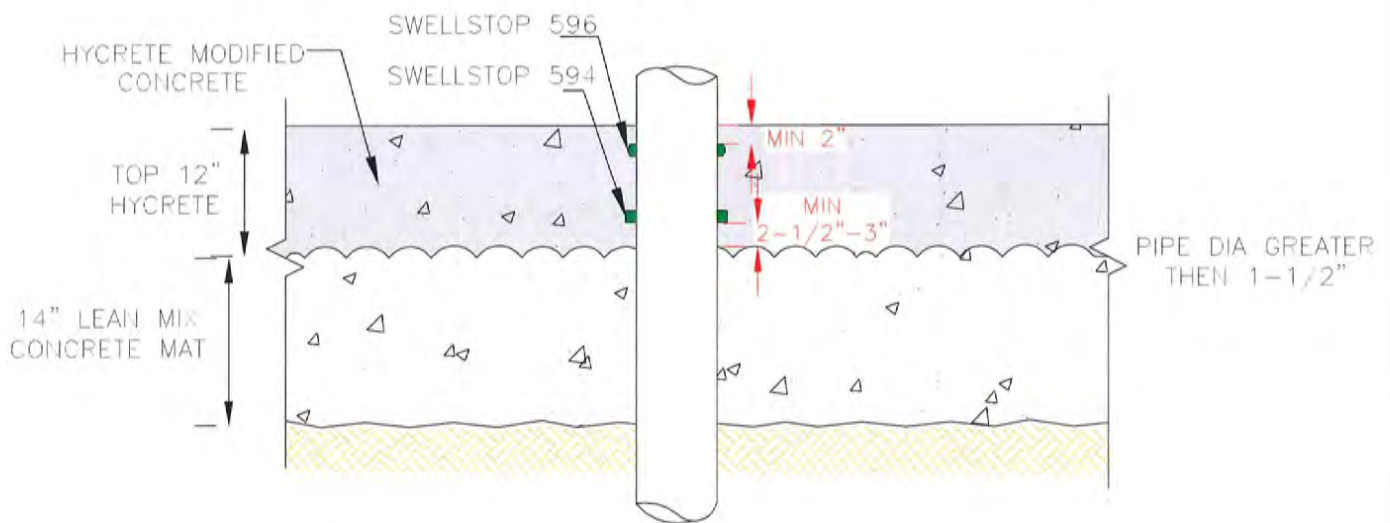
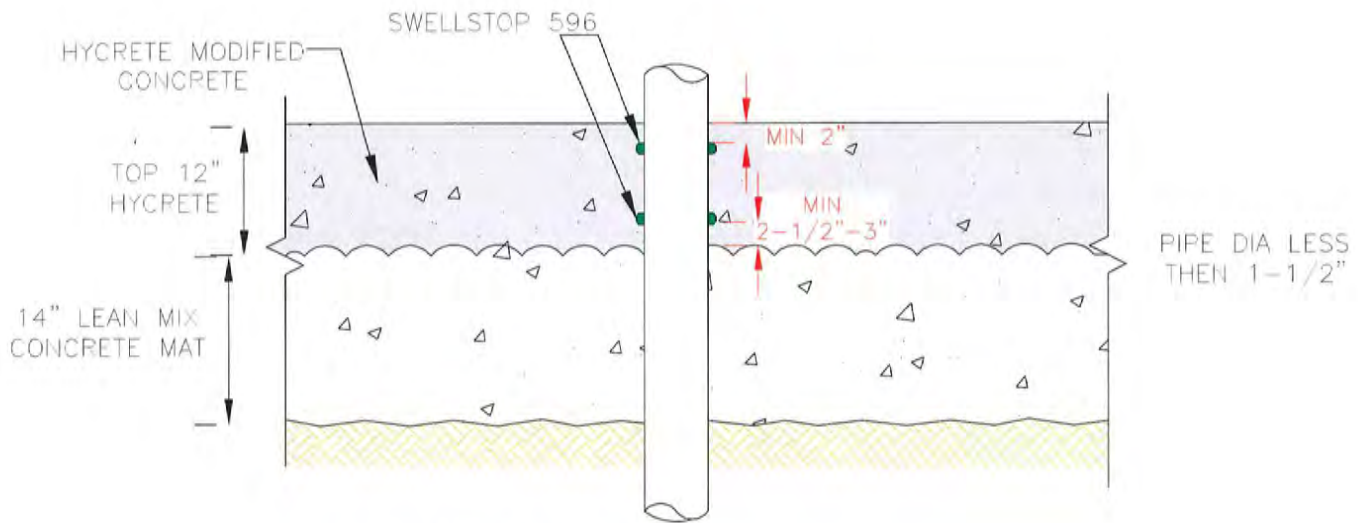
Figure F



Note:


Expanding Joint Waterstop Should Be Glued To The Surface. Surface Of The Joint Must Be Smooth, Clean & Free From Any Laitance Prior To Waterstop Installation .

Project#1462	Slab On Grade-Sheet Pile Section Detail		 462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com
Date:6/27/12	Home Plate Centre Phase 2		
Drwn By: Fazal	Sheet#001	NTS	
Chkd By: NHM			

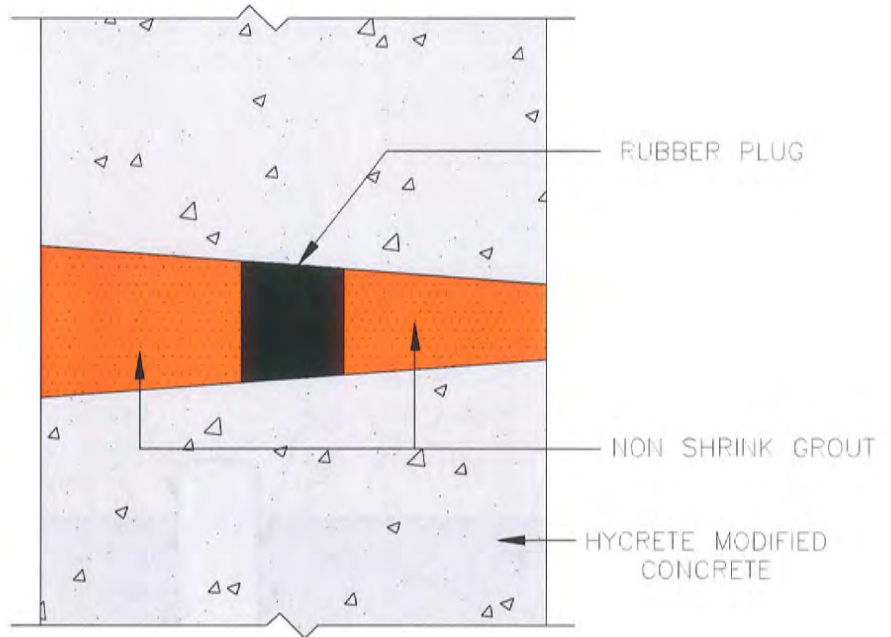


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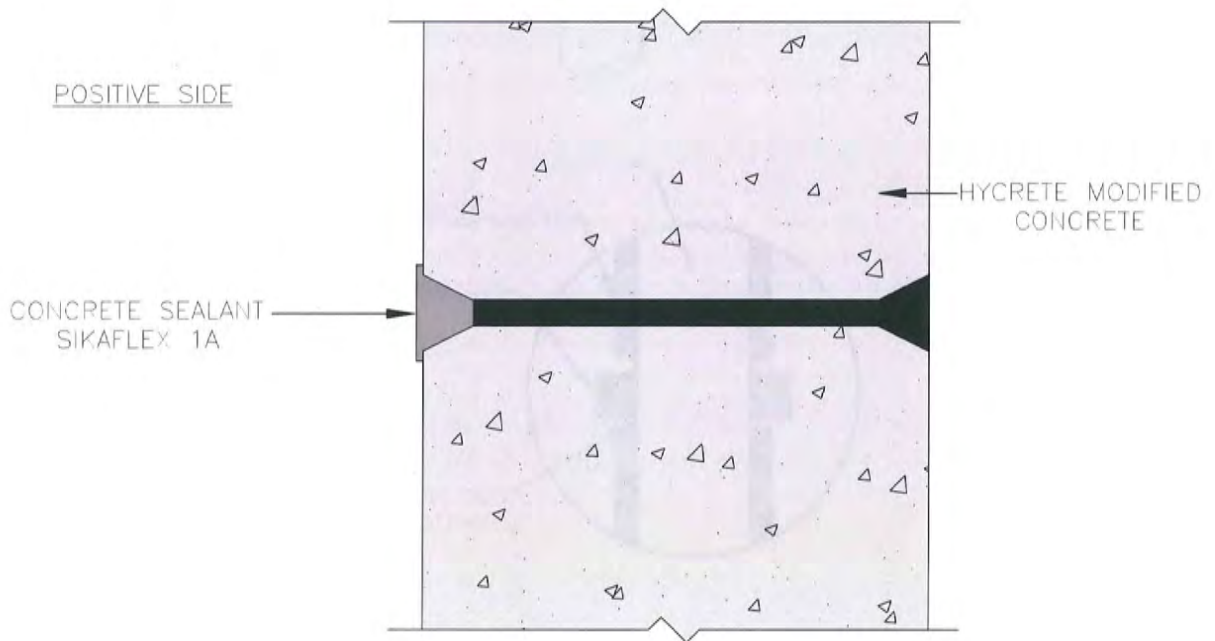
Expanding Joint Waterstop Should Be Glued To The Surface. Surface Of The Joint Must Be Smooth, Clean & Free From Any Laitance Prior To Waterstop Installation .

Project#1462	Penetration Detail		 462 Barell Avenue Carlstadt, NJ 07072 (201) 386 8110 www.hycrete.com
Date: 6/27/12	Home Plate Centre Phase 2		
Drwn By: Fazal	Sheet#002	NTS	
Chkd By: NHM			

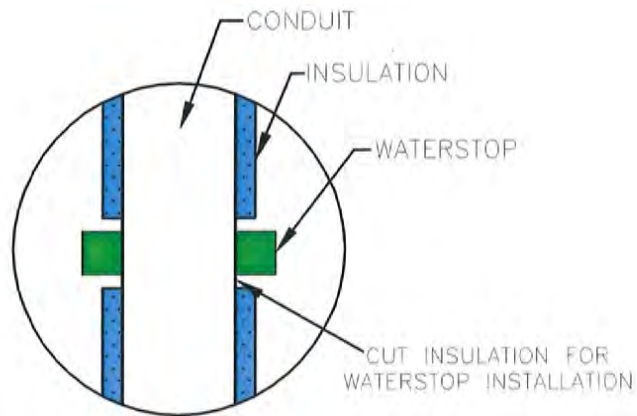
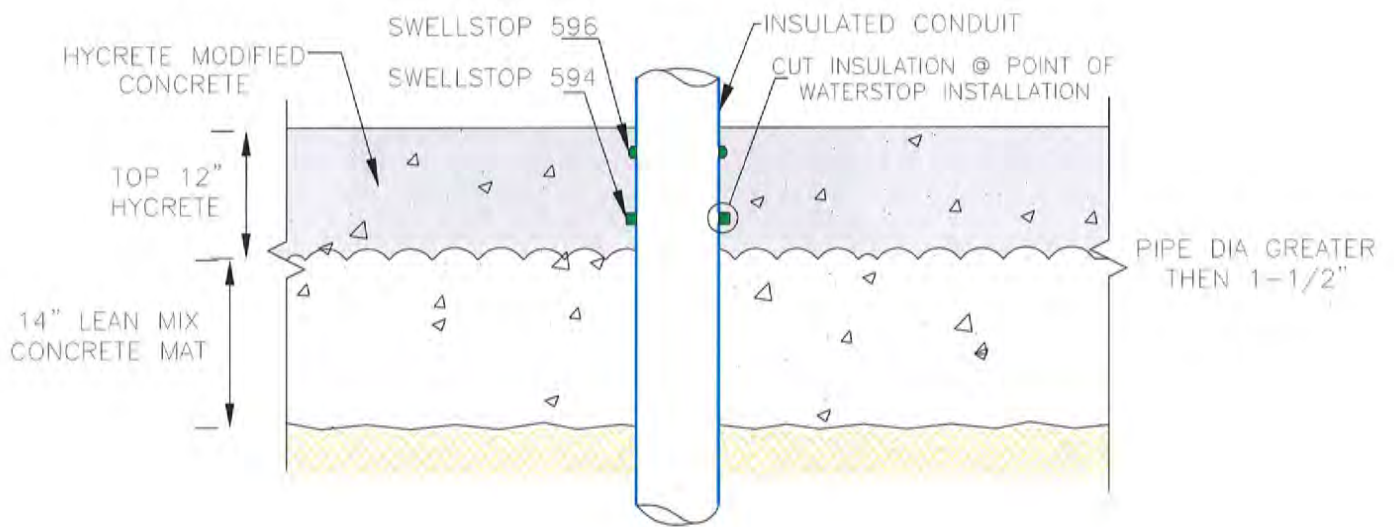
POSITIVE SIDE



POSITIVE SIDE




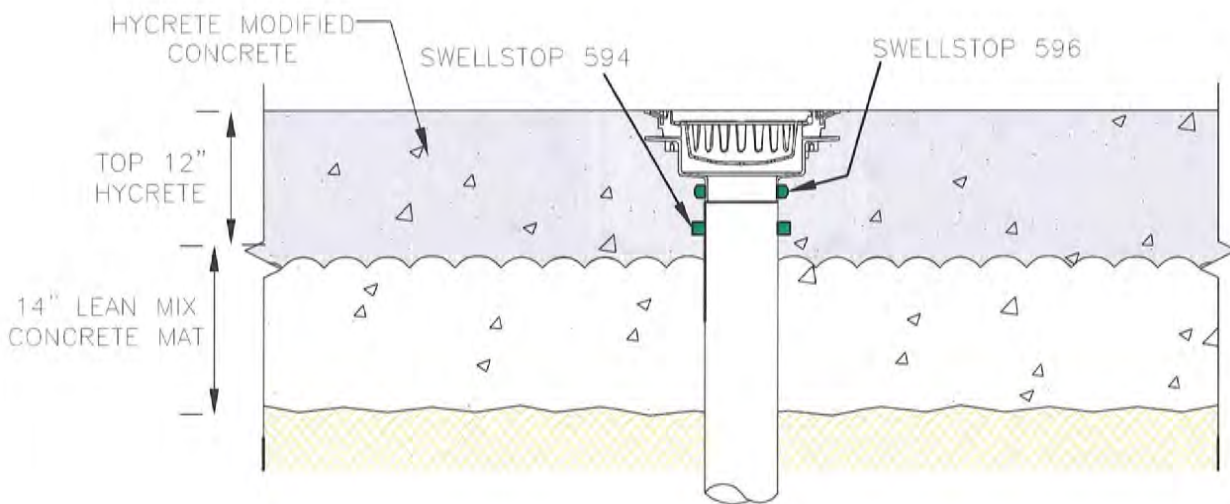
Project#1462	Tapered Tie Hole & Snap Tie Detail	 462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com
Date:6/27/12	Home Plate Centre Phase 2	
Drwn By: Fazal	Sheet#002A	NTS
Chkd By: NHM		



Note:


Expanding Joint Waterstop Should Be Glued To The Surface. Surface Of The Joint Must Be Smooth, Clean & Free From Any Laitance Prior To Waterstop Installation .

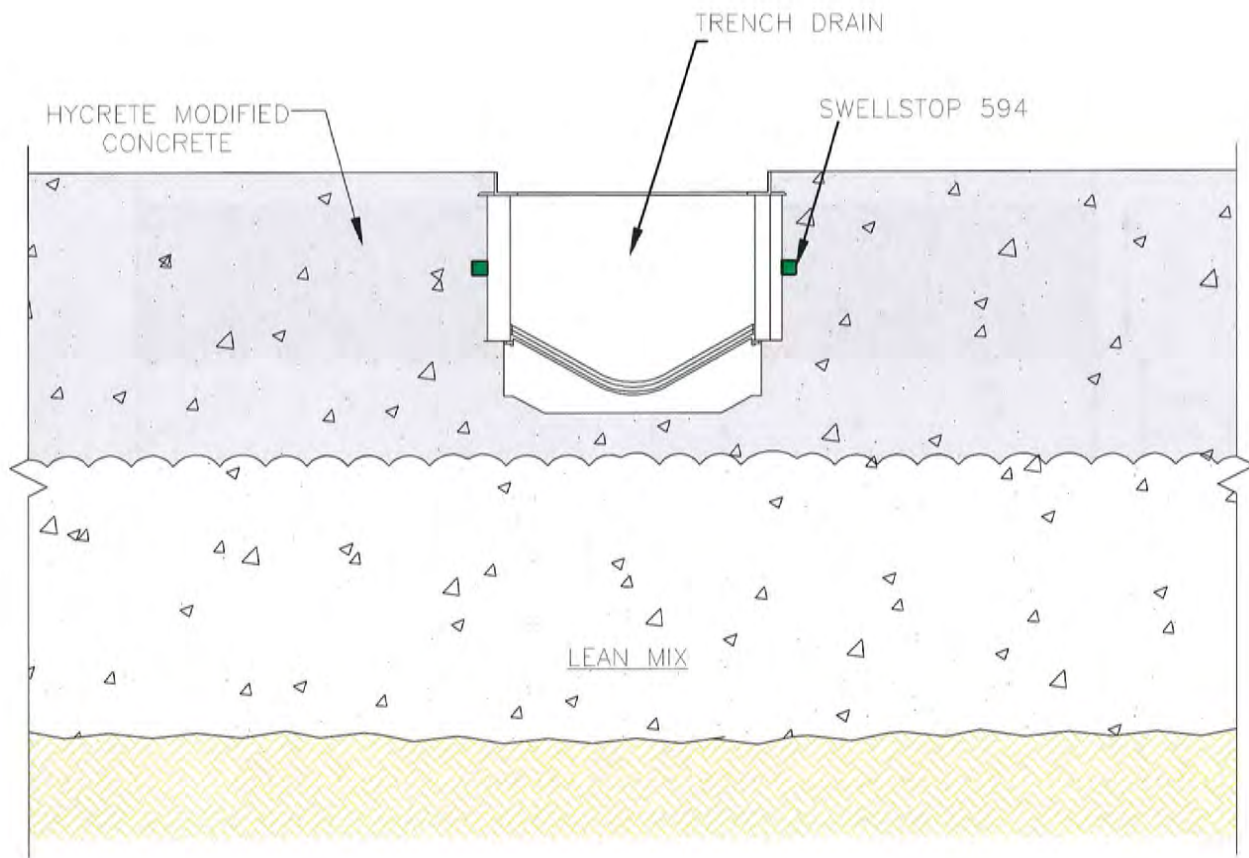
Project#1462	Penetration Detail		 462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com
Date: 6/27/12	Home Plate Centre Phase 2		
Drwn By: Fazal	Sheet#002B	NTS	
Chkd By: NHM			



Note:


Expanding Joint Waterstop Should Be Glued To The Surface. Surface Of The Joint Must Be Smooth, Clean & Free From Any Laitance Prior To Waterstop Installation .

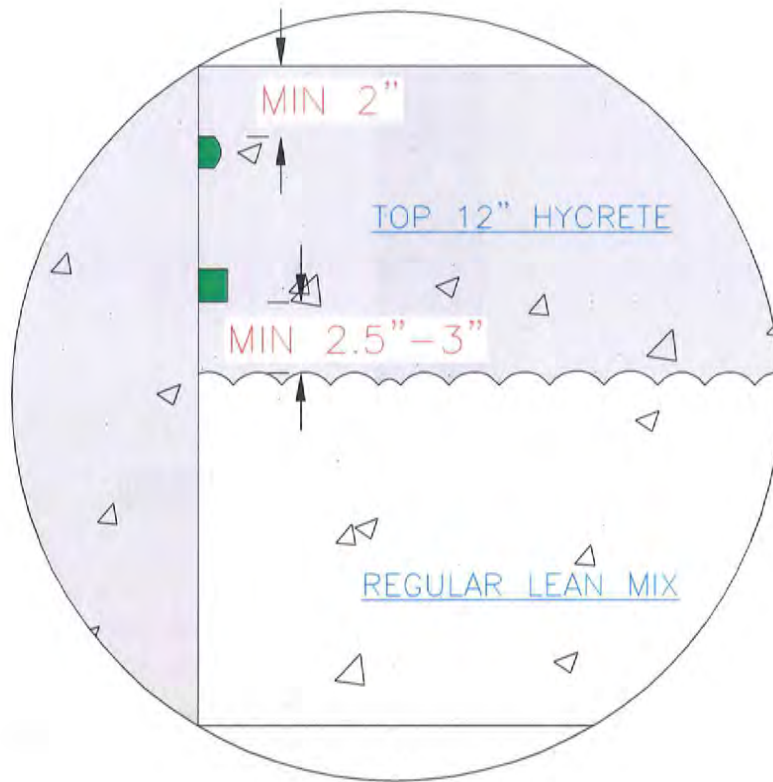
Project# 1462	Penetration Detail		 462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com
Date: 6/27/12	Home Plate Centre Phase 2		
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Chkd By: NHM			




Note:

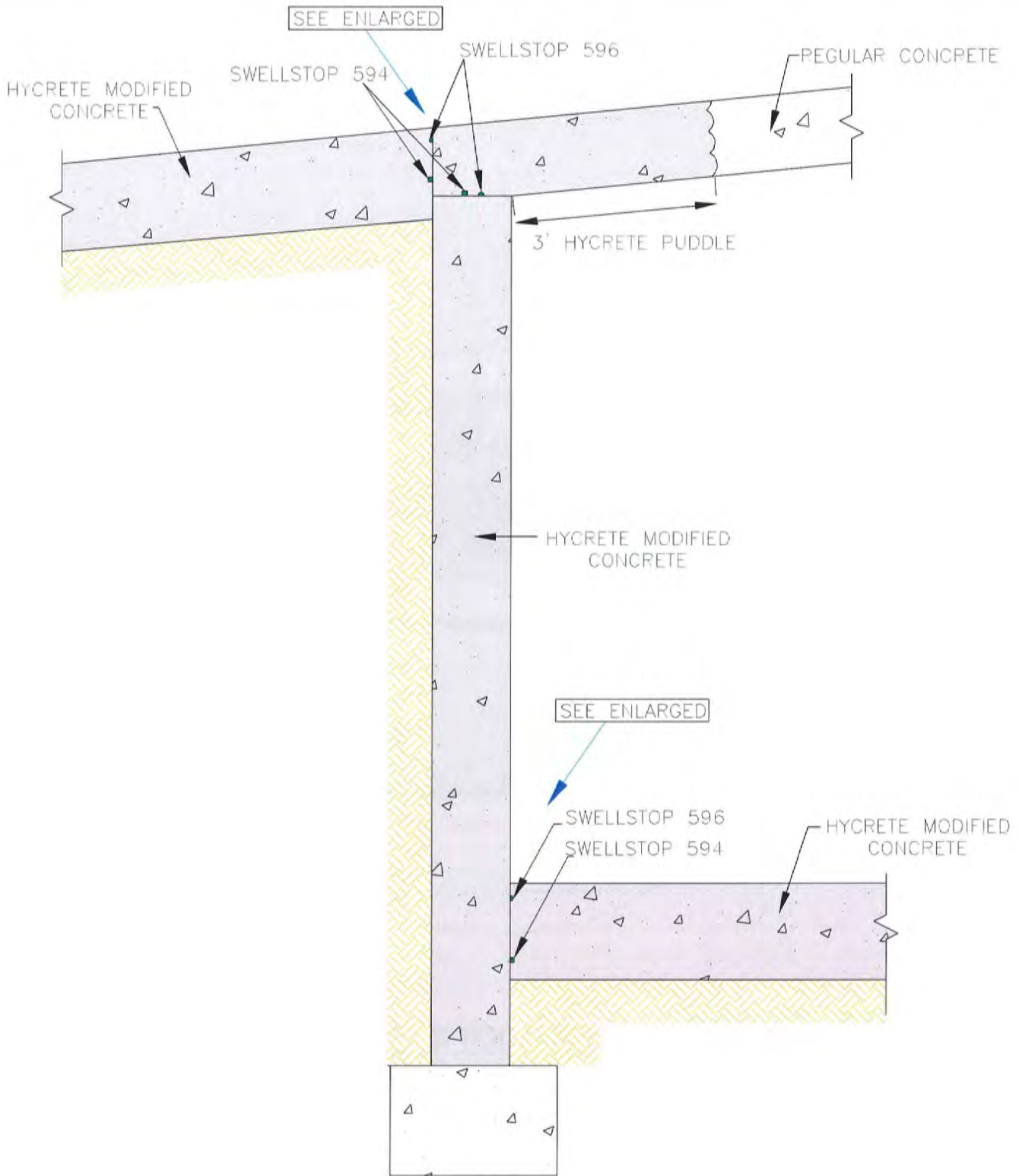
Expanding Joint Waterstop Should Be Glued To The Surface. Surface Of The Joint Must Be Smooth, Clean & Free From Any Laitance Prior To Waterstop Installation .

Project# 1462	Penetration Detail		 462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com
Date: 6/27/12	Home Plate Centre Phase 2		
Drwn By: Fazal	Sheet# 002D	NTS	
Chkd By: NHM			




WATERSTOP CONFIGURATION @ JOINTS ENLARGED SECTION

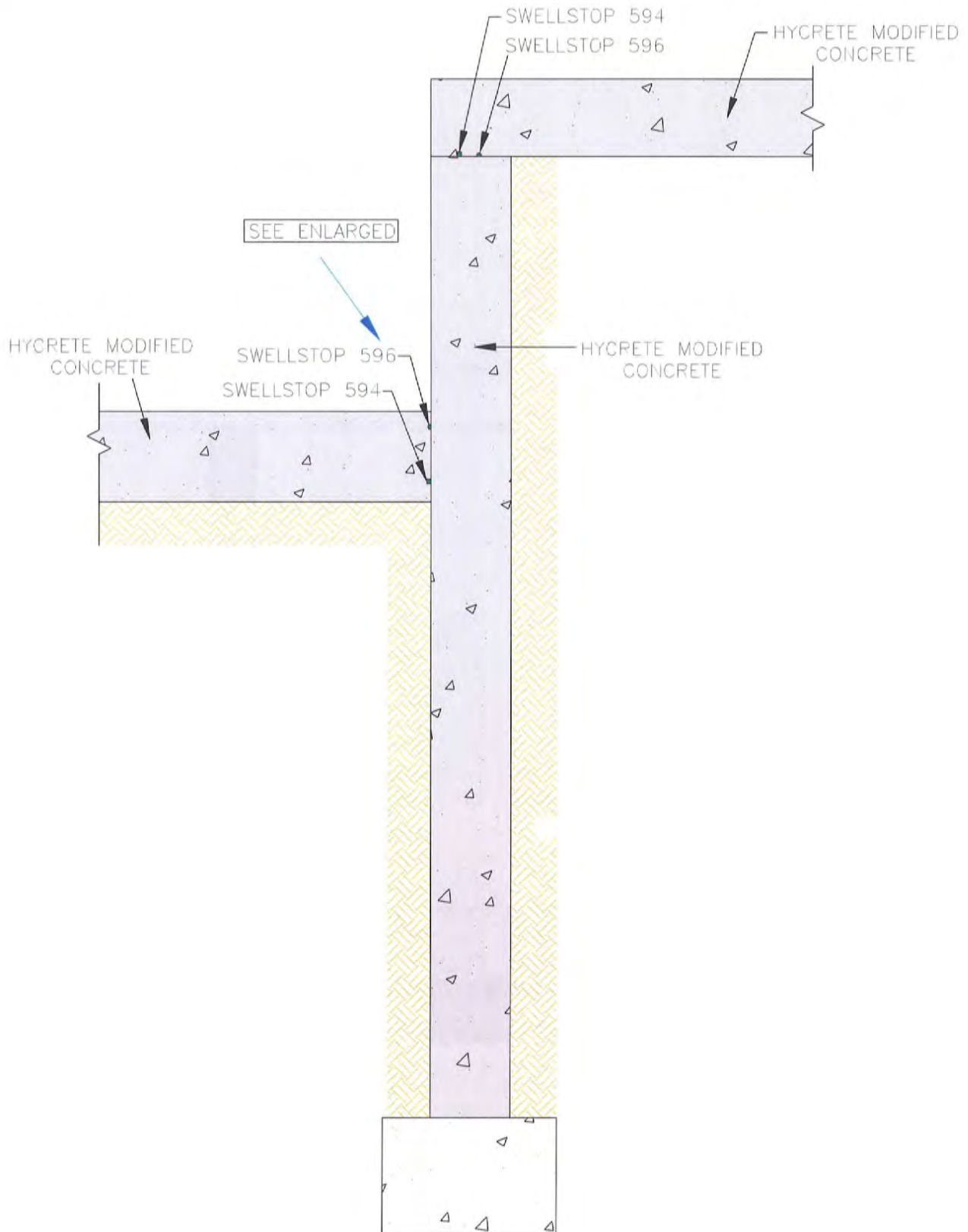
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Date: 6/27/12	Home Plate Centre Phase 2		
Drwn By: Fazal	Sheet#003	NTS	
Chkd By: NHM			



Note:

Expanding Joint Waterstop Should Be Glued To The Surface. Surface Of The Joint Must Be Smooth, Clean & Free From Any Laitance Prior To Waterstop Installation .

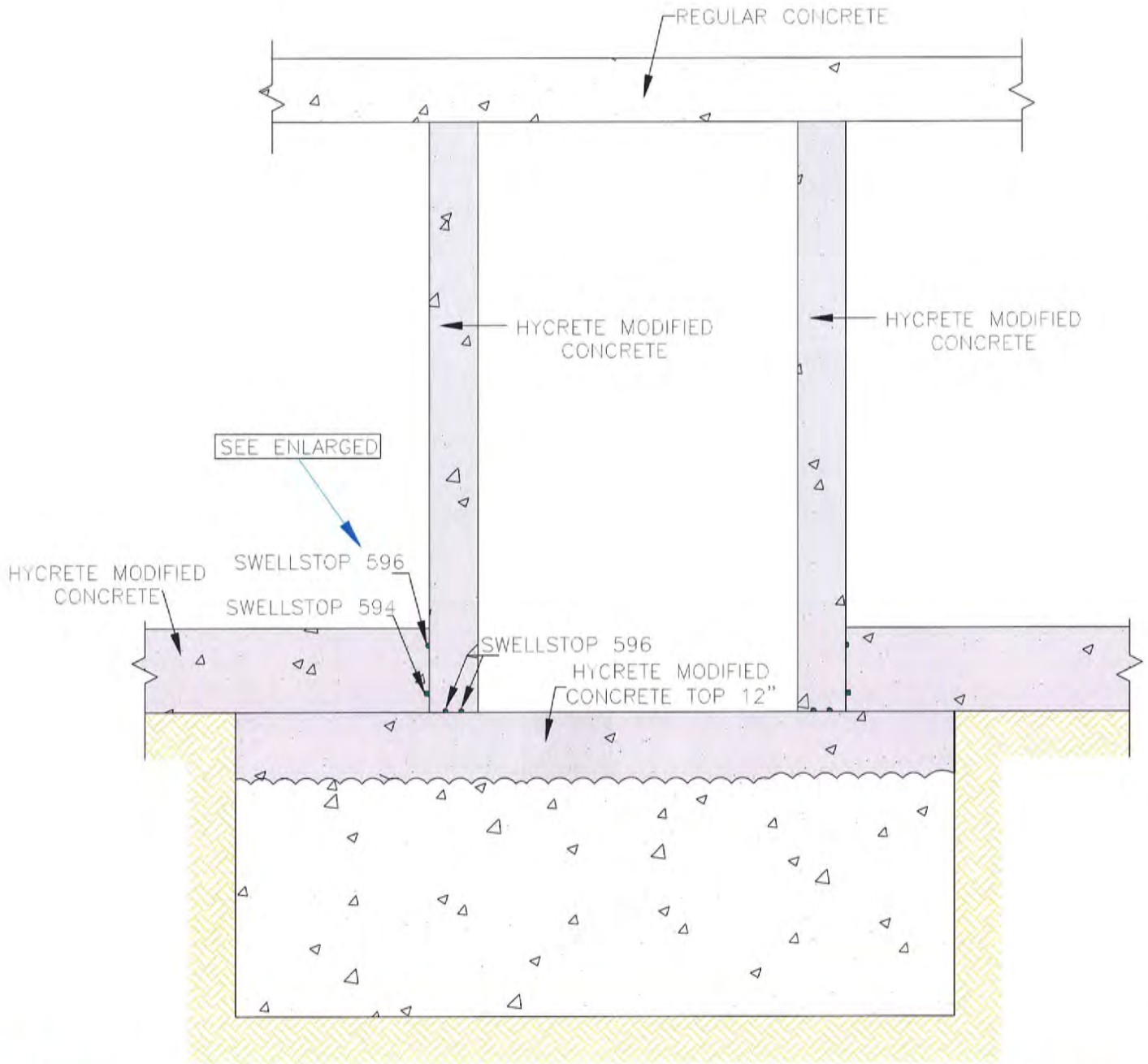
Project# 1462	Section @ Ramp		 462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com
Date: 6/27/12	Home Plate Centre Phase 2		
Drwn By: Fazal	Sheet#004	NTS	
Chkd By: NHM			



Note:


Expanding Joint Waterstop Should Be Glued To The Surface. Surface Of The Joint Must Be Smooth, Clean & Free From Any Laitance Prior To Waterstop Installation .

Project# 1462	Section @ Ramp		 462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com
Date: 6/27/12	Home Plate Centre Phase 2		
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Chkd By: NHM			

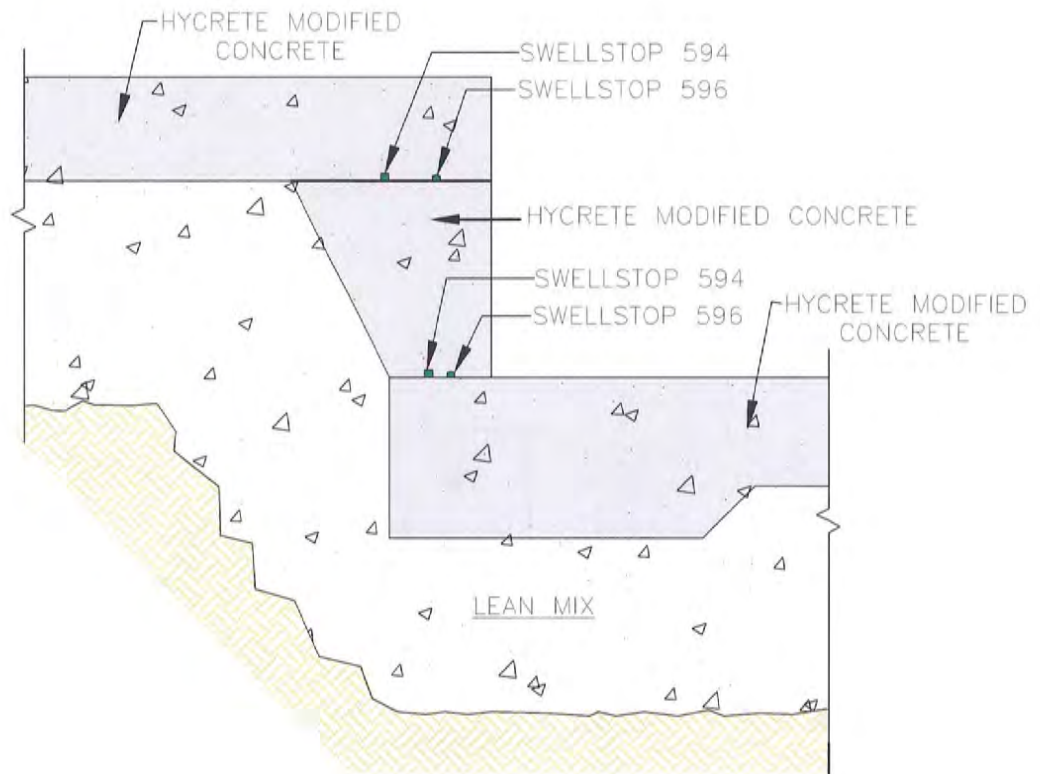


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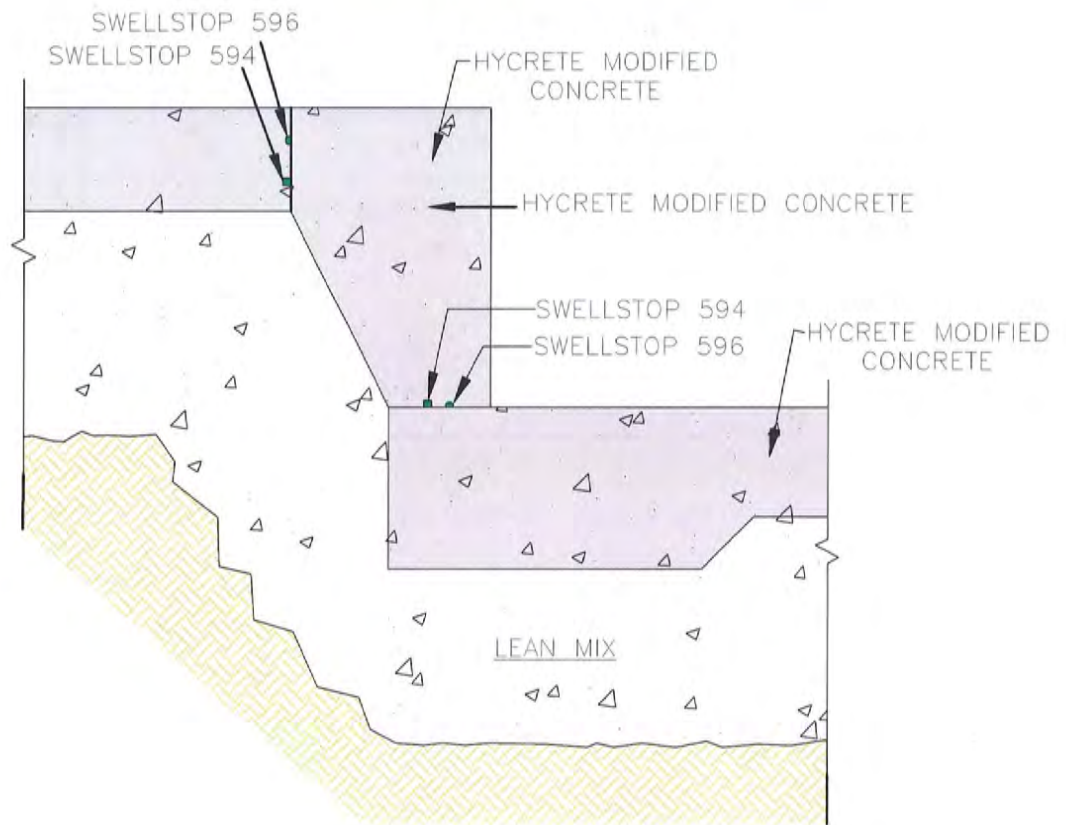
Expanding Joint Waterstop Should Be Glued To The Surface. Surface Of The Joint Must Be Smooth, Clean & Free From Any Laitance Prior To Waterstop Installation .

Project#1462	Section @ Catch Basin	 462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com
Date:6/27/12	Home Plate Centre Phase 2	
Drwn By: Fazal	Sheet#005	NTS
Chkd By: NHM		

OPTION "A"




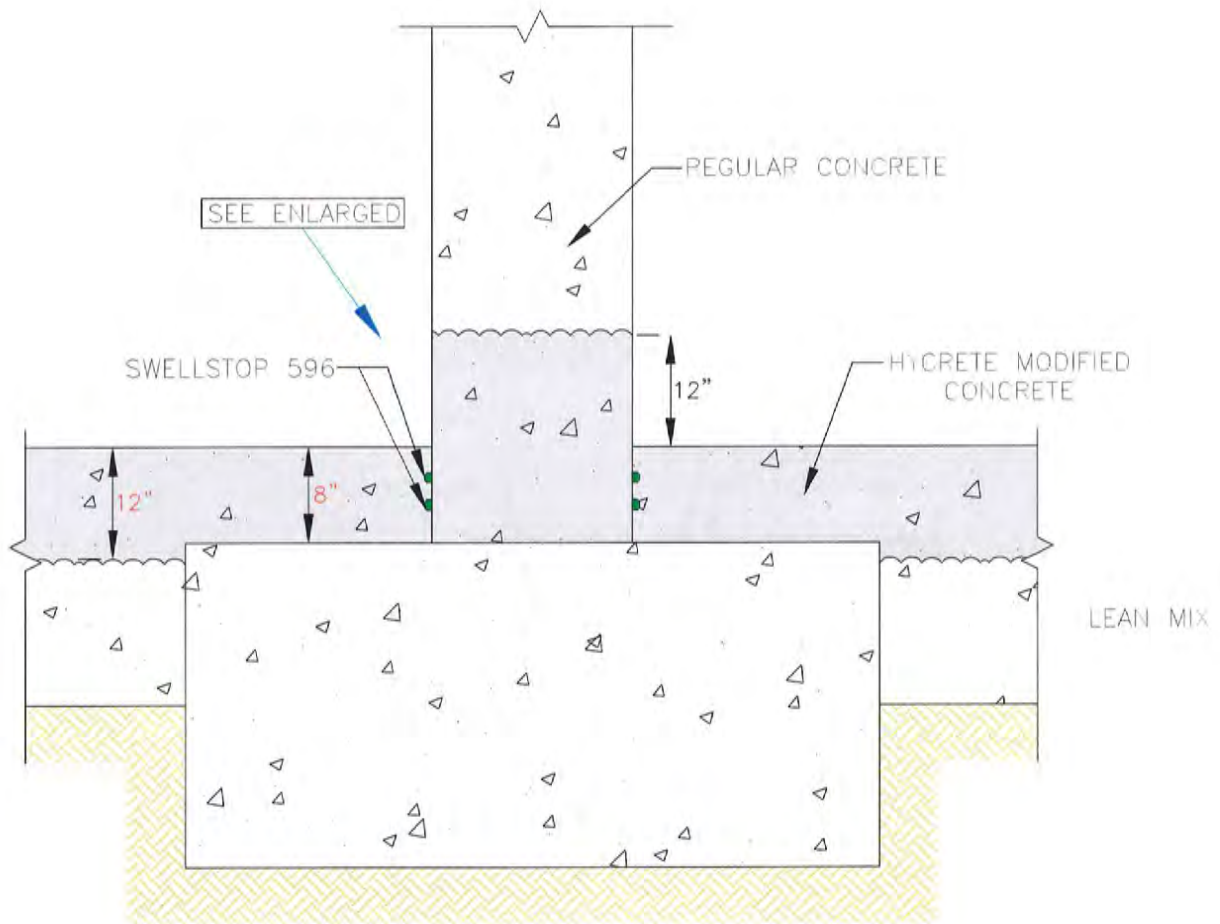
OPTION "B"



Note:


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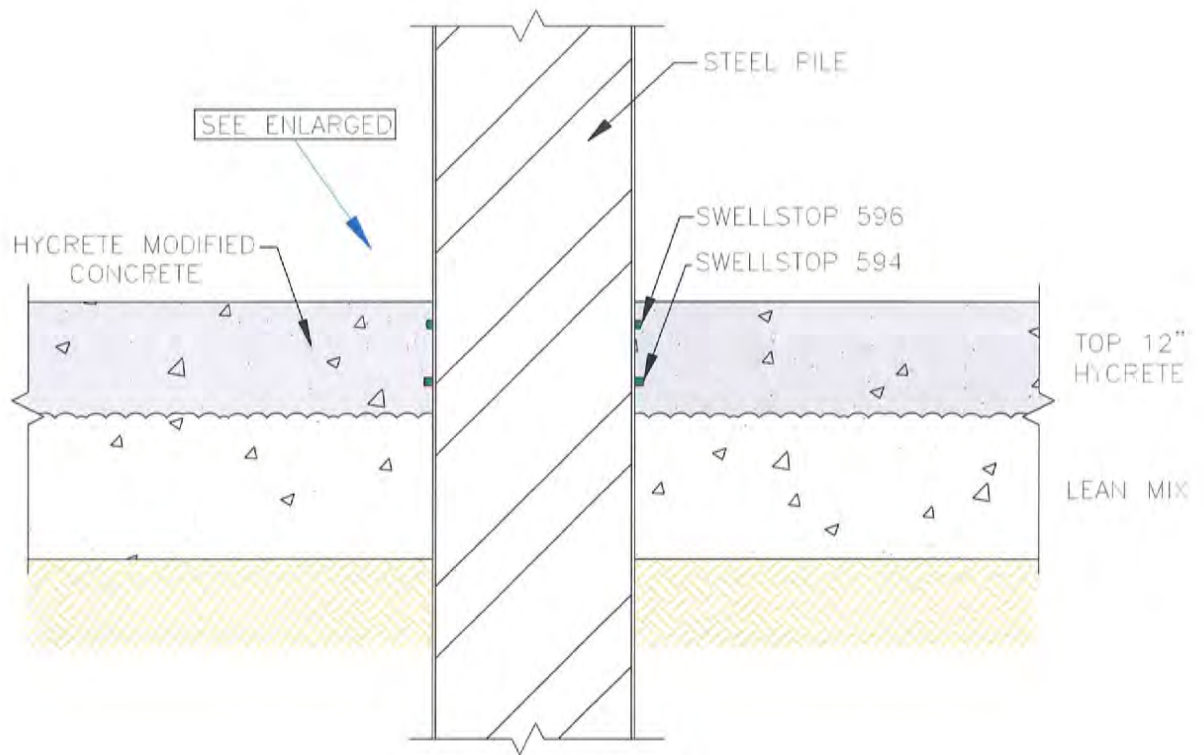
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Date:6/27/12	Home Plate Centre Phase 2		
Drwn By: Fazal	Sheet#006	NTS	
Chkd By: NHM			



Note:

Expanding Joint Waterstop Should Be Glued To The Surface. Surface Of The Joint Must Be Smooth, Clean & Free From Any Laitance Prior To Waterstop Installation .

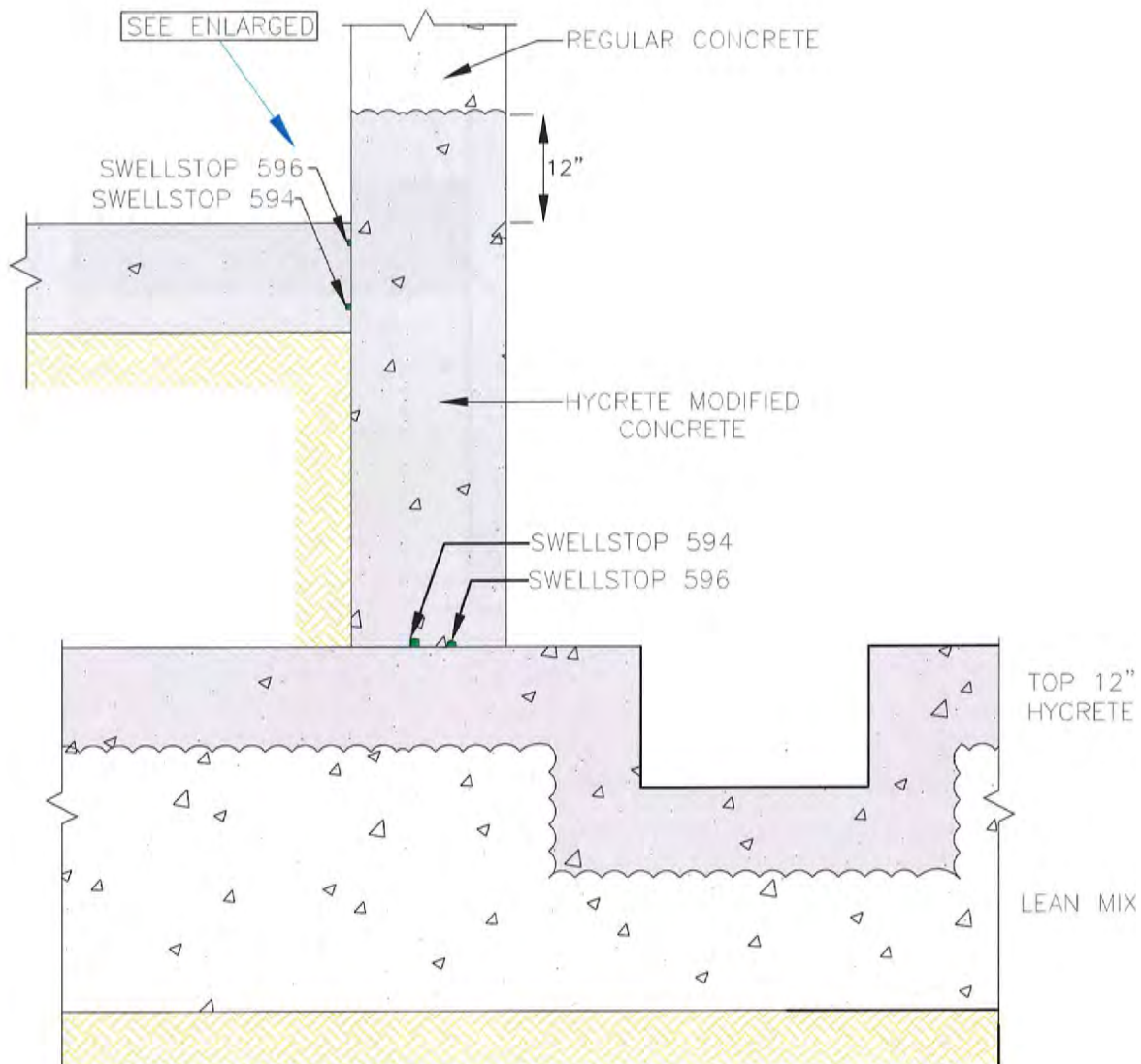
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Date: 6/27/12	Home Plate Centre Phase 2		
Drwn By: Fazal	Sheet#007	NTS	
Chkd By: NHM			



Note:


Expanding Joint Waterstop Should Be Glued To The Surface.
 Surface Of The Joint Must Be Smooth, Clean & Free From Any
 Laitance Prior To Waterstop Installation .

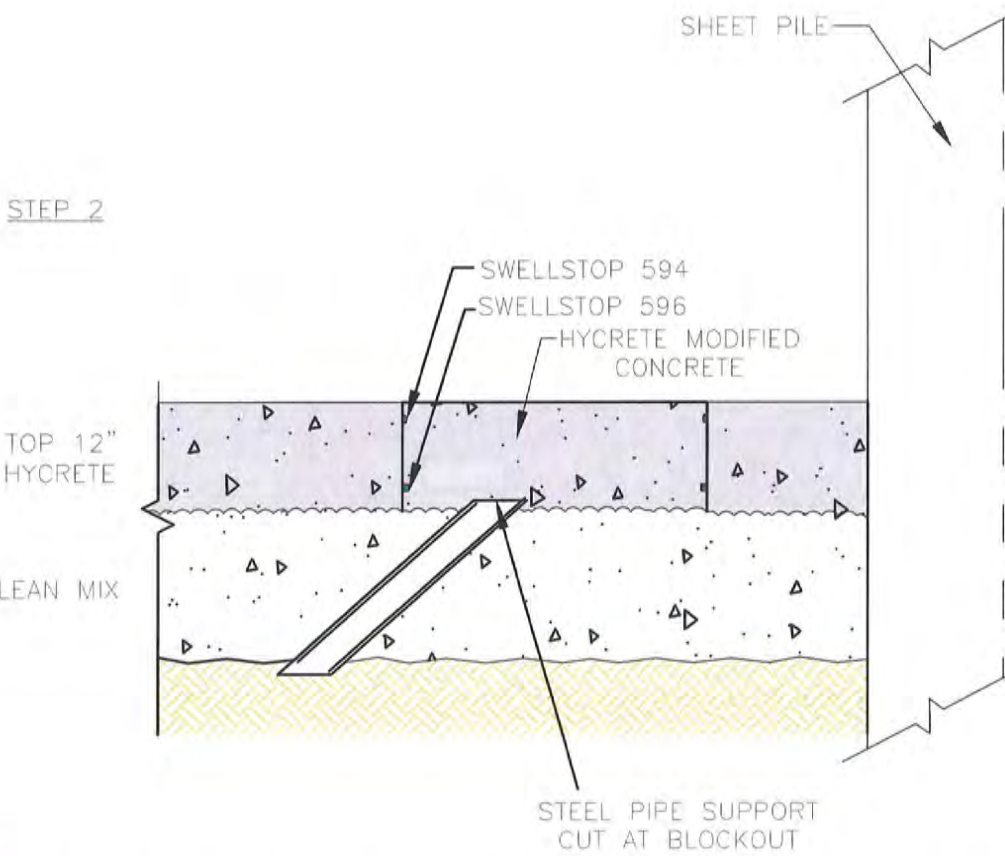
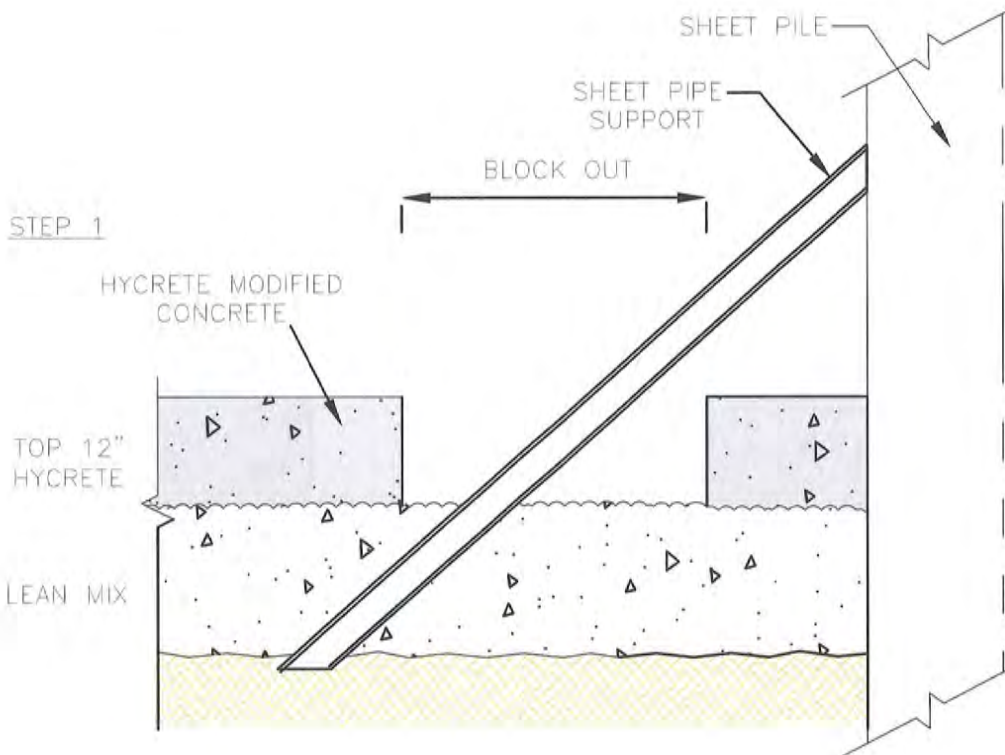
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Date:6/27/12	Home Plate Centre Phase 2		
Drwn By: Fazal	Sheet#008	NTS	462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com
Chkd By: NHM			



Note:


Expanding Joint Waterstop Should Be Glued To The Surface. Surface Of The Joint Must Be Smooth, Clean & Free From Any Laitance Prior To Waterstop Installation .

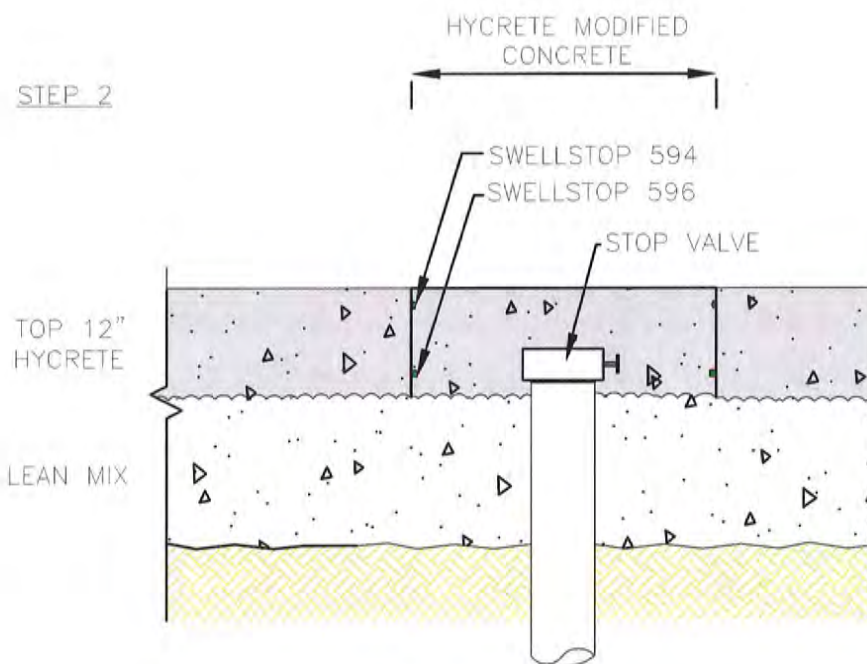
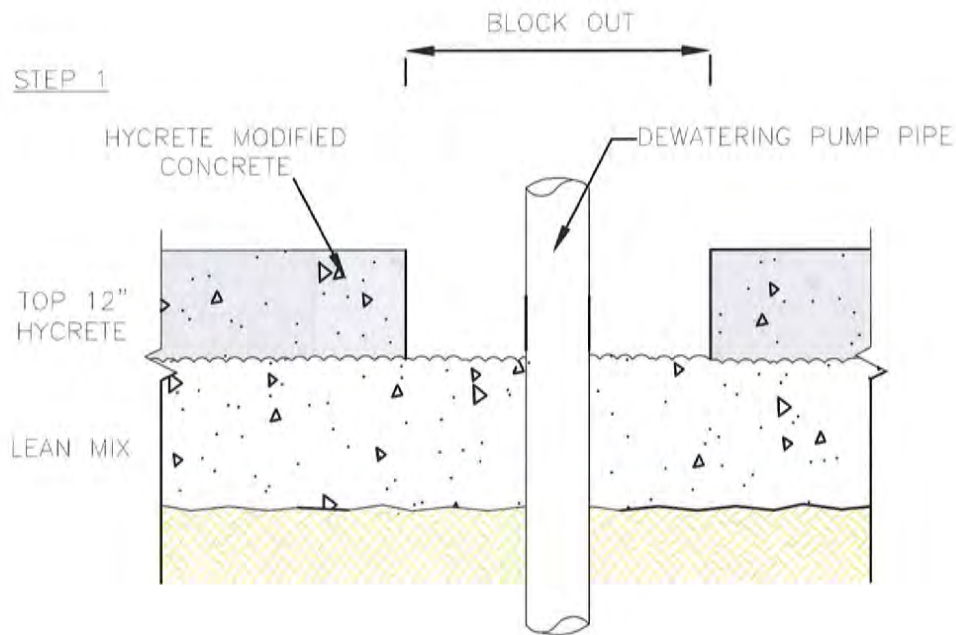
Project# 1462	Section @ Elevator		 462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com
Date: 6/27/12	Home Plate Centre Phase 2		
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Chkd By: NHM			



Note:


Expanding Joint Waterstop Should Be Glued To The Surface. Surface Of The Joint Must Be Smooth, Clean & Free From Any Laitance Prior To Waterstop Installation .

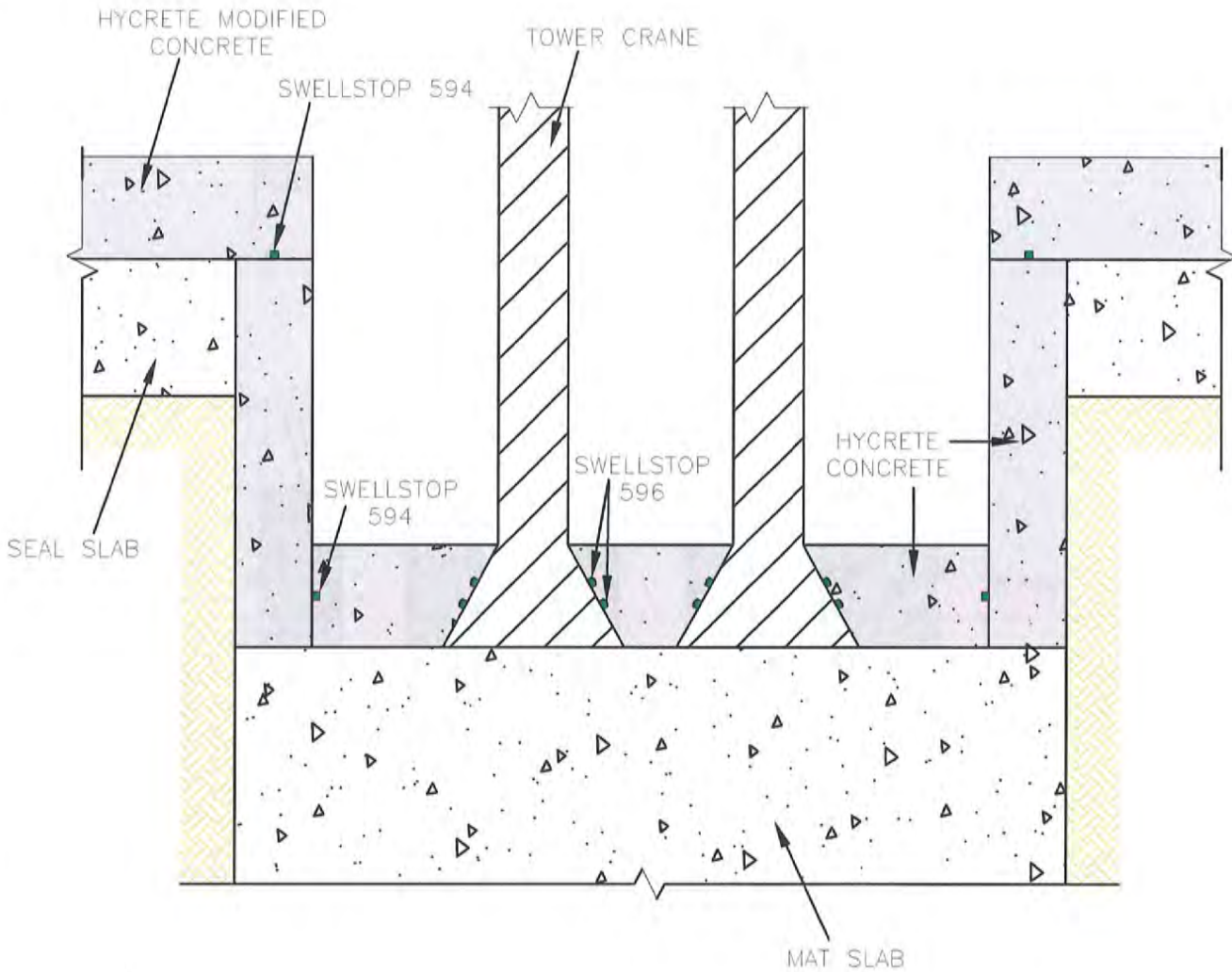
Project#1462	Section @ Steel Pile Support		 462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com
Date: 6/27/12	Home Plate Centre Phase 2		
Drwn By: Fazal	Sheet#011	NTS	
Chkd By: NHM			



Note:


Expanding Joint Waterstop Should Be Glued To The Surface. Surface Of The Joint Must Be Smooth, Clean & Free From Any Laitance Prior To Waterstop Installation .

Project#1462	Sump Pump Detail		 462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com
Date:6/27/12	Home Plate Centre Phase 2		
Drwn By: Fazal	Sheet#012	NTS	
Chkd By: NHM			

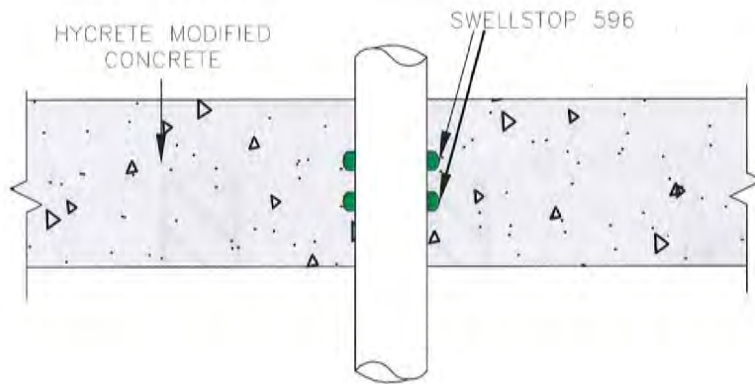


Note:

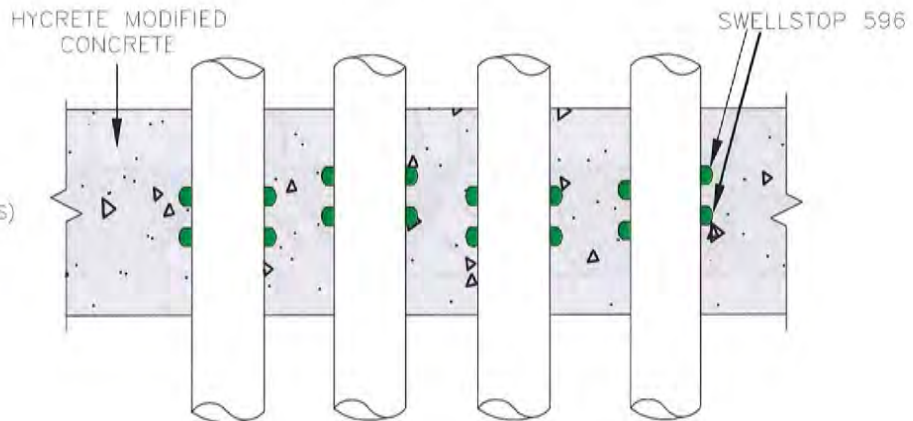
Expanding Joint Waterstop Should Be Glued To The Surface. Surface Of The Joint Must Be Smooth, Clean & Free From Any Laitance Prior To Waterstop Installation .

Project#1462	Tower Crane Detail		 462 Barell Avenue Carlstadt, NJ 07072 (201) 386 8110 www.hycrete.com
Date: 6/27/12	Home Plate Centre Phase 2		
Drwn By: Fazal	Sheet#013	NTS	
Chkd By: NHM			


ALL PENETRATIONS

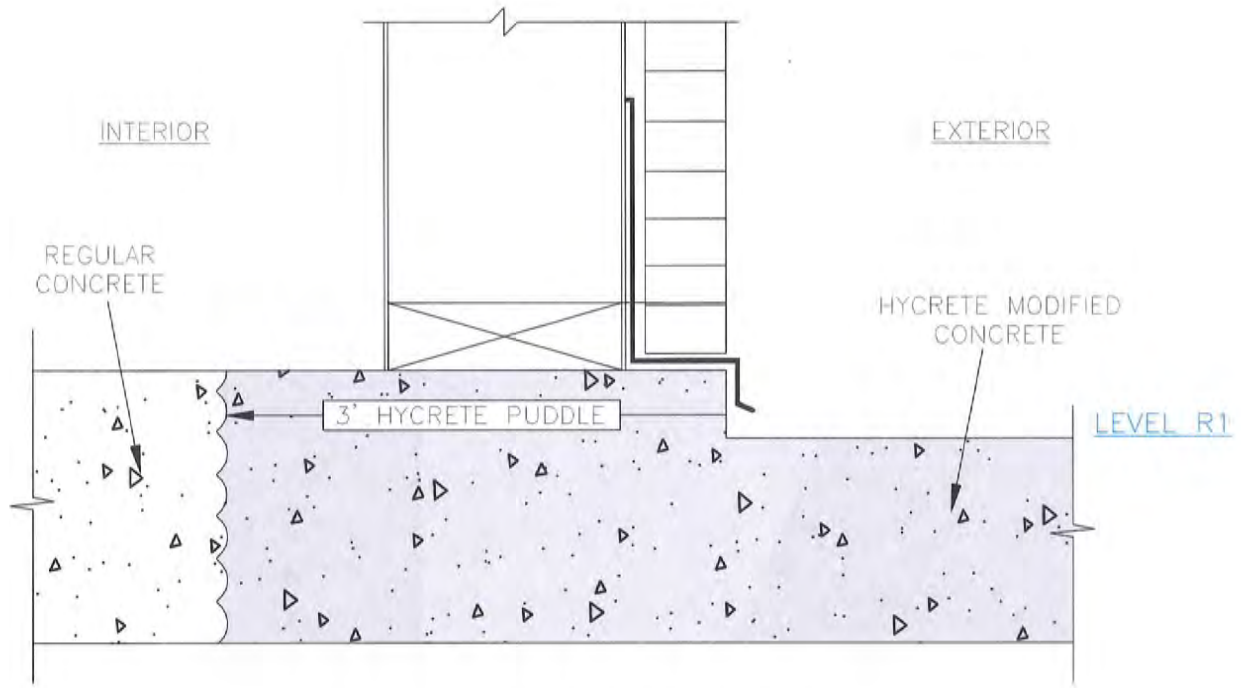


SWELLSTOP 596
(ALL CONGESTED PENETRATIONS)

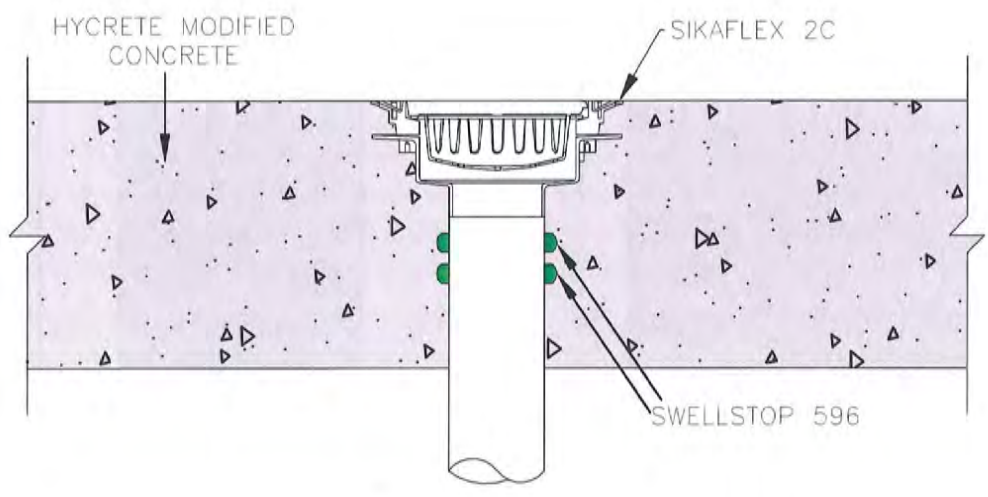


- SURFACE OF JOINT MUST BE SMOOTH AND FREE FROM DIRT AND LAITANCE BEFORE FIXING WATERSTOP.
- WATERSTOP MUST BE GLUED THE SURFACE EVERY WITH RECOMMENDED ADHESIVE.

Project#1462	Elevated Deck Penetration Detail		 462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com
Date: 6/27/12	Home Plate Centre Phase 2		
Drwn By: Fazal	Sheet#014	NTS	
Chkd By: NHM			



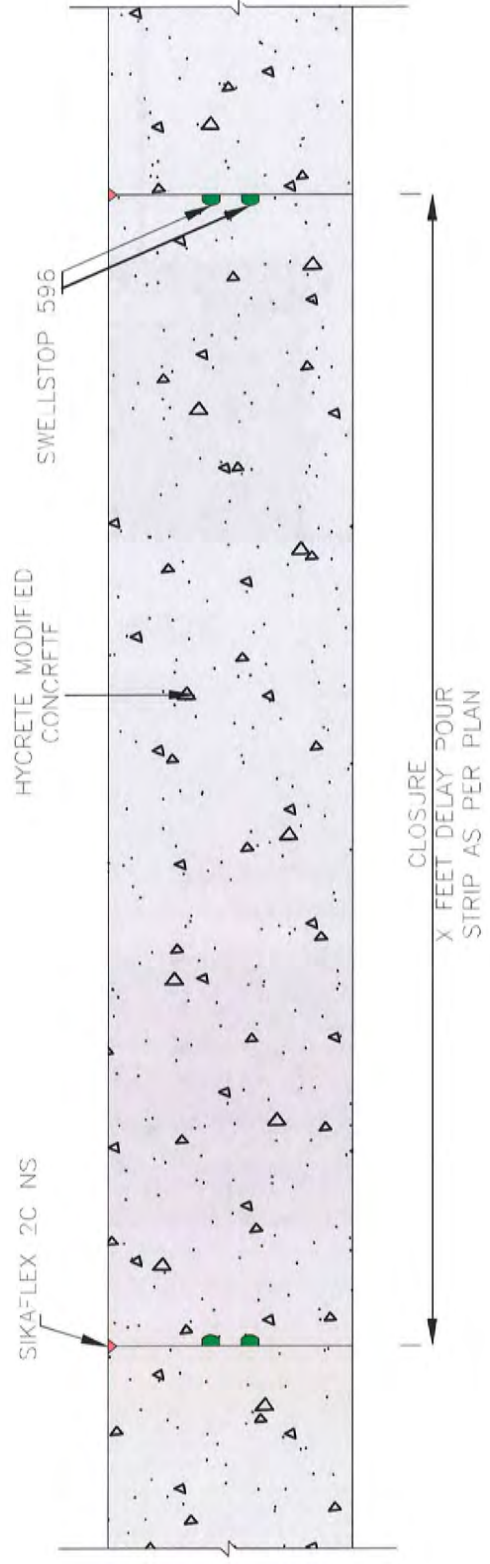
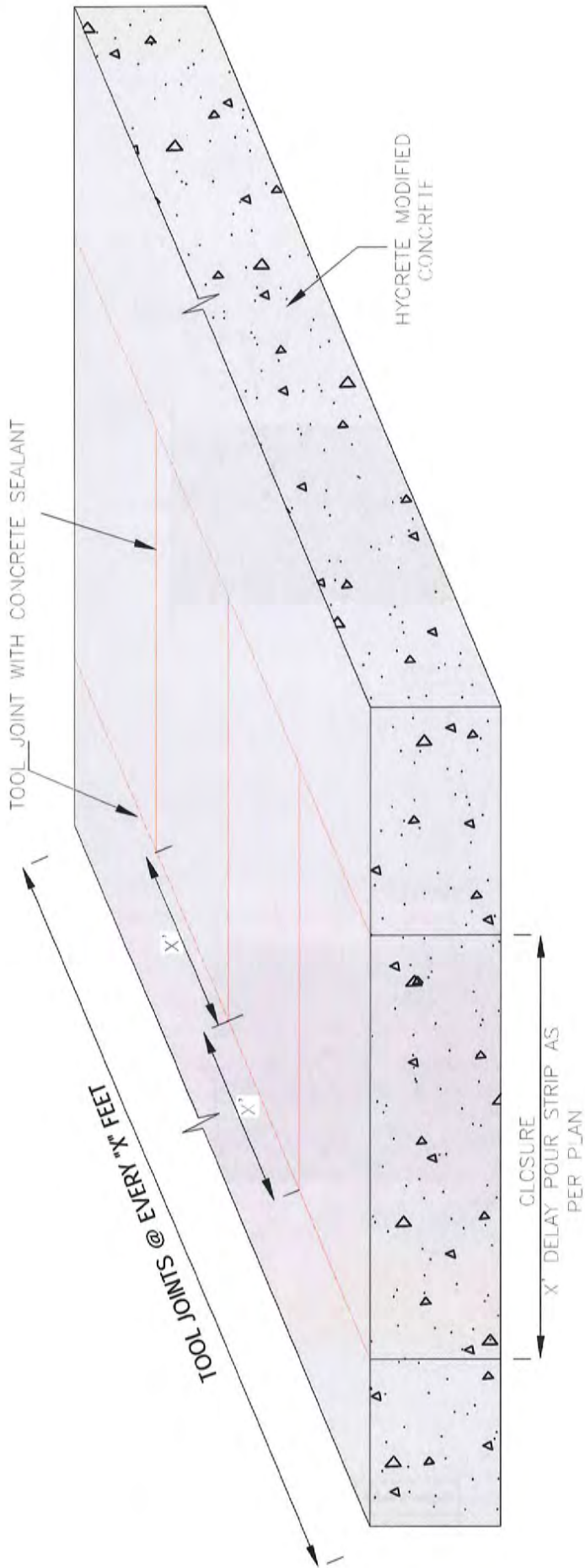
SECTION AT PLAZA INTERIOR-EXTERIOR




SECTION @ DRAIN

- SURFACE OF JOINT MUST BE SMOOTH AND FREE FROM DIRT AND LAITANCE BEFORE FIXING WATERSTOP.
- WATERSTOP MUST BE GLUED THE SURFACE EVERY WITH RECOMMENDED ADHESIVE.

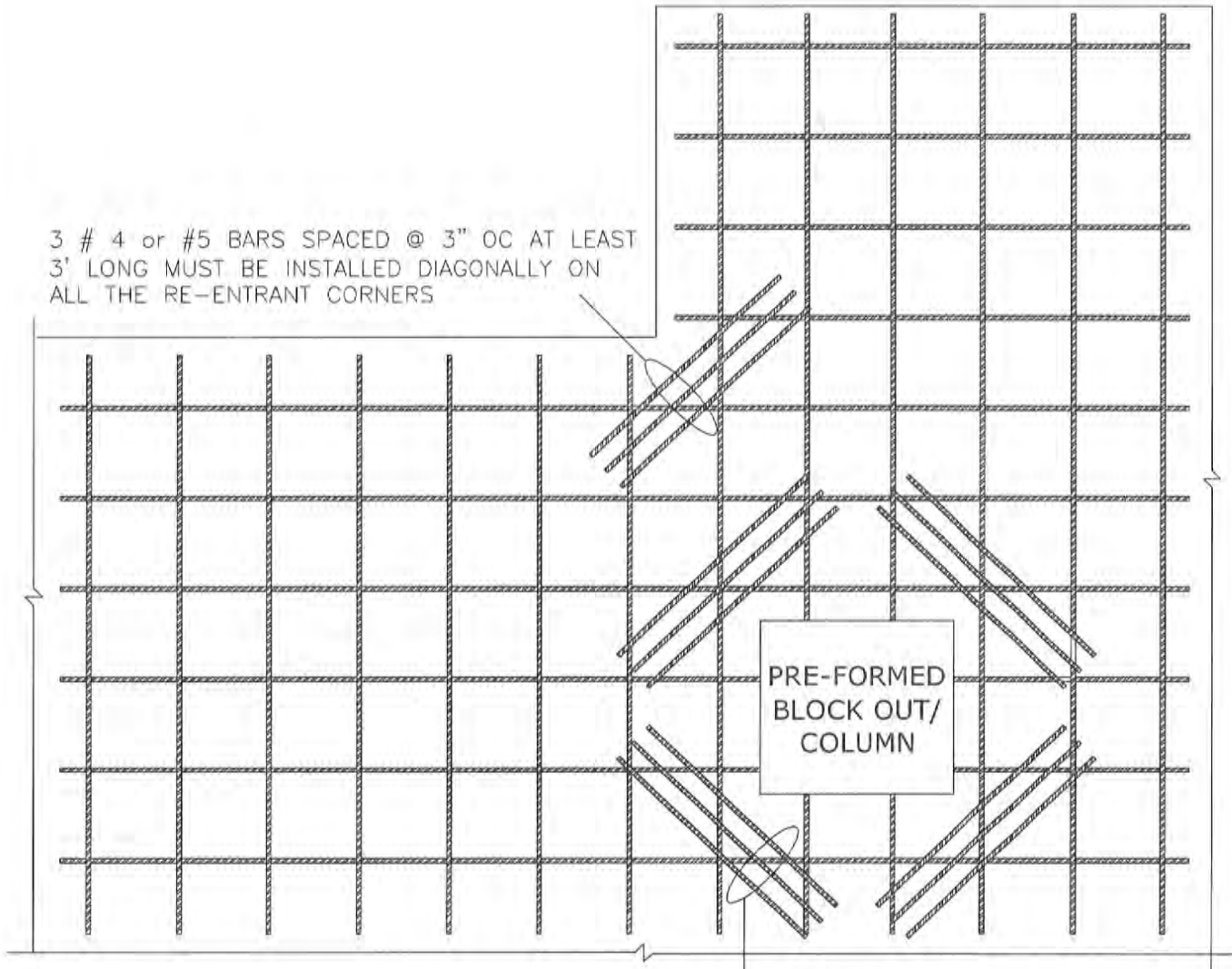
Project#1462	Elevated Deck Detail		 462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com
Date:6/27/12	Home Plate Centre Phase 2		
Drwn By: Fazal	Sheet#015	NTS	
Chkd By: NHM			




- SURFACE OF JOINT MUST BE SMOOTH AND FREE FROM DIRT AND LANTANCE BEFORE FIXING WATERSTOP.
- WATERSTOP MUST BE GLUED THE SURFACE EVERY WITH RECOMMENDED ADHESIVE.

Project#1462	Closure Detail	Home Plate Centre Phase 2	Sheet#016	NTS
Date:6/27/12	Drawn By: Faizal			
		462 Barell Avenue Carlstadt NJ 07072 (201) 386 8110 www.hycrete.com		

3 # 4 or #5 BARS SPACED @ 3" OC AT LEAST
3' LONG MUST BE INSTALLED DIAGONALLY ON
ALL THE RE-ENTRANT CORNERS



3 #4 OR #5 DIAGONAL
BARS SPACED @ 3" OC

Project#1462	Re-Entrant Corner Detail		 462 Barell Avenue Carlstadt NJ 07072 (201) 386 81 10 www.hycrete.com
Date: 11/3/10	Project: Home Plate Centre		
Drwn By: Fazal	Sheet#010	NTS	
Chkd By: NHM			



SWELLSTOP™

CONTROLLED EXPANSION WATERSTOP

- ◆ Manholes
- ◆ Slabs
- ◆ Box culverts
- ◆ Parking garages
- ◆ Concrete pipes
- ◆ Retaining walls
- ◆ Storage tanks
- ◆ Tunnels

Swellstop is a multiple use waterstop, which is formulated to encapsulate hydrophilic materials into a rubber base creating a controlled, moisture-activated sealant. **Swellstop** has the structural integrity of a rubber-base sealant, conforming well to the underlying substrate and exhibiting self-healing properties when needed.

Unlike many of the traditional clay-based products, **Swellstop** will not expand to a point that the waterstop itself is destroyed. In-field experience has proven that products, which continually expand, lose much of their structural integrity and begin to wash away when subjected to a constant flow of water.

The controlled expansion properties engineered into **Swellstop** reduce the internal pressures created in cast-in-place applications. Internal pressures can cause spalling in foundations and wall structures.

Swellstop Primer Adhesive is required to assure proper installation. Additional mechanical fasteners may be required for vertical or overhead applications.

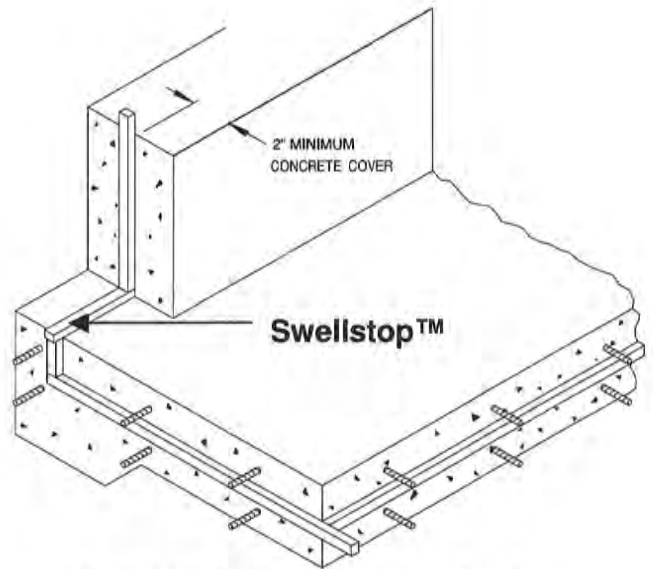
Swellstop is available in two sizes:



3/4" X 1" X 16'8" rolls
6 rolls (100 ft.) per carton



3/8" X 3/4" X 25' rolls
6 rolls (150 ft.) per carton



SWELLSTOP is for use in NON-MOVING joints only.

PHYSICAL PROPERTIES		
Description	Method	Result
Color		Black
Specific Gravity	ASTM D-71	1.55 ± 5%
Volatile Matter	ASTM D-6	1% max.
Penetration, cone at 77°F, 150 gm; 5 sec.	ASTM D-217	40 ± 5%
Application Temperature		-10°F to 125°F
Service Temperature		-30°F to 180°F

GREENSTREAK

3400 Tree Court Industrial Blvd.
St. Louis, MO 63122

Phone (800) 325-9504 or (636) 225-9400
Fax (800) 551-5145 or (636) 225-2049
GREENSTREAK.com • info@greenstreak.com

SIKAFLEX®-2C NS

Two-component, non-sag, polyurethane elastomeric sealant



DESCRIPTION

Sikaflex-2c NS is a 2-component, premium-grade, polyurethane-based, elastomeric sealant. It is principally a chemical cure in a non-sag consistency. Meets ASTM C-920, Type M, Grade NS, Class 25, use T, NT, M, G, A, O, I and Federal Specification TT-S-00227E, Type II, Class A. Tested in accordance with ASTM C-1382 for use in EIFS Systems.

WHERE TO USE

- Intended for use in all properly designed working joints with a minimum depth of 1/4 inch.
- Ideal for vertical and horizontal applications.
- Placeable at temperatures as low as 40°F.
- Adheres to most substrates commonly found in construction.
- An effective sealant for use in Exterior Insulation Finish Systems (EIFS).
- Submerged environments, such as canal and reservoir joints.

ADVANTAGES

- Capable of +50% joint movement.
- Chemical cure allows the sealant to be placed in joints exceeding 1/2 in. in depth.
- High elasticity with a tough, durable, flexible consistency.
- Exceptional cut and tear resistance.
- Exceptional adhesion to most substrates without priming.
- Available in 40 architectural colors.
- Color uniformity assured via Color-pak system.
- Available in pre-pigmented Limestone Gray (no Color-pak needed).
- Non-sag even in wide joints.
- Easy to mix.
- Paintable with water-, oil-, and rubber-base paints.
- ANSI/NSF 61 approval for contact with potable water.
- Jet fuel resistant

COVERAGE

1 gal. yields 231 cu. in. or 154 lin. ft. of a 1/2 in. x 1/4 in. joint.

PACKAGING

1.5 gal. unit, 3 gal unit. Color-pak is purchased separately. Limestone Gray color available prepigmented.

SURFACE PREPARATION

All joint-wall surfaces must be clean, sound, and frost-free. Joint walls must be free of oils, grease, curing compound residues, and any other foreign matter that might prevent bond. Ideally this should be accomplished by mechanical means. Bond breaker tape or backer rod must be used in bottom of joint to prevent bond.

PRIMING

Priming is typically not necessary. Most substrates only require priming if sealant will be subjected to water immersion after cure. Testing should be done, however, on questionable substrates, to determine if priming is needed.

Note: Most Exterior Insulation Finish Systems (EIFS) manufacturers recommend the use of a primer. When EIFS manufacturer specifies a primer or if on-site bond testing indicates a primer is necessary, Sikaflex 429 primer is recommended. On-site adhesion testing is recommended with final system prior to the start of a job.

Typical Data (Material and curing conditions 73°F (23°C) and 50% R.H.)

Shelf life	One year in original, unopened containers.	
Storage Conditions	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75° before using.	
Colors	A wide range of architectural colors are available. Special colors available on request.	
Application Temperature	40° to 100°F, ambient and substrate temperatures. Sealant should be installed when joint is at mid-range of its anticipated movement.	
Service Range	-40° to 170°F (-40°-75°C).	
Curing Rate (ASTM C-679)		
Tack-Free Time	6-8 hrs.	
Final Cure	3 days	
Application Life	3-4 hrs.	
Tear Strength	ASTM D-624	45 lb./in.
Shore A Hardness	ASTM D-2240	25 ± 5
Tensile Properties (ASTM D-412)		
Tensile Strength at Break	120 psi	
Tensile Elongation	500%	
100% Modulus	70 psi	
Adhesion in Peel (Fed Spec. TT-S-00227E)		
Substrate	Peel Strength	% Adhesion Loss
Concrete	25 lb.	Zero
Weathering Resistance	Excellent	
Chemical Resistance	Good resistance to water, diluted acids, diluted alkalines, and residential sewage. Consult Technical Service for specific data.	

SIKAFLEX®-2C NS

Two-component, non-sag, polyurethane elastomeric sealant



MIXING

Pour entire contents of Component 'B' into pail of Component 'A'. Add entire contents of Color-pak into pail and mix with a low-speed drill (400-600 rpm) and Sikaflex paddle.* Mix for 3-5 minutes to achieve a uniform color and consistency. Scrape down sides of pail periodically. Avoid entrapment of air during mixing.

When mixing in cold weather (<50°F), do not force the mixing paddle to the bottom of the pail. After adding Component 'B' and Color-pak into Component 'A', mix the top 1/2 to 3/4 of the pail during the first minute of mixing. After scraping down the sides of the pail, mix again for another minute. The paddle should reach the bottom of the pail between the first and second minute of mixing. Scrape down the sides of the pail a second time and then mix for an additional 2-3 minutes until the sealant is well blended.

Color-pak must be used with tint base. For pre-pigmented Limestone base, just mix with low speed drill and Sikaflex paddle (no Color-pak needed).

APPLICATION

Recommended application temperatures 40°-100°F. Pre-conditioning units to approximately 70°F is necessary when working at extremes. Move pre-conditioned units to work areas just prior to application.

Apply sealant only to clean, sound, dry, and frost-free substrates. Sikaflex-2c should be applied into joints when joint slot is at mid-point of its designed expansion and contraction.

To place, load directly into bulk gun or use a follower plate loading system. Place nozzle of gun into bottom of joint and fill entire joint. Keeping the nozzle deep in the sealant, continue with a steady flow of sealant preceding nozzle to avoid air entrapment. Also, avoid overlapping of sealant since this also entraps air. Tool as required. Joint dimension should allow for 1/4 inch minimum and 1/2 inch maximum thickness for sealant. Proper design is 2:1 width to depth ratio.

LIMITATIONS

- The ultimate performance of Sikaflex-2c NS depends on good joint design and proper application.
- Minimum depth in working joint is 1/4 in.
- Maximum expansion and contraction should not exceed 50% of average joint width.
- Do not cure in the presence of curing silicones.
- Avoid contact with alcohol and other solvent cleaners during cure.

- Allow 3-day cure before subjecting sealant to total water immersion.
- Avoid exposure to high levels of chlorine. (Maximum level is 5 ppm).
- Do not apply when moisture vapor transmission exists since this can cause bubbling within the sealant.
- Avoid over-mixing sealant.
- Light color shades tend to yellow over time when exposed to ultraviolet rays.
- Light colors can yellow slightly if exposed to direct gas fired heating elements prior to the formation of initial skin.
- When overcoating: an on-site test is recommended to determine actual compatibility.
- The depth of sealant in horizontal joints subject to traffic is 1/2 inch.
- In horizontal joints exposed to vehicular or foot traffic, "TG" additive is recommended. See Sikaflex-2c NS TG data sheet for specific details.

CAUTION

Component 'A'; Irritant - Avoid contact. Product is a skin, respiratory and eye irritant. Use of safety goggles and chemical resistant gloves recommended. Use of a NIOSH approved respirator required if PELs are exceeded. Use with adequate ventilation.

Component 'B'; Combustible; Sensitizer; Irritant - Contains Xylene. Keep away from heat, sparks and open flame. Use with adequate ventilation. Product is a respiratory and skin sensitizer. Avoid contact. Product is an eye, skin, and respiratory irritant. Use of safety goggles and chemical resistant gloves recommended. Use of a NIOSH approved respirator required if PELs are exceeded.

FIRST AID

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes; contact physician. For respiratory problems, remove to fresh air. Wash clothing before reuse. Discard contaminated shoes.

Warranty

Sika warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current technical data sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SPECIAL OR CONSEQUENTIAL DAMAGES.

APPENDIX B
Report Limitations and Guidelines for Use

APPENDIX B

REPORT LIMITATIONS AND GUIDELINES FOR USE

This appendix provides information to help you manage your risks with respect to the use of this report.

Report Use and Reliance

The data report has been prepared for 255 S King Street LP. The report is not intended for use by others, and the information contained herein is not applicable to other projects or properties. No party or parties other than those named above may rely on the product of our services unless we agree to such reliance in advance and in writing. The purpose of this limitation is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions.

This report is intended to be used only for the specific purpose or project originally contemplated for our services, and use of this report is not recommended for any other purpose or project. The data was developed and compiled for this project only, and no representation or warranty is made, either express or implied. GeoEngineers shall not be responsible for any alterations, modifications or additions to the data herein or the consequences of any interpretations of the data. Any use of the data, including any conclusion or information obtained or derived from the use of the data, other than by 255 S King Street LP, their authorized agents and regulatory agencies for the specific purpose or project originally contemplated for our services will be at the user's sole risk.

If changes are made to the project or property after the date of the report, we recommend that GeoEngineers be given the opportunity to review the data, and then we can provide written modifications or confirmation, as appropriate.

Information Provided by Others

GeoEngineers makes no warranties or guarantees regarding the accuracy or completeness of data provided or compiled by others and shall not be responsible for user's interpretation of such data.

Construction Specification Drawings



DRS
D.R. STRONG
CONSULTING ENGINEERS, INC.
 ENGINEERS PLANNERS SURVEYORS
 400 2ND AVENUE, SUITE 1000
 SEATTLE, WASHINGTON 98104
 TEL: 206.467.7800 FAX: 206.467.7823

255 KING STREET SOUTH, LP
 270 SOUTH HANFORD STREET
 SEATTLE, WASHINGTON 98134
 206.381.1690

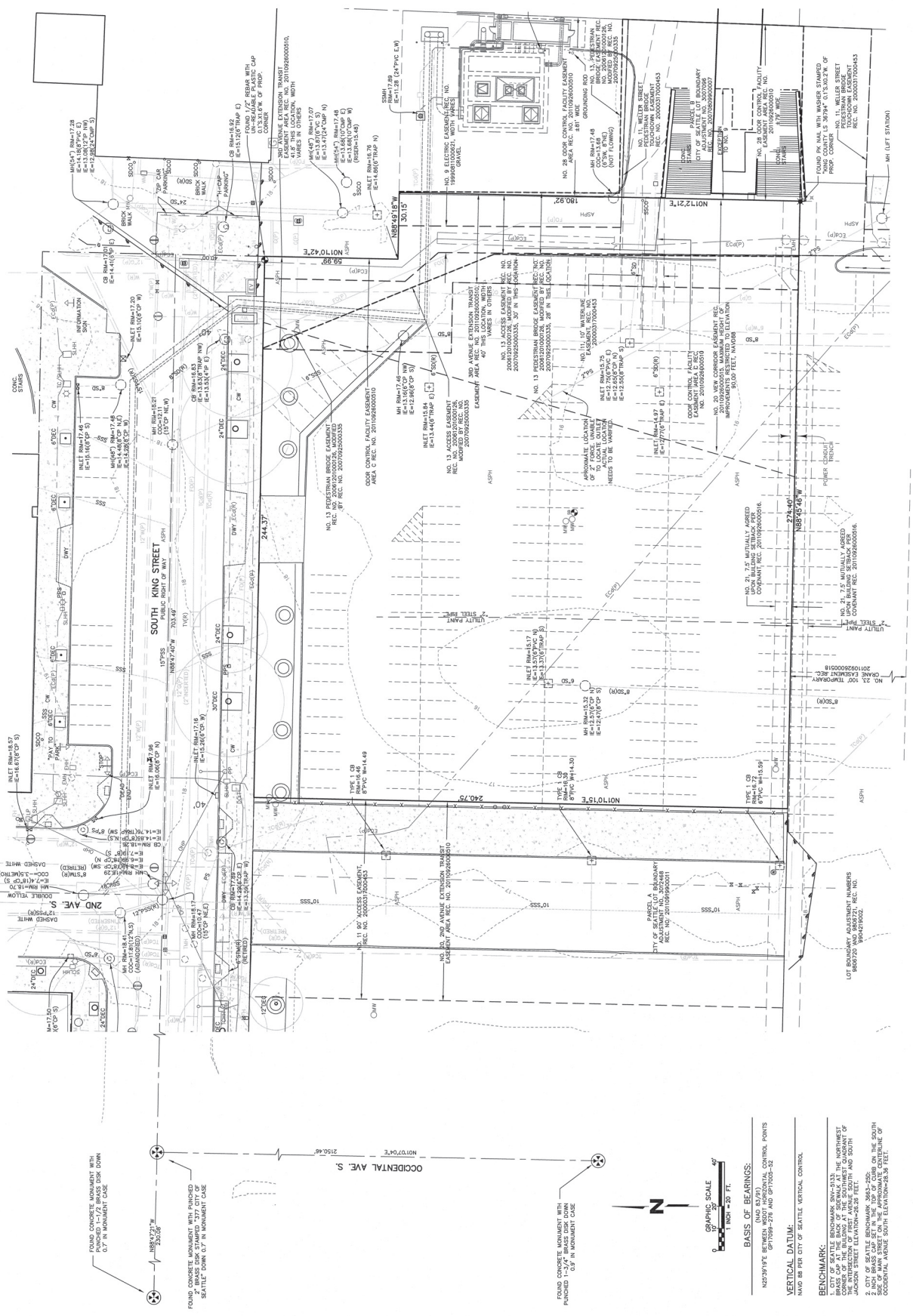


DATE	REVISION
APR	

PROJECT SURVEYOR: **CS**
 DATED BY: **RB/SJS**
 FIELD BOOK: **250**
 DATE: **9/05/13**
 PROJECT NO.: **11090**

SHEET: **2 OF 2**

BOUNDARY AND TOPOGRAPHIC SURVEY
 A PORTION OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 5,
 TOWNSHIP 24 NORTH, RANGE 4 EAST, W.M.
 CITY OF SEATTLE, KING COUNTY, WASHINGTON



GRAPHIC SCALE: 1" = 25' FT.
 BASIS OF BEARINGS: NAD83/NTS BETWEEN (AND EXCEPT) METAL CONTROL POINTS 0PT1039-278 AND 0PT2005-30.
 VERTICAL DATUM: MEAN SEA LEVEL, VERTICAL CONTROL: NAD83/NTS.
 BENCHMARKS:
 1. CITY OF SEATTLE BENCHMARK, SWN-2333, AT THE INTERSECTION CORNER OF THE BUILDING AT THE SOUTHWEST QUARTER OF SECTION 5, TOWNSHIP 24 NORTH, RANGE 4 EAST, W.M. AND SOUTH JACKSON STREET, ELEVATION = 76.28 FEET.
 2. CITY OF SEATTLE BENCHMARK, SW-2525, ON THE SOUTH SIDE OF MAIN STREET ON THE APPROXIMATE CENTERLINE OF OCCIDENTAL AVENUE SOUTH, ELEVATION = 26.56 FEET.



Integrated site design

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Seattle, WA 98125
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www.i-s-d.com

landscape architecture | site planning | site paving | landscape architecture | site paving | natural systems design

PROJECT:
NORTH LOT TOWER
255 SOUTH KING STREET
SEATTLE, WASHINGTON

CLIENT:
NORTH LOT LLC
270 S. HANFORD ST #100
SEATTLE, WASHINGTON



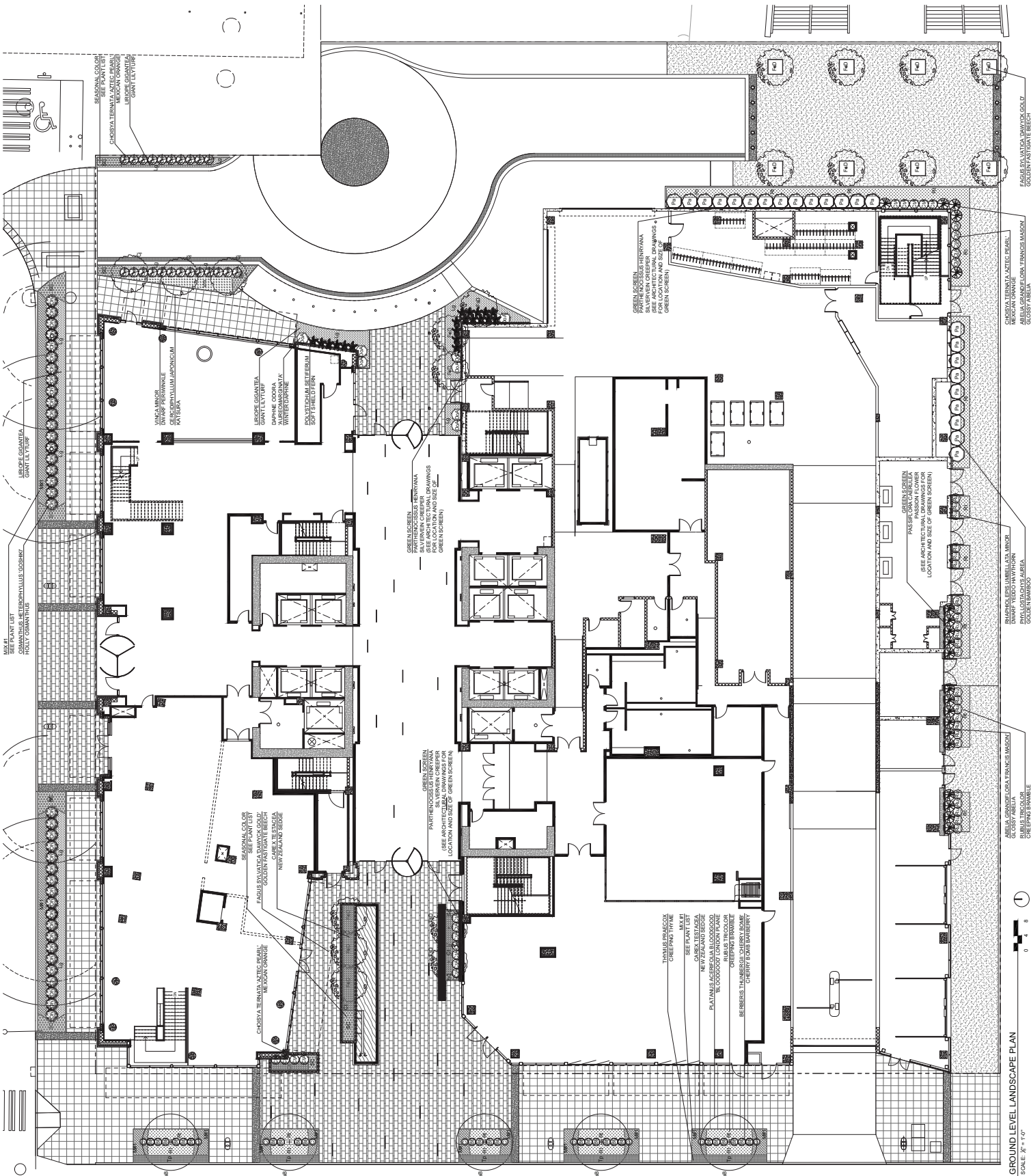
STATE OF WASHINGTON
REGISTERED ARCHITECT
JENNIFER HARRIS
NO. 100000000
DATE OF EXPIRATION: 12/31/2017

REVISIONS
SUBMITTAL PERMIT 09/23/2013
SUBMITTAL T-PL

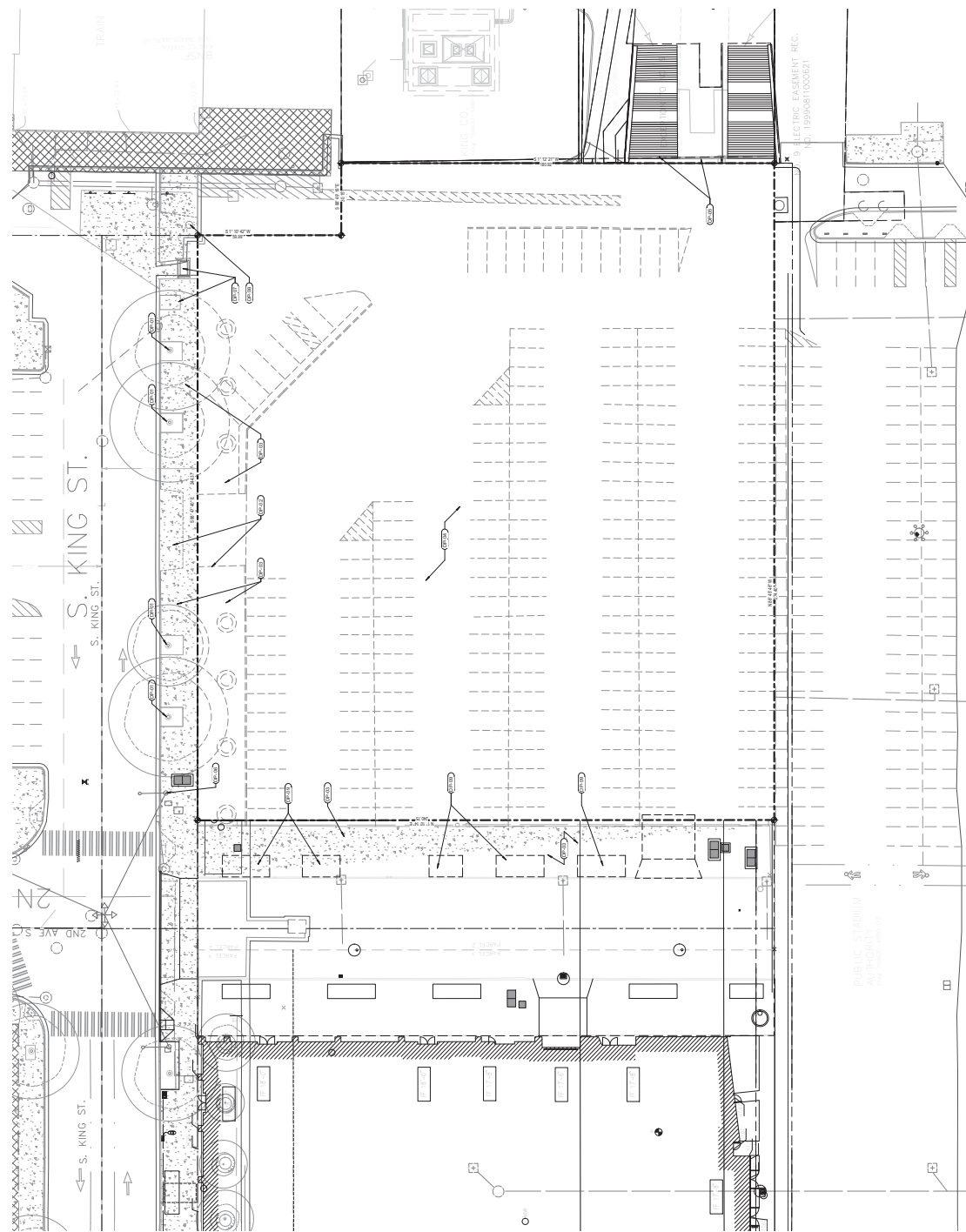
GROUND LEVEL
LANDSCAPE PLAN

L-2.0

Not to be printed without permission of designer



1 GROUND LEVEL LANDSCAPE PLAN
SCALE: 1/8" = 1'-0"



1/8" = 1'-0" SCALE
 SITE DEMOLITION PLAN

DEMOLITION KEYNOTES

- DP 01: DEMOLISH EXISTING CONSTRUCTION
- DP 02: DEMOLISH EXISTING CONSTRUCTION
- DP 03: DEMOLISH EXISTING CONSTRUCTION
- DP 04: DEMOLISH EXISTING CONSTRUCTION
- DP 05: DEMOLISH EXISTING CONSTRUCTION
- DP 06: DEMOLISH EXISTING CONSTRUCTION
- DP 07: DEMOLISH EXISTING CONSTRUCTION
- DP 08: DEMOLISH EXISTING CONSTRUCTION
- DP 09: DEMOLISH EXISTING CONSTRUCTION

DEMOLITION GENERAL NOTES

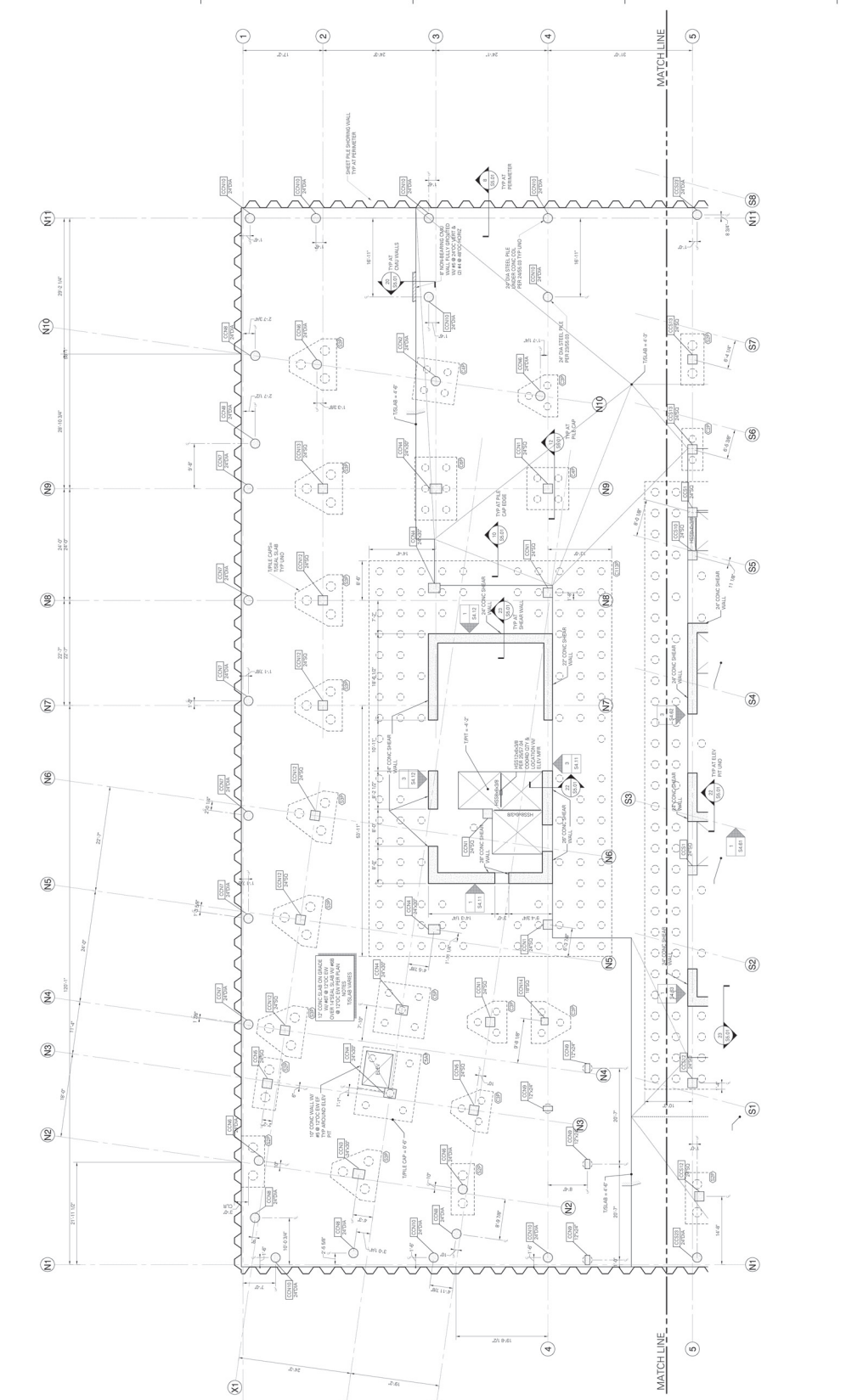
1. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF SEATTLE AND THE KING COUNTY DEPARTMENT OF PUBLIC WORKS.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF SEATTLE AND THE KING COUNTY DEPARTMENT OF PUBLIC WORKS.
3. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF SEATTLE AND THE KING COUNTY DEPARTMENT OF PUBLIC WORKS.
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9. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF SEATTLE AND THE KING COUNTY DEPARTMENT OF PUBLIC WORKS.
10. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF SEATTLE AND THE KING COUNTY DEPARTMENT OF PUBLIC WORKS.

DEMOLITION LEGEND

- PROPERTY LINE
- EXISTING CONSTRUCTION
- DEMOLITION KEYNOTES
- DEMOLITION KEYNOTES
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- DEMOLITION KEYNOTES
- DEMOLITION KEYNOTES



DCI
DESIGN COLLABORATIVE INC.
1000 1st Avenue, Suite 1000
Seattle, WA 98101
Phone: 206.461.1000
Fax: 206.461.1001
www.dci-architects.com



- FOUNDATION PLAN NOTES:**
1. STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND DIMENSIONS IS TO BE USED.
 2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. ALL EXISTING CONDITIONS SHALL BE MAINTAINED UNLESS OTHERWISE NOTED.
 3. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SEATTLE BUILDING DEPARTMENT (SBD) CODES AND THE SEATTLE CITY ENGINEER'S (SCE) REQUIREMENTS. ALL FOUNDATION WORK SHALL BE IN ACCORDANCE WITH THE SBD CODES AND THE SCE REQUIREMENTS. ALL FOUNDATION WORK SHALL BE IN ACCORDANCE WITH THE SBD CODES AND THE SCE REQUIREMENTS.
 4. FOUNDATION WORK SHALL BE IN ACCORDANCE WITH THE SBD CODES AND THE SCE REQUIREMENTS. ALL FOUNDATION WORK SHALL BE IN ACCORDANCE WITH THE SBD CODES AND THE SCE REQUIREMENTS.
 5. ALL FOUNDATIONS SHALL BE IN ACCORDANCE WITH THE SBD CODES AND THE SCE REQUIREMENTS. ALL FOUNDATIONS SHALL BE IN ACCORDANCE WITH THE SBD CODES AND THE SCE REQUIREMENTS.
 6. SHALE SHALL BE UNDERMINED AND APPLICABLE DESIGN REQUIREMENTS FOR STRUCTURAL.
 7. WATER PROOFING SYSTEM BY CONTRACTOR. REFER TO CHARTER DETAILS.
 8. TYPICAL DETAILS PER:

PILE CAP SCHEDULE

NUMBER	DIMENSIONS	WIDTH	LENGTH	THICKNESS	REFERENCE	DETAIL	COMMENTS
CC1P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.01	1005.01	
CC2P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.02	1005.02	
CC3P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.03	1005.03	
CC4P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.04	1005.04	
CC5P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.05	1005.05	
CC6P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.06	1005.06	
CC7P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.07	1005.07	
CC8P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.08	1005.08	
CC9P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.09	1005.09	
CC10P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.10	1005.10	
CC11P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.11	1005.11	
CC12P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.12	1005.12	
CC13P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.13	1005.13	
CC14P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.14	1005.14	
CC15P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.15	1005.15	
CC16P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.16	1005.16	
CC17P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.17	1005.17	
CC18P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.18	1005.18	
CC19P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.19	1005.19	
CC20P	12'-0" x 12'-0"	12'-0"	12'-0"	4'-0"	1005.20	1005.20	

9. TYPICAL DETAILS PER:
- 1005.01 TYPICAL SLAB ON GRADE CONSTRUCTION DETAIL
 - 1005.02 TYPICAL FOUNDATION WALL DETAIL
 - 1005.03 TYPICAL FOUNDATION WALL DETAIL
 - 1005.04 TYPICAL FOUNDATION WALL DETAIL
 - 1005.05 TYPICAL FOUNDATION WALL DETAIL
 - 1005.06 TYPICAL FOUNDATION WALL DETAIL
 - 1005.07 TYPICAL FOUNDATION WALL DETAIL
 - 1005.08 TYPICAL FOUNDATION WALL DETAIL
 - 1005.09 TYPICAL FOUNDATION WALL DETAIL
 - 1005.10 TYPICAL FOUNDATION WALL DETAIL
 - 1005.11 TYPICAL FOUNDATION WALL DETAIL
 - 1005.12 TYPICAL FOUNDATION WALL DETAIL
 - 1005.13 TYPICAL FOUNDATION WALL DETAIL
 - 1005.14 TYPICAL FOUNDATION WALL DETAIL
 - 1005.15 TYPICAL FOUNDATION WALL DETAIL
 - 1005.16 TYPICAL FOUNDATION WALL DETAIL
 - 1005.17 TYPICAL FOUNDATION WALL DETAIL
 - 1005.18 TYPICAL FOUNDATION WALL DETAIL
 - 1005.19 TYPICAL FOUNDATION WALL DETAIL
 - 1005.20 TYPICAL FOUNDATION WALL DETAIL

Health and Safety Plans



WORK LOCATION PERSONNEL PROTECTION AND SAFETY EVALUATION FORM

**Attach Pertinent Documents/Data
Fill in Blanks As Appropriate**

Job No.: <u>1307001.010</u>	
Prepared by: <u>Colette Gaona</u>	Reviewed by: <u>Christine Kimmel/Tim Syverson</u>
Date: <u>January 21, 2014</u>	Date: <u>January 27, 2014</u>

A. WORK LOCATION DESCRIPTION

1. **Project Name:** North Lot East Block Development/ 225 S. King Street LP
2. **Location:** East Parcel of the North Lot Property at the southeast corner of South King Street and Occidental Avenue South, 225 S. King Street, Seattle, Washington
3. **Anticipated Activities:** Soil and groundwater sampling and analysis to support soil excavation for property development. Monitoring well installation for compliance monitoring, and indoor air sampling following building construction. The Property includes about 20 ft of fill over native marine sediments. Groundwater is present at about 5 to 7 ft below grade.
4. **Surrounding Population:** Municipal, commercial, and residential
5. **Buildings/Homes/Industry:** The Property is currently a parking lot.
6. **Topography:** The average elevation of the Property is approximately 10 to 15 ft above mean sea level. The Property slopes slightly to the west.
7. **Anticipated Weather:** Varying extremes of hot and cold; with most work anticipated during the summer months.
8. **Unusual Features:** The entire Property is a paved parking lot.
9. **Site History:** The Property operated as a rail yard from the late 1800s to the late 1960s. The results of the sampling and analysis conducted for the remedial investigation have identified: 1) soil contamination by polycyclic aromatic hydrocarbons (PAHs) and petroleum hydrocarbons in soil greater than 15 ft below grade in the northeast portion of the Property due to the presence of creosote-like material at the fill-native marine sediments interface; and 2) Property-wide PAHs in soil and areas of arsenic and petroleum hydrocarbon-contaminated soil. Only arsenic has been detected above regulatory levels at multiple locations in groundwater, and these concentrations are due to upgradient, off-Property sources.

B. HAZARD DESCRIPTION

1. **Background Review:** Complete Partial

If partial, why?

2. **Hazardous Level:** B C D Unknown

Justification: Total petroleum hydrocarbons (TPH) including gasoline-range, diesel-range, and oil-range petroleum hydrocarbons, benzene, ethylbenzene, toluene, xylenes, PAHs, polychlorinated biphenyls (PCBs), and lead possible due to current and historical operations.

3. **Types of Hazards:** (Attach additional sheets as necessary)

- A. Chemical Inhalation Explosive
 Biological Ingestion O2 Def. Skin Contact

Describe: Exposure to chemical hazards from petroleum products, metals, PAHs, and volatile organic compounds (VOCs). Nitrile gloves will be worn. Incidental inhalation and ingestion possible from sampling process. Respirator will be worn if vapor levels warrant. Potential explosive hazard due to VOCs in subsurface; ambient conditions will be monitored with combustible gas meter.

- B. Physical Cold Stress Noise Heat Stress Other

Describe: Physical hazards from equipment and overhead obstacles (e.g., overhead power lines) may be encountered during exploration and excavation activities. Noise hazards associated with exploration and excavation equipment. Ear protection will be used. Steel-toed boots will be worn at all times due to heavy object hazards. Potential trip and fall hazards associated with exploration equipment will be minimized where possible.

- C. Radiation

Describe:

4. **Nature of Hazards:**

- Air Describe: Potential inhalation exposure to petroleum hydrocarbon and VOC constituents, and contaminated particulates including metals.
- Soil Describe: Potential inhalation, ingestion, or skin exposure to metals, TPH, PAHs, and/or VOCs.
- Surface Water Describe:
- Groundwater Describe: Potential inhalation, ingestion, or skin exposure to metals.
- Other Describe: Creosote-like material is present at greater than 15 ft below grade in a limited area in the northeast portion of the Property.

5. Chemical Contaminants of Concern N/A

Contaminant	PEL (ppm)	I.D.L.H. (ppm)	Source/Quantity Characteristics	Route of Exposure	Symptoms of Acute Exposure	Instruments Used to Monitor Contaminant
Arsenic	0.5 mg/m ³	5 mg/m ³	Soil and groundwater at concentrations just greater than Project-specific screening levels	Inhalation, ingestion, dermal contact, eye contact	Damage to liver, kidneys, skin, lungs, and lymphatic system (potential occupational carcinogen)	Visual (Dust)
Benzene	1	5	Soil at concentrations greater than Project-specific screening levels	Inhalation, ingestion, dermal contact, eye contact	Irritation of eyes, nose, skin, respiratory system; nausea; dizziness; headache; lassitude	PID meter, detection tubes, combustible gas meter
Ethylbenzene	100	125	Soil at concentrations greater than Project-specific screening levels	Inhalation, ingestion, dermal contact, eye contact	Irritation of eyes, skin, mucous membrane; headache; coma	PID meter
Naphthalene (PAH)	10	15	Soil at concentrations greater than Project-specific screening levels	Inhalation, ingestion, dermal contact, eye contact	Irritation of eyes; headache; confusion; excitement; malaise; nausea; sweating; optical neuritis	PID meter
Toluene	100	150	Soil at concentrations greater than Project-specific screening levels	Inhalation, ingestion, dermal contact, eye contact	Irritation of eyes, nose, skin, throat, respiratory system; nausea; dizziness; convulsions; headache; lassitude; bluish skin; liver injury	PID meter

Contaminant	PEL (ppm)	I.D.L.H. (ppm)	Source/Quantity Characteristics	Route of Exposure	Symptoms of Acute Exposure	Instruments Used to Monitor Contaminant
Total petroleum hydrocarbons	100 (as petroleum distillates)	400 mg/m ³ (as petroleum distillates)	Soil at concentrations greater than Project-specific screening levels	Inhalation, ingestion, dermal contact, eye contact	Irritation of eyes, nose, throat; nausea; dizziness; headache; dry cracked skin	Visual, PID meter
Xylene	100	150	Soil at concentrations greater than Project-specific screening levels	Inhalation, ingestion, percutaneous absorption, and skin and eye contact	Nervous system depression; liver and kidney damage.	PID meter

6. Physical Hazards of Concern N/A

Hazard	Location	Procedures Used to Monitor Hazard
Moving parts of drill rig, falling and flying objects	Near drill rig	Alert observation of surroundings; minimize time spent near drill rig; no loose clothing; use of safety glasses, hard hat, and steel-toed boots
Vehicles and heavy equipment used at the site	Any area	Alert observation of surroundings, use of brightly colored safety vest
Slips, trips, and falls	Any area	Alert observation of surroundings; chains and other equipment and supplies are covering much of the ground surface
Soil Excavation Machinery	Within swing radius of equipment, proximity to moving parts, and near unsupported excavation	Communicate your actions to the equipment operator. Minimize time spent close to the equipment and the edge of the excavation. Do not enter unsupported excavations more than 4 ft deep.
Forklift Operation	Within swing radius of equipment and proximity to moving parts	Communicate your actions to the equipment operator. Minimize time spent close to the equipment.

7. **Work Location Instrument Readings** N/A

Location: _____

Percent O₂: _____

Percent LEL: _____

Radioactivity: _____

PID: _____

FID: _____

Other: _____

Other: _____

Other: _____

Other: _____

Other: _____

Location: _____

Percent O₂: _____

Percent LEL: _____

Radioactivity: _____

PID: _____

FID: _____

Other: _____

Other: _____

Other: _____

Other: _____

Other: _____

Location: _____

Percent O₂: _____

Percent LEL: _____

Radioactivity: _____

PID: _____

FID: _____

Other: _____

Other: _____

Other: _____

Other: _____

Other: _____

Location: _____

Percent O₂: _____

Percent LEL: _____

Radioactivity: _____

PID: _____

FID: _____

Other: _____

Other: _____

Other: _____

Other: _____

Other: _____

8. **Hazards Expected In Preparation for Work Assignment** N/A

Describe:

C. PERSONAL PROTECTIVE EQUIPMENT

1. Level of Protection

A B C D

Location/Activity: Monitoring well installation, soil, soil vapor, and groundwater sampling, and soil excavation activities. If conditions warrant (based on action levels described in Attachment A), upgrade to Level C PPE.

2. Protective Equipment (specify probable quantity required)

Respirator N/A

- SCBA, Airline
 Full-Face Respirator
 Half-Face Respirator (Cart. organic vapor) (Only if upgrade to Level C)
 Escape mask
 None
 Other: Hearing protection
 Other:

Head & Eye N/A

- Hard Hat
 Goggles
 Face Shield
 Safety Eyeglasses
 Other:

Foot Protection N/A

- Neoprene Safety Boots with Steel Toe/Shank
 Disposable Overboots
 Other: Steel-toed boots

Clothing N/A

- Fully Encapsulating Suit
 Chemically Resistant Splash Suit
 Apron, Specify:
 Tyvek Coverall (Only if upgrade to Level C)
 Saranex Coverall
 Coverall, Specify
 Other: Work pants/long sleeve shirt or jacket

Hand Protection N/A

- Undergloves; Type:
 Gloves; Type: nitrile
 Overgloves; Type:
 None
 Other:

3. **Monitoring Equipment**

- | | |
|--|---|
| <input type="checkbox"/> CGI | <input checked="" type="checkbox"/> PID |
| <input type="checkbox"/> O ² Meter | <input type="checkbox"/> FID |
| <input type="checkbox"/> Rad Survey | <input type="checkbox"/> Other |
| <input type="checkbox"/> Detector Tubes (optional) | |

Type:

D. DECONTAMINATION

PERSONAL DECONTAMINATION

- Required Not Required

If required, describe:

Wash face/hands before breaks and lunch.

EQUIPMENT DECONTAMINATION

- Required Not Required

If required, describe and list equipment:

All non-dedicated equipment needs to be decontaminated between uses and before leaving the project site.

All sampling equipment will be decontaminated using wet decontamination procedures:

- Wash and scrub equipment with Alconox/tap water solution.
- Rinse with tap water.
- Rinse with de-ionized water.
- Repeat entire procedure or any parts of the procedure as necessary.

Down-the-hole equipment will be decontaminated using a hot water, high-pressure steam cleaner.

In addition to the wet decontamination procedures, other measures will be taken to prevent cross-contamination. These measures include: working site from “clean” to “dirty” areas, changing out disposable gloves between each sampling location, using fresh paper towels at each sample location, and maintaining a clean work area.

E. PERSONNEL

	Name	Work Location Title/Task	Medical Current	Fit Test Current
1.	Colette Gaona	Project Engineer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.	Christine Kimmel	Health and Safety Officer	<input type="checkbox"/>	<input type="checkbox"/>
3.	Tim Syverson	Project Manager	<input type="checkbox"/>	<input type="checkbox"/>
4.			<input type="checkbox"/>	<input type="checkbox"/>
5.			<input type="checkbox"/>	<input type="checkbox"/>
6.			<input type="checkbox"/>	<input type="checkbox"/>
7.			<input type="checkbox"/>	<input type="checkbox"/>
8.			<input type="checkbox"/>	<input type="checkbox"/>
9.			<input type="checkbox"/>	<input type="checkbox"/>
10.			<input type="checkbox"/>	<input type="checkbox"/>

Site Safety Coordinator: Christine Kimmel

F. ACTIVITIES COVERED UNDER THIS PLAN

Task No.	Description	Preliminary Schedule
	North Lot East Block Development Activities including excavation activities, soil and groundwater sampling, monitoring well installation and sampling, and indoor air sampling.	2014-2015

G. SUBCONTRACTOR'S HEALTH AND SAFETY PROGRAM EVALUATION

N/A

Name and Address of Subcontractor:

EVALUATION CRITERIA

Item	Adequate	Inadequate	Comments
Medical Surveillance Program	<input type="checkbox"/>	<input type="checkbox"/>	
Personal Protective Equipment Availability	<input type="checkbox"/>	<input type="checkbox"/>	
Onsite Monitoring Equipment Availability	<input type="checkbox"/>	<input type="checkbox"/>	
Safe Working Procedures Specification	<input type="checkbox"/>	<input type="checkbox"/>	
Training Protocols	<input type="checkbox"/>	<input type="checkbox"/>	
Ancillary Support Procedures (if any)	<input type="checkbox"/>	<input type="checkbox"/>	
Emergency Procedures	<input type="checkbox"/>	<input type="checkbox"/>	
Evacuation Procedures Contingency Plan	<input type="checkbox"/>	<input type="checkbox"/>	
Decontamination Procedures Equipment	<input type="checkbox"/>	<input type="checkbox"/>	
Decontamination Procedures Personnel	<input type="checkbox"/>	<input type="checkbox"/>	

GENERAL HEALTH AND SAFETY PROGRAM EVALUATION: Adequate Inadequate

Additional Comments:

Evaluation Conducted By: _____

Date: _____

EMERGENCY FACILITIES AND NUMBERS

Hospital: Swedish Medical Center
747 Broadway
Seattle, WA 98122

Telephone: (206) 386-6000

Directions:

Start out heading west on S King St toward Occidental Ave S	< 0.1 miles
Turn RIGHT at 1 st Ave S.	0.2 miles
Turn RIGHT at Yesler Way	0.6 miles
Turn LEFT at Broadway	0.5 miles
End at 747 Broadway	
Seattle, WA 98122-4379, US	

Total Estimated Time: 6 minutes
Total Estimated Distance: 1.4 miles

Emergency Transportation Systems (Fire, Police, Ambulance) – 911

Emergency Routes – Map (Attachment B)

Emergency Contacts:

Name	Phone Number	Location
Emergency	911	On site
Tim Syverson	(206) 605-9236 (Cell)	Off site
Christine Kimmel	(206) 786-3801 (Cell)	Off site

In the event of an emergency, do the following:

- Call for help as soon as possible. Call 911. Give the following information:
 - WHERE the emergency is – use cross streets or landmarks
 - PHONE NUMBER you are calling from
 - WHAT HAPPENED – type of injury
 - WHAT is being done for the victim(s)
 - YOU HANG UP LAST – let the person you called hang up first.
- If the victim can be moved, paramedics will transport to the hospital. If the injury or exposure is not life-threatening, decontaminate the individual first. If decontamination is not feasible, wrap the individual in a blanket or sheet of plastic prior to transport.

**HEALTH AND SAFETY PLAN
APPROVAL/SIGN OFF FORMAT**

I have read, understood, and agreed with the information set forth in this Health and Safety Plan (and attachments) and discussed in the Personnel Health and Safety briefing.

_____	_____	_____
Name	Signature	Date
_____	_____	_____
Name	Signature	Date
_____	_____	_____
Name	Signature	Date
_____	_____	_____
Name	Signature	Date
_____	_____	_____
Site Safety Coordinator	Signature	Date
_____	_____	_____
Christine Kimmel	Signature	Date
_____	_____	_____
Landau Health and Safety Manager	Signature	Date
_____	_____	_____
Tim Syverson	Signature	Date
_____	_____	_____
Project Manager	Signature	Date

Personnel Health and Safety Briefing Conducted By:

_____	_____	_____
Name	Signature	Date

ATTACHMENT A

ACTION LEVELS FOR RESPIRATORY PROTECTION

Monitoring Parameter	Reading	Level of Protection
Organic Vapors	PID/detection tube reading >15 ppm in breathing zone for more than 1 minute	Establish 25-ft diameter exclusion zone around work area and evacuate or upgrade to Level C PPE. Establish contamination reduction zone with waste containers and decontamination fluids provided for personal decontamination.
	PID/detection tube reading >75 ppm in breathing zone for more than 1 minute	Evacuate area and move upwind to allow vapors to dissipate; may resume work after vapors dissipate or upgrade to a full-face respirator with organic vapor/HEPA cartridge.
	PID/detection tube reading >150 ppm in breathing zone for more than 1 minute OR >300ppm for momentary peak	Evacuate area and contact H&S Manager
Petroleum-Contaminated Particulates	Visible Dust (with dust suppression utilized)	Evacuate area and upgrade to Level C – half face respirator with organic vapor/HEPA combination cartridges

ATTACHMENT B

**EMERGENCY ROUTE TO SWEDISH MEDICAL CENTER
747 BROADWAY, SEATTLE, WASHINGTON
(206) 386-6000**





255 South King Street **WORKER SAFETY & HEALTH PLAN**

February 25, 2014

Owner: 255 S King Street LP

Environmental Consultant: Landau Associates

General Contractor: Sodo Builders, LLC

Site Address: 255 S King Street, Seattle, WA 98134

INTRODUCTION

This site specific health and safety plan (SHASP) establishes the procedures and requirements to ensure the health and safety of workers during the construction of the 23-story hotel tower and 18-story office tower at 255 South King Street in Seattle, WA.

This SHASP has been prepared to comply with the 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response (HAZWOPER) and WAC Chapter 296-843 Hazardous Waste Operations. This report is to supplement the Soil & Water Handling & Disposal Plan and its specific potential exposure to contaminated soils during excavation operations.

EDUCATE & DEFINE LIMITS

1. Inform onsite workers about contaminants and zones.
2. Educate those in close proximity to safety risks and precautions.
3. "Hot Zones" flagged or clearly marked.
4. HAZWOPER trained for those with direct supervision.
5. Hot Zones may be reclassified by Environmental Consultant or HAZWOPER supervisor.
6. All workers with potential exposure to submit site specific health and safety plan.

EMERGENCY CONTACTS

1. Patrick Nickerson – Construction Manager, (206) 349-4050
2. Ray Pinney – Assistant superintendent, (206) 245-0502

SITE HAZARD EVALUATION

1. Site reconnaissance with Environmental Consultant, HAZWOPER superintendent, and General Contractor. Visual inspection of areas to be disturbed and where installing barriers or zoning markers. Hot Zone to be delineated with red tape. Caution Zone to be delineated with yellow tape.

HAZARD COMMUNICATION

1. Site specific orientation
2. WISHA 40-hr HazMat course certification current
3. Weekly safety meetings
4. Notify of suspected unmarked contaminants immediately for appropriate testing
5. Hot Zone until confirmed or reclassified

HOT ZONE - PRACTICES & PROCEDURES

1. Extent defined
2. Access limited
3. HAZWOPER super onsite at all times during disturbance in Hot Zone
4. WISHA 40-hr HazMat certification for those handling contaminated soils
5. Unauthorized entry subject to disciplinary action or removal
6. Prohibited activities identified or signed.
7. Personal Protective Equipment (PPE) appropriate to level of contamination

CAUTION ZONE – PRACTICES & PROCEDURES

1. Extent defined
2. Access limited
3. HAZWOPER super onsite at all times during disturbance in Caution Zone
4. PPE appropriate to level of contamination.

ENGINEERING CONTROLS

1. Implementation is responsibility of earthwork subcontractor and Sodo Builders, LLC
2. During excavation, soil wetting may be required to minimize dust; avoid over-wetting to prevent excess water runoff
3. All tools and equipment to be decontaminated prior to removal from Hot Zone

PERSONAL PROTECTIVE EQUIPMENT

1. Minimum standard PPE: work boots, visible vest, hard hats, eye protection
2. Hot Zone PPE: protective eyewear, protective outerwear, outer gloves, chemically resistant boots, visible vest, hard hats, respiratory protection as necessary
3. Caution Zone PPE: protective eyewear, outer gloves, work boots, visible vest, hard hats

TRAINING

1. Hot Zone – 40-hr HAZWHOPER certified, attend site specific awareness training per WAC 296-62 General Occupational Health Standards, including
 - a. Site Specific Safety Plan
 - b. Names for those responsible for site safety and health
 - c. Safety, health, and other hazards at site
 - d. Description and locations of suspected contaminants
 - e. Appropriate handling of suspected contaminants
 - f. Transport and disposal of suspected contaminants
 - g. Hazards and medical effects
 - h. Medical visual surveillance
 - i. Types, frequency, and interpretation of air monitoring

- j. PPE – care, donning, and limitations
 - k. Personal decontamination
 - l. Practices to minimize risks
 - m. Site control measures
 - n. Barrier ID and controls
 - o. Safe use of controls and equipment
 - p. Emergency response
 - q. WAC 296-155 Safety Standards for Construction
2. Caution Zone – minimum Site Specific Awareness Training, including
 - a. Site Specific Safety Plan
 - b. Names for those responsible for site safety and health
 - c. Safety, health, and other hazards at site
 - d. Description and locations of suspected contaminants
 - e. Hazards and medical effects
 - f. Types, frequency, and interpretation of air monitoring
 - g. PPE – care, donning, and limitations
 - h. Personal decontamination
 - i. Practices to minimize risks
 - j. Site control measures
 - k. Barrier ID and controls
 - l. Safe use of controls and equipment
 - m. Emergency response
 - n. WAC 296-155 Safety Standards for Construction

MEDICAL SURVEILLANCE

1. WAC 296-843-210 Hazardous Waste Operations: Health & Safety Plan
2. For Hot Zone
3. Required when meeting any of following:
 - a. Above permissible exposure limits (PELs)
 - b. Respirator use for 30 days/year or more with injury, illness, or symptoms of possible overexposure
 - c. HAZMAT member
4. Medical examination for affected employees, including obtaining following information:
 - a. Medical and work history
 - b. Any additional information

AIR MONITORING

1. Ambient air (perimeter) monitoring as baseline, conducted by Environmental Consultant or third party. If perimeter ambient air exceeds 50% of action level, HAZWHOPER to review and/or modify work practices
2. Conducted by Environmental Consultant or HAZWOPER supervisor

- a. At initial site entry
 - b. During excavation and soil disturbance
 - c. Identify and quantify
 - d. Document exposure levels
 - e. Submitted to SODO Builders
3. Excavation work considered Hot Zones until air monitoring prove below PEL or other published exposure levels
4. Employers responsible for providing monitoring and servicing of their equipment

WASH STATIONS / DECONTAMINATION STATIONS

1. Hand wash station provided by earthwork subcontractor,
 - a. Used prior to breaks or entry into break area, end of shift, prior to eating/drinking, or in event of inadvertent skin contact with contaminants
 - b. Placed at far end of decontamination zone
2. Decontamination of tools/equipment to start at Hot Zone and end in decontamination zone