GBD

LAND USE APPLICATION

WRITTEN NARRATIVE

Block 37 Apartments
March 27, 2014

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WRITTEN STATEMENT

Block 37 Apartments

SITE AND VICINITY

Block 37 is located in the South Waterfront subdistrict to Portland's Central City. The site is situated at the edge of the Willamette River along the Willamette River greenway. Bordering the site to the north is SW Gaines, a special Building Height Corridor, to the south is a "Green Street" along SW Lane alignment, and to the west is SW River Parkway, a parking access restricted. The improvements for the south side of SW Gaines, the east side of SW River Parkway and to the centerline of SW Lane are to be included within the scope of this Design Review Application.

The site improvements and architecture are intended to strengthen the urban fabric of South waterfront by creating pedestrian connection to the greenway, continuing the stormwater treatment expression along Lane, emphasizing the retail corner at Gaines and River Parkway and completing the urban enclosure of the central district.

ARCHITECTURAL SUMMARY

Block 37 is on a 72,749 SF site and is six stories and comprised of a 278 market-rate apartments, 226 parking stalls and over 6,000 SF of retail. The ground floor has pedestrian-oriented retail and 12 apartments with walk-up style entry stoops. The main entry is located mid-block on SW River Parkway directly aligned with the pedestrian access that cuts through the Ardea to the west with visual connection to the streetcar stop on SW Bond. With parking access limited on SW Lane, since it is a Green Street, and River Parkway, since it is parking restricted, the garage entry is located on SW Gaines. The ground level of parking is completely enclosed by ground level apartments. A total of 421+ long-term bike parking spaces are provided within the building along with 13 short-term bike racks in the sidewalk furnishing zone. An interior ramp accesses an additional level of below grade parking. Retail is located at the corner of SW Gaines and River Parkway, as required, as well as the corner of SW Lane and River Parkway. Both offer great opportunities for outside dining/café use as access points to the river and the greenway. The building height steps down to the east with terraces providing a gradual transition to the river and the greenway. It also has a large south facing courtyard along SW Lane.

The building's simple massing consists of a modified "U" shape that encloses a residential amenity terrace at level two along SW Lane. The building either projects or steps back to emphasis corners, break up the mass, and provides shadow lines, texture and visual interest. A common living room on the second level provides residents with outdoor living space to enjoy the river view and greenway while activating the greenway and providing eyes on the trail. The ground level building materials are clear vision glass, dark brick and metal panel. Upper levels consist of stucco, metal panels and large windows.

ZONING SUMMARY

	Allowed / Required	Proposed
Zone	CXdg	
Use 33.130.100	Household Living, Retail Sales and Service + more	Conforms – use is Apartment Housing and Retail
Site Area		72,749 SF – land area 59,530 - buildable area
FAR 33.510.200	5:1	Conforms – FAR is 3.71:1 See Technical Exhibits
Height 33.510.205	125' & 75' for first 125' from top of bank	Conforms – Building is 72'
Min. Setback 33.130.215	0'	Conforms
Max. Setback 33.130.215	10' in Pedestrian District	Conforms
Bldg Coverage 33.130.220	No limit	Conforms
Req'd Landscaping 33.130.225	None	Conforms
Req'd Bldg Lines 33.130.230 33.510.215	SW River Parkway - bldg. must extend to lot line along min 75% or commit space to active use	Conforms – Building either extends to lot line or extend sidewalk to bldg. face.
Grnd Flr Windows 33.130.230 33.510.220	50% of all façade lengths & 25% of ground floor wall area up to 9' above finished grade. This does not apply to residential units	Conforms See Technical Exhibits
Active Use 33.510.225	SW Gaines - 50% of ground floor walls. 12' clear, 25' deep. Uses include retail and residential	Conforms See Technical Exhibits
Parking Restrictions 33.510.225	SW Gaines – vehicle areas not allowed	Conforms
Screening 33.130.235	Garbage and ground level mechanical equipment	Conforms
Ped Reqmts 33.130.240	Connect main entrance to adjacent street and internal areas	Conforms
Ext Display 33.510.240	Display of good not allowed. Dining is allowed	Conforms
Special Height Corridor 33.510.252	SW Gaines - Portions of buildings within 50' of the centerline limited to 50' – note trees are not req'd	Modification Requested
Accessways 33.510.252	SW Lane – building to setback min of 30' from centerline of accessway & meet landscaping stds 33.510.215	Modification Requested See Technical Exhibits

Req'd Retail 33.510.252	SW Gaines & River – retail to extend min 25' from corner ea. Direction, 12' clear height, 25' deep	Conforms See Technical Exhibits
Fences 33.130.270	Front: in setback max.3'6" Side: in setback max 8' Rear: < 50% obscuring max 8', > 50% obscuring 3'6"	Conforms
Street Trees 20.40	Required for all development	Conforms
Recycling 33.130.310	Recycling area required for residential and retail	Conforms
Signage Title 32		To be submitted at a later date
Parking-Auto 33.266.130 33.510	Residential: min .33/DU, max. 1.7/DU Retail: no min or max if in structured parking	Conforms Modification Requested See Technical Exhibits
Parking-Bikes 33.266.220	Short Term Residential: 1/20 DU Short Term Retail: 2 Long Term Residential: 1.5/ DU Long Term Retail: 2	Conforms See Technical Exhibits
Loading 33.266.310	Two spaces 18'x9'x10 clear or one 35'x10' x13' clear, forward motion and paved	Conforms

LEED SUMMARY

The project is targeting LEED Silver. Specific strategies that will be used will include on site high performance envelope, rainwater treatment, native landscaping, light-colored roof with filtration rock, access to public transportation and high efficiency MEP systems. Through strategic design, development and construction techniques, Block 37 will strive to earn the necessary credits in order to be certified by the U.S. Green Building Council.

PREVIOUS CONDITIONS OF APPROVAL

Below is a list of the land use case review that the City of Portland has on record for the site. We do not believe there are any relevant conditions of approval from previous land use reviews on the site.
LU 10-204930 DZGW
EA 13-151841 DA

DESIGN REVIEW NARRATIVE

Block 37 Apartments

SOUTH WATERFRONT DESIGN GUIDELINES

SECTION A
PORTLAND PERSONALITY

A1 INTEGRATE THE RIVER
Central City Fundamental Design Guideline

Block 37 is directly adjacent to the Willamette Greenway along its eastern boundary. The river is integrated into the project through the architecture and site development and infrastructure. The river view is of primary importance to the design and greatly influenced the shape in order to maximize views for the residents. The building stair-steps back from the greenway trail in an eroding edge with terraces and landscape planters that soften the built form as it extends towards the greenway and while providing a visual extension of the greenway into the edge of the building. An approximately 8 foot level change between the greenway and the private patios is achieved with gradual terraces. A second level common living room provides residents the opportunity to relax along the river's edge while creating activity and providing "eyes on the park" – effectively expanding the public realm. Additionally, residents will have excellent opportunities to enjoy the river from the many balconies, and with enhanced connections to the greenway right at their doorstep. The pedestrian experience and increased housing opportunities will help connect the city with the river.

As a part of the project, the Green Street along SW Lane will be completed and will provide connection to the new bike and pedestrian trails along the greenway for all of the residents of the district. A large south facing courtyard is accessed off of Lane with a gracious stair that connects to the Green Street bringing greater pedestrian activation to the base of the building and the Green Street.

Lastly, the building's stormwater management system implements on-site filtration while celebrating water. A waterfall funnels the building's stormwater from the second level terrace down to bio-swale filtration ponds on SW Lane that is linked to the river.

A1-1 CONTRIBUTE TO THE CREATION OF RIVER EDGE VARIETY
South Waterfront Design Guideline

In addition to the terracing, planter and form that stair-steps back from the greenway edge, Block 37 provides variety in its form along the river. The two other buildings along the river's edge in South Waterfront District are towers that sit on podiums that fill their blocks. Block 37 is a podium building that fills its block and does not rise above 75'. This maintains continuity in the pedestrian realm while providing more sunlight and less shadow to the greenway trail than a tower form and while maintaining views for the surrounding towers and hills to the west. Its mass is broken up with volumes that project and recede to create a variety of volumes along with the

balconies and stoops that not only create variety, but provide opportunities for residents to enjoy river views and provide "eyes on the street."

A1-2 INCORPORATE ACTIVE USES ALONG THE RIVER

South Waterfront Design Guideline

Retail at the corner of SW Gaines and River Parkway serves to strengthen and build upon the pedestrian connection to the greenway along Gaines. The building face is setback long Gaines to provide the opportunity for a café to spill out onto the sidewalk with tables and chairs. Canopies provide pedestrian protection. Walk-up units with stoops along SW Gaines and SW Lane contribute to the expansion of the public realm by creating outdoor rooms where residents and sit and people-watch.

Along SW Lane, a gear room is provided for residents to store and rent paddle boards and kayaks along with a dog and bike repair station. Biking is encouraged with over 400 bike parking spaces being provided. The project team is actively working with Portland Parks and Recreation to provide a hardscape connection from SW Lane to the greenway trail to further promote walking, biking and boating.

A2 EMPHASIZE PORTLAND THEMES

Central City Fundamental Design Guideline

A2-1 RECOGNIZE THE WILLAMETTE RIVER'S MARITIME/NAUTICAL HISTORY AS AN IMPORTANT THEME

South Waterfront Design Guideline

The project celebrates several Portland-related themes including a vital pedestrian focused streetscape and an emphasis on bicycle transportation. The orientation of the ground-level spaces activate all adjacent streets with retail, front stoops and landscaping along with a pedestrian terrace on the greenway. An active stormwater filtration system expresses the movement of water towards the river through the waterfall from the second level courtyard that connects to bio-swale filtration ponds along SW Lane and the river.

The boardwalks over the filtration ponds at SW Lane harken back to the notion of wood dock structures of the district's maritime past that served to provide connection from the water to land much like the connection the boardwalks provide from the private residences to the Green Street.

A3 RESPECT THE PORTLAND BLOCK STRUCTURES

Central City Fundamental Design Guideline

Block 37 aligns with the established grid structure of the South Waterfront neighborhood. The urban building edges along SW Gaines, SW River Parkway and SW Lane come to the lot line in a variety of forms with walk-up front entries to individual apartments and glass expanses of retail storefronts. Each of these expressions provides a strong edge and respects the urban character of the neighborhood while creating opportunities for active pedestrian environments.

A4 USE UNIFYING ELEMENTS

Central City Fundamental Design Guideline

The unique district lighting, street furniture and public way materials will be used to unify the project and the entire district. The streetcar, aerial tram and greenway trails all serve to connect the district with not only the central downtown district but now the eastside central city as well with the new light rail bridge. Block 37 will further unify the district by completing the urban fabric with a podium that meets the lot line, maintains the cohesive pedestrian scale established by the surrounding tower podiums and by using unifying materials already found in the district – brick, stucco, and metal panel. It is designed to relate to other buildings in the district through simple but bold building forms and coloration as well as landscape treatments at the building perimeter along the sidewalk.

A4-1 INCORPORATE INDIGENOUS/ECOLOGICAL CONCEPTS IN THE URBAN LANDSCAPE

South Waterfront Design Guideline

A4-2 INCORPORATE STORMWATER MANAGEMENTS SYSTEMS IN DEVELOPMENT

South Waterfront Design Guideline

The "green" pedestrian accessway, SW Lane Street, is designed to accommodate a bio-swale as well as a pedestrian link to the greenway trail and the river. All site storm water eventually works its way to this natural treatment element before continuing to the river. A waterfall along the stairs that connect the south courtyard to this green street celebrates rain while carrying storm water to the bio-swales. Non-occupied roof surfaces incorporate artistically assembled filtration rock providing function and visual interest. Plantings along the greenway follow Portland Parks and Recreations' greenway planting palette to seamlessly blur the line between private and public property while enhancing indigenous habitat. The project is targeting LEED Silver certification. Energy efficiency, a high performance envelope, environmentally sound material selection, native plantings and resource conservation are all integrated into the design.

A5 ENHANCE, EMBELLISH AND IDENTIFY AREAS

Central City Fundamental Design Guideline

A5-1 CONSIDER SOUTH WATERFRONT'S HISTORY AND SPECIAL QUALITIES

South Waterfront Design Guideline

An active stormwater filtration system expresses the movement of water towards the river through the waterfall from the second level courtyard that connects to the bio-swales along Lane which eventually serve to help replenish the river. The boardwalks over the bioswales harken back to the notion of wood dock structure that serve to provide connection from the water to land and thus incorporate the maritime/nautical thematic elements into the urban landscape while providing a consistent and unifying element with the boardwalks along Ardea along SW Lane.

The unique district lighting, street furniture and public way materials will be used to unify the project and the entire district. Street tress, stormwater treatment and landscaping are coordinated with the district standards.

A6 RE-USE / REHABILITATE / RESTORE BUILDINGS

Central City Fundamental Design Guideline

There are no existing structures on the Block 37 site; therefore the guideline does not apply although the restoration of the riverbank and completion of the greenway trail in front of the site meets the spirit of the guideline to restore significant elements in the city.

A7 ESTABLISH AND MAINTAIN A SENSE OF URBAN ENCLOSURE
Central City Fundamental Design Guideline

Block 37 responds to and reinforces its place within both the existing and the developing urban context of the South Waterfront District. These responses can be seen in a number of gestures. The ground floor extends to the lot lines and creates a strong urban edge. The retail spaces are held back to allow doors to be opened without protruding into the pedestrian way and provides more area for the retail to spill out into the sidewalk. The corners at SW Gaines and SW Lane are reinforced with retail and strong massing form that accentuates the building's corners. The walk-ups along SW Gaines and W Lane provide a comfortable street edge leading to the greenway. In addition, balconies, canopies, lighting and a strong differentiated base serve to articulate the urban edge.

A8 CONTRIBUTE TO VIBRANT STREETSCAPE
Central City Fundamental Design Guideline

There are two aspect of this project that contributes to the vibrancy of adjacent streetscape. First is the retail space that occupies the River Parkway frontage. There will be retail entrances at both the southwest and northwest corners of the block accentuated by the tall first floor of the building. The retail base has large amounts of vision glass to connect and energize the street with the activity in the retail spaces. The retailers will have the opportunity to utilize the building zone of the sidewalk and provide sidewalk seating. The second contributing factor is the ground level residential interaction with the street. Ground level units have direct interaction with the street via entrance stoops along both SW Gaines and SW Lane. The building's main entry lobby mid-block on SW River Parkway had visual connection to the streetcar stop on SW Bond through the Ardea's pedestrian way. All of these elements will add to the activity of the street and the creation of a place in which to live, work, shop and play.

A9 STRENGTHEN GATEWAYS
Central City Fundamental Design Guideline

Block 37 is not located at a designated city gateway. However the location of the site within the South Waterfront district sets the areas as a major landmark and gateway as one enters Portland on 1-5. On a smaller scale, the accentuated northwest retail corner entrance will serve as a gateway to the greenway while strengthening the intersection as a retail node.

SECTION B
PEDESTRIAN EMPHASIS

B1 REINFORCE AND ENHANCE THE PEDESTRIAN SYSTEM
Central City Fundamental Design Guideline

B1-2 ENHANCE ACCESSWAY TRANSITIONS
South Waterfront Design Guideline

Block 37 provides extensions of the planned streets and pedestrian system as well as a strong pedestrian orientation to all adjacent streets. River Parkway has been designated a retail spine that will reinforce the north south pedestrian system through the district. The building corners at SW Gaines and SW Lane are reinforced with retail and strong massing form that accentuates the building's corners and strengthens the retail node at the intersection of SW Gaines and River Parkway encouraging pedestrian movement to the greenway. Connection to the Willamette Greenway, which includes both walking and biking trails, will provide a natural environment experience. The walk-ups along both SW Gaines and SW Lane provide transition from the urban network to the greenway. Sidewalk materials, components and street trees conform to the South Waterfront District Street Plan criteria and standards. Scoring patterns in the paving and thoughtful placement of benches all add to the pedestrian friendly environment. Canopies and well-lit sidewalks further enhance the pedestrian experience. Lastly the project team is working with Portland Parks and Recreation to provide a pedestrian connection to the greenway walking and biking trails from SW Lane.

B1-1 FACILITATE TRANSIT CONNECTIONS

South Waterfront Design Guideline

River Parkway is not a transit street, however SW Bond and SW Moody, one and two blocks to the west are designated transit streets. The primary retail entrances are oriented to the intersections of SW Gaines and SW Lane offering a convenient pedestrian linkage to the transit streets to the west. The main lobby is located in the center of the block along River Parkway directly across from the pedestrian corridor that cuts through the Ardea providing visual as well as direct connection to the streetcar stop on SW Bond. The site also has a direct connection to the greenway walking and bike paths, which serves as an excellent alternative transit route into downtown.

B2 PROTECT THE PEDESTRIAN

Central City Fundamental Design Guideline

Along River Parkway curb extensions increase the width of the sidewalk and make for safer pedestrian crossings. Street trees and street furniture placed within the street furniture zone, between the movement zone of the sidewalk and the curb will help create a physical barrier between pedestrians and vehicles. In addition, parallel parking will provide for another layer of protection and maintain a human scale within the right-of-way. Canopies along river Parkway will provide protection from wet weather. Light from the retail storefront, overhead canopies and residential stops will help illuminate the sidewalk and activities while increasing the pedestrian security.

Vehicular access is not allowed along SW River Parkway. The parking garage access is located on Gaines. To address neighbor concerns, minimize vehicular traffic and promote pedestrian access on SW Gaines, the loading is located off of SW Lane. The loading is located on the west portion of the building to limit the area on Lane that loading vehicles can access. The loading area allows a tuck to pull all the way into the building so that sidewalk access is not impeded. As the building leases up, loading will be heavily used for apartment move-ins. After lease-up, we would expect the need for move-in loading to taper off to once a week. Retailers will be encouraged to use the loading space inside the garage.

B2-1 INCORPORATE OUTDOOR LIGHTING THAT RESPONDS TO DIFFERENT USES
South Waterfront Design Guideline
C12 INTEGRATE EXTERIOR LIGHTING
Central City Fundamental Design Guideline

The frontages of the project require lighting to accommodate several diverse uses. Lighting for individual residential walk-up entrances along with the building lobby entrance will provide both security and architectural enhancement through downlights integrated into canopies and building overhangs. The retail frontages rely on general street lighting, lighting from the display windows and down lighting in the canopies. Accent lighting is anticipated in association with future retail signage. General pedestrian lighting along the frontages will be in accordance with South Waterfront streetscape standards. In addition, discrete landscape lighting is proposed for the terraces along the greenway to enhance evening connection to the trails. Fire-pits on the second floor common living area will provide both warmth and mood lighting. Finally step lighting will be incorporated into the stairs that connect the south courtyard to SW Lane. All outdoor lighting will be carefully planned to comply with LEED night sky criteria.

B3 BRIDGE PEDESTRIAN OBSTACLES
Central City Fundamental Design Guideline

The street intersections will include curb extensions to minimize the street crossing distance while also slowing traffic. SW Lane is designed as a Green Street that will have a special emphasis on pedestrian friendliness. As a part of the Willamette Greenway improvements pedestrian and bike connections will be provided at SW Gaines. The project team is currently working with Portland Parks and Recreation to provide both pedestrian and bike connection at the termination of the greenway trail to SW Lane.

B4 PROVIDE STOPPING AND VIEWING PLACES
Central City Fundamental Design Guideline

The retail frontage along River Parkway will offer numerous places to stop and view into the retail space. The retail frontage is slightly pulled back to provide more space for retailers to spill out on the sidewalk. Street furniture along all streets will provide additional opportunities to stop and appreciate the views to the river. In addition the residential stoops along SW Gaines and SW Lane, greenway terraces, balconies and the common living room along the greenway all provide views to the river encourage interaction and provide eyes on the street. Street furniture and planting walls will provide opportunities for pedestrians to sit and rest. Lastly the waterfall at the south terrace and the bio-swales provide pedestrian interest and variety.

B5 MAKE PLAZAS, PARKS AND OPEN SPACES SUCCESSFUL
Central City Fundamental Design Guideline

The south courtyard provides residents with common landscape space to relax and socialize in the sun. The courtyard augments the Green Street on SW Lane with a waterfall and gracious stairway that connects the pedestrian system with the greenway trail and the rest of the district. The stoops along SW Lane and Gaines provide additional opportunities for residents to sit and

enjoy the sun and watch the people passing by while enlivening the Green Street. The common living room on the second floor along the greenway provides additional opportunities for residents to view the river and activities along the greenway trail. These spaces provide a variety of areas from more active to contemplative and serve to connect the pedestrian environment through the project into the surrounding district.

B6 DEVELOP WEATHER PROTECTION
Central City Fundamental Design Guideline

The main lobby and retail entrances are protected from the weather with canopies that will mitigate the effects of rain wind, glare, reflection and sunlight on the pedestrian environment. The residential entrances along Gaines and Lane have stoops where the building face is setback and provides protection from the elements.

B7 INTEGRATE BARRIER-FREE DESIGN
Central City Fundamental Design Guideline

All exterior and interior spaces in the building have been designed for barrier-free access and accessible routes to each apartment and the retail spaces. Six fully accessible units are sprinkled throughout the building in a variety of unit types providing various living options for those who require accessible units. All accessibility elements are well integrated and do not detract from the building's overall design.

SECTION C
PROJECT DESIGN

C1 ENHANCE VIEW OPPORTUNITIES
Central City Fundamental Design Guideline

SW Gaines is a Special building Height corridor that aligns and ends in a Minor Viewpoint. Portions of buildings over fifty feet are required to setback fifty feet of the centerline of SW Gaines. The project is requesting a modification to this standard since the entire length of the building's massing sets back 6' from the property line and the entire massing does not extend beyond 75.' The setback provides even greater visual access to and from the greenway in the east west direction and the lower stature building mass provides greater access to sunlight along the street and the greenway than a point tower massing, The limited height also preserves views for the surrounding towers.

The view corridor along SW Lane is maintained and provides connection to the greenway trail which leads to view opportunities of Mt. Hood. Lane is a designated accessway and the building is required to set back at least 30' from the centerline of the accessway. In addition the area between the building and the accessway must meet required landscaping standards that further project the view corridor.

The massing of the building was designed to maximize both views to the river and sunlight. Terraces and private stoops are provided along the greenway to take advantage of views and provide eyes on the park. The common living room on the second level faces the greenway and provides outdoor space for all residents to enjoy the park view.

C2 PROMOTE QUALITY AND PERMANENCE IN DEVELOPMENT

Central City Fundamental Design Guideline

The entire development on Block 37 will be constructed of high-quality and durable materials found elsewhere in the district. The base of the building consists of a cast-in-place structural frame clad in aluminum storefront windows, brick and metal canopies. The floors above integrate VPI commercial vinyl windows, stucco, metal panel and glass railings. The large windows are recessed to create texture and shadow while the building form projects for emphasis or recesses to create from breaks and massing variety. As a LEED certified building, the envelope and mechanical systems will be highly energy efficient.

C3 RESPECT ARCHITECTURAL INTEGRITY

Central City Fundamental Design Guideline

This guideline is intended to address the rehabilitation or remodeling of existing structures. Since Block 37 is an entirely new development, this guideline does not apply.

C4 COMPLEMENT THE CONTEXT OF EXISTING BUILDINGS

Central City Fundamental Design Guideline

Block 37 responds to and helps define the context of the district. The massing reinforces the podium heights of the surrounding towers and steps back from the greenway providing landscape planting opportunities, balconies and terraces that soften the building edge along the river while following the development pattern of the towers to the north. The walk-up units along both SW Gaines and SW Lane create transitions between the public sidewalk and residences while providing opportunities for residents to landscape, relax and view those passing by similar to many of the surrounding buildings. Several design elements in the project are found in adjacent buildings including ground floor active use and an emphasis on sculptural use of variously textured exterior siding materials found elsewhere in the district.

C4-1 DEVELOP COMPLIMENTARY STRUCTURED PARKING

South Waterfront Design Guideline

The two-story structured parking garage is well integrated into the design of the building. The apartment lobby, retail and ground floor residential units wrap the ground level parking along all streets. The second story is below grade. 226 parking stalls are provided for the use of residents. Entry to the parking garage is along SW Gaines since SW River Parkway is a parking access restricted street and SW Lane is a Green Street. At the request of the Atwater resident's the project team is working to located the parking garage entrance further east and offset from their garage entrance, but will need to get approval from PBOT since stormwater filtration planters are currently planned for in that location.

C5 DESIGN FOR COHERENCY

Central City Fundamental Design Guideline

The overall project uses a coherent palette of materials that are well knit together. The building massing is simple and clear with a strong base expressed in brick and retail areas that with storefront glazing and canopies. The upper floors are clad in stucco contrasted against textural metal panels and large setback windows that provide a coherent rhythm and texture. The massing is broken up with variations in façade depth that serve to emphasis corners. A consistent module of window sizes and panel sizes create coherency in the forms.

C6 DEVELOP TRANSITIONS BETWEEN BUILDINGS AND PUBLIC SPACES

Central City Fundamental Design Guideline

The river frontage meets this guideline by a series a low planters walls, terracing down between the private terraces to the public realm of the greenway. The frontages along SW Gaines and SW Lane utilize a combination of slightly elevated stoops to define the line between public and private. The River Parkway frontage is primarily retail with immediate access from the public way into the various shops as well as the main building lobby. The main building lobby and the retail entrances have canopies that provide both pedestrian weather connection and transition.

C7 DESIGN CORNERS THAT BUILD ACTIVE INTERSECTIONS

Central City Fundamental Design Guideline

The building corners at SW Gaines and SW Lane are reinforced with retail and a strong massing form that accentuates the building's corners and strengthens the retail node at the intersection of SW Gaines and River Parkway serving to encourage pedestrian movement to the greenway. The primary retail entrances with cantilevered canopies to emphasize them are oriented to the intersections of SW Gaines and SW Lane offering a convenient pedestrian linkage to the transit streets to the west and the greenway to the east. The taller height at the ground floor serves to accentuate the base of the building while providing retailers with a highly visible location to display merchandise. Finally, sidewalk extensions at the corners provide more space for pedestrian activity, retail seating, viewing and stopping opportunities.

C8 DIFFERENTIATE THE SIDEWALK-LEVEL OF THE BUILDINGS

Central City Fundamental Design Guideline

The taller height at the ground floor is expressed in brick with retail areas that have storefront glazing and canopies. The frontages along SW Gaines and SW Lane utilize a combination of slightly elevated stoops to define the line between public sidewalk and private entrances. The upper floors are clad in white stucco large windows and metal panel. The base is a dark brick that contrasts with the white stucco on the floors above - further enhancing the differentiation between the ground floor and upper floors.

C9 DEVELOP FLEXIBLE SIDEWALK-LEVEL SPACES

Central City Fundamental Design Guideline

Retail frontage and spaces have been designed to accommodate a variety of uses. The space is designed to be flexible and allow tenants in a variety of sizes and uses. Storefronts are designed to

allow flexible location of entrances and easy subdivision of space. Back-of-house support spaces such as restrooms and trash connect to all retail areas which also support easy subdivision of space and finally, shafts have been designed into the spaces to allow for a restaurant to occupy the space on the corner of SW Gaines and River Parkway.

C10 INTEGRATE ENCROACHMENTS

Central City Fundamental Design Guideline

There are a series of canopies along River Parkway that extend over the sidewalk which are well integrated into the façade. All of the canopies project and announce primary pedestrian building entrances while adding depth and pattern to the exterior façade. Retail signage is anticipated and planned for the retail canopies and the area directly above the canopies. Signage will be submitted at a later date and will meet title 33 regulations.

C11 INTEGRATE ROOFS AND USE ROOF TOPS

Central City Fundamental Design Guideline

Block 37 has two elevated courtyards on the second level (the roof of the garage). Both combine hardscape and landscape materials. Large landscape planters act as dividers between the public and private areas of the courtyard while also treating all of the storm-water for the project. As the building's mass steps back from the greenway, the adjacent roofs are utilized as terraces. The upper level roof is designed as a flat roof concealed behind a perimeter parapet. There is limited mechanical equipment on the roof, but what is there has been consolidated into one area and is well-screened. The roof itself is covered in a rock pattern that creates texture and interest for those looking at the roof from the surrounding towers. At six stories, the rooftop design has limited skyline impacts and is well integrated with the overall design concept.

The roof will be inspected quarterly as part of the overall roof maintenance plan. It is very unlikely that rocks will be displaced due to their weight, however rocks will be either replaced or moved into their original location if needed. We expect very little weed growth due to no organics on the roof terrace. If weeds are present, they will be removed on a quarterly basis. Any visible debris that accumulates on the roof will be removed.

C13 INTEGRATE SIGNS

Central City Fundamental Design Guideline

C13-1 COORDINATE DISTRICT SIGNS

Central City Fundamental Design Guideline

No specific signage designs are proposed with this application. Potential retail signage and associated accent lighting has been anticipated for integration with the canopies. A building signage program will be developed and well integrated to compliment the architectural integrity of the building while also providing information and way finding.

SOUTH WATERFRONT GREENWAY DESIGN GUIDELINES

1 DESIGN A COHESIVE GREENWAY TRAIL SYSTEM

Retail at the corner of SW Gaines and SW River Parkway strengthens the retail node while encouraging pedestrian movement to the greenway. Greenway connection from the trails to SW Gaines will be developed as a part of the Willamette Greenway trail development in 2014. The project team is working with Portland Parks and Recreation to provide pedestrian and bike connection to the greenway trails from SW Lane. Similar to the podiums of the towers to the north, the building stair-steps back from the greenway trail creating continuity in transition.

2 ADDRESS GREENWAY EDGES

The building stair-steps back from the greenway trail in an eroding edge with terraces and landscape planters that soften the built form as it extends towards the greenway and while providing a visual extension of the greenway into the edge of the building. A 5 foot level change between the greenway and the private patios is achieved with gradual terraces, grading and integrated plantings that blur the line between public and private.

2-1 ADDRESS GREENWAY EDGES

SW Gaines and SW Lane are designed as “Universal Streets” intended to be biased toward the pedestrian and bicyclist. They incorporate stormwater planters, street furnishings, sidewalk extensions to that calm traffic and visual permeability to the adjacent retail spaces. The frontages utilize a combination of slightly elevated stoops to define the line between public and private. SW Gaines ends in a turnaround cul-de-sac. The north half of the SW Lane accessway will be developed and bollards will restrict vehicle access. Views connections along both streets are enhanced by the building mass stepping back from the right of way.

2-2 ADDRESS ADJACENT OPEN SPACE

The south courtyard provides residents with common open space while augmenting the Green Street on SW Lane with a waterfall and gracious stairway that provides a clear connection to the accessway and greenway trail to the east. The bio-swales reflect the adjacent greenway habitat character while providing continuity of design along the accessway. The stoops along SW Lane and Gaines provide additional opportunities for residents to sit and enjoy the sun and watch the people passing by while enlivening the Green Street. The common living room on the second floor along the greenway provides additional opportunities for residents to view the river and activities along the greenway trail. These spaces provide a variety of areas from more active to contemplative and serve to connect the pedestrian environment through the project into the surrounding district.

2-3 ADDRESS BRIDGES

Block 37 is not adjacent to any bridges, but it will have limited views to the new lightrail bridge and Ross Island Bridge to the north. The terracing form of the building along the greenway enhances the views to those bridges from the greenway trail.

3 INCORPORATE A DIVERSE SET OF GATHERING PLACES

Block 37's terraces, walk-up stoops, balconies, southern courtyard and common living room all provide a diverse set of both large and small spaces for gathering and play as well as to enjoy the views and activities along the river. The walk-up stoops serve to extend the greenway west while providing residential viewing terraces back to the east. The common living room along the greenway provides and overlook to the river and serves a gathering space for residents while provide visual interest and variety to those moving along the greenway trail.

4 INTEGRATE MATERIALS, STRUCTURES, AND ART

Sidewalk materials, components and street trees conform to the South Waterfront District Street Plan criteria and standards. Scoring patterns in the paving and thoughtful placement of benches all add to the pedestrian friendly environment.

The boardwalks over the bioswales along SW Lane harken back to the notion of wood dock structures that serve to provide connection from the water to land and thus incorporate the maritime/nautical thematic elements into the urban landscape while providing a consistent and unifying element with the boardwalks along the Ardea's frontage.

General pedestrian lighting along the frontages will be in accordance with South Waterfront streetscape standards. In addition, discrete landscape lighting is proposed for the terraces along the greenway to enhance evening connection to the trails. Fire-pits on the second floor common living area will provide both warmth and mood lighting. Finally step lighting will be incorporated into the stairs that connect the south courtyard to SW Lane. All outdoor lighting will be carefully planned to comply with LEED night sky criteria.

5 ENHANCE THE RIVERBANK
6 DESIGN DIVERSE PLANT COMMUNITIES

The Willamette Greenway Park sits between Block 37 and the riverbank. As a part of the development two rows of stone columns will be placed between the building and the property line to provide both bank and soil liquefaction stabilization. Native landscape plantings will be used throughout the development site. The bio-swales along SW Lane enhance habitat and celebrate the natural environment. Plantings along the greenway will match the planting palette of the Willamette Greenway park. The Bureau of Environmental Services owns and controls the bio-swale between the greenway and the river in front of the property and discourages connection to the river at this location. That being said, greenway access is provided at Gaines that connects to the trails and to river access further north.

DESIGN ADVICE REQUEST HEARING COMMENTS

Block 37 Apartments

The following comments are from the August 1, 2013 D.A.R. Hearing

GENERAL

- This design needs to blur the line between the existing towers and the new economics of development. It has to be done poetically and express a sensibility that these are "badass modern" homes.
- This building requires substantial shifts and has a long way to go to meet stated expectations.

Response

The building's massing and materials have been greatly simplified. The brick at the ground level provides a strong contrast and clear differentiation between the base of the building and the upper stucco levels. Large rectangular stucco frames on the upper levels accentuate the corners and break up the overall massing – similar to the metal panel frames expressed on the John Ross. Large punched windows painted the match adjacent metal panels create a glassy infill expression between the rectangular stucco frames. The high quality materials are consistent with materials found elsewhere in the district.

SW GAINES HEIGHT CORRIDOR MODIFICATION

- The modification could be approvable if it is demonstrated that the shadow impact on Gaines is no more than a project that conforms to the standards. There was support for the upper floors encroaching as much as proposed.

Response

The shadow impact on Gaines from the building's massing is no more than a project that conforms to the standards. A sun study will be provided.

SW LANE SETBACK MODIFICATION

- The ground level should conform to the standard. There was support for the upper floors encroaching as much as proposed.

Response

The ground level sets back 30' from the centerline of Lane. The upper floors project to the property line providing protection from the weather at the residential stoops. A modification is requested for the upper levels.

COMPOSITION AND MATERIALS

- The elevation is confusing. There is a lack of hierarchy. Stick with a primary material and maybe add a secondary. Do more design with fewer materials and moves. The wood is incongruous and odd.
- Celebrate the honesty of forms. Make the building simple and elegant.
- There are massing shifts in plan that do not clearly translate in the volume
- Study proportions – the parapet looks heavy and the base of the second floor is skinny.
- For cement panels to be allowed, they need to be very secondary and minimal.
- Commercial grade vinyl windows are acceptable when bounded by higher quality materials and punched.
- Be clear and systematic with color.

Response
See the response to the general comments above. Cement panels are no longer being used on the project. The building form has been simplified. The parapet height has been reduced and the second floor adjusted. The commercial grade vinyl windows are surrounded by stucco and metal panels and are setback to create a punched expression and shadow lines.

CORNERS

- All corners need to be excellent.
- The commission mostly agreed with public testimony eroding the corner at the Greenway while supporting an urban edge at the ground level. One commissioner supported the corner as proposed.
- The ground level of the building against the Greenway urbanizes the Greenway which is a good thing.
- There was support for making a great corner at Gaines/River but not consensus on this solution. Concern was expressed with the amount of service near the corner, the ground level layout and the upper floors at the corner.

Response
The corner at Gaines and the greenway has been pulled back and eroded. The ground level still creates a strong urban edge. The expression of the corner at Gaines and River is strong and emphasizes the corner in a more dignified expression. The project team is working with PBOT to move the garage entry to the east.

RIVER

- The inclination to have outdoor spaces open up to the river was right. The proposal lacks river connection.
- Show erosion in the building at the river.
- The ground level needs more work – activation, interest and landscape design. Soften the edge
- Would moving the garage entry closer to the greenway create more activity? Build in flexibility for the ground floor units to be converted to future retail. If the club room is next to the second floor courtyard then the courtyard would be activated.
- The ground level units need to be able to accommodate commercial uses.

Response
A common outdoor living room has been added at the second level along the greenway to provide greater connection to the river. The building's massing has been further eroded along this edge providing private terraces and balconies at various levels. The ground level terraces site approx. 5' above the greenway therefore terracing landscape planters transition the building edge to the sloping grade between the building and the greenway. Plantings in this transition space will match the Willamette Greenway trail plantings in order to blur the line between public and private space and while pulling the greenway into the project helping to make the greenway feel larger.

GROUND LEVEL

- The south courtyard is buried with little street connection. It needs a more robust pedestrian level connection.
- Provide canopies. The guidelines encourage weather protection.
- Need good transitions to the Greenway
- The first 30' have to be great

- Concern was expressed with the cor-ten at the touch zone.

Response
The south courtyard provides the residents with a more quiet and contemplative space than the common living room along the greenway. It is meant to feel more private while providing residents with access to the Green Street and greenway. A waterfall takes stormwater down along the stair and connects to the bio-swales in Lane to create greater pedestrian interest. The cor-ten has been eliminated from the project.

PARKING

- The commission supported the parking entry along Gaines, but requested studies for other locations.
- Explore achieving a higher parking ratio

Response
The team has studied and would like to move the garage entry to the east, but needs to work with PBOT to determine if it is possible due to planned filtration planters along the ROW. Putting the garage entry along River parkway, an access restricted street, would require the elimination of either the building entry or the retail space at the corner of Lane which is not supported by the district goals. Putting the garage entry on Lane would bring regular traffic to a pedestrian accessway and would require that the loading move to SW Gaines near the corner so that access to the elevators could be maintained. This option also does not support the goals of the district guidelines.

The team has look at improving parking efficiency, but was not able to do so without adding an additional level below grade which would be cost prohibitive.

ROOF

- Very big concerns with the roof – explore and design it.
- Explore an eco-roof as an option. If it's not green, it has to be designed and beautiful. If using rocks, think about long term maintenance and weeds.

Response
The roof has been designed with a heavily textured rock pattern that provides variety in color, shadow and texture while providing stormwater filtration.

DESIGN MODIFICATIONS

Block 37 Apartments

MODIFICATION 1

SPECIAL BUILDING HEIGHT CORRIDORS

(33.510.252)

A.2. Special Building Heights

The portion of a building that is within 50' of the centerline of a street or accessway designated as a special building height corridor may be no more than 50' in height.

PURPOSE

Special building heights along designated east-west corridors and tower orientation standards provide visual access to the Greenway from points west of the district, provide visual access to the Tualatin Hills from points east of the district, provide access to sunlight along designated streets, and encourage an urban form that is visually permeable and varied.

PROPOSAL

SW Gaines is a special building height street with a minor viewpoint. The entire face of the building along Gaines is setback 6' from the lot line and projects a total of 75' in height.

APPROVAL CRITERIA:

A. The resulting development will better meet the applicable designed guidelines:

The building better meets the guidelines by creating a strong and varied urban form. Maintaining the 72' height at the corner of SW Gaines and SW River Parkway places greater emphasis on the intersection thereby drawing the pedestrian eye, and hopefully pedestrian, to this preferred retail focus street. Setting the entire building façade back 6 from the lot line increases the view corridor and opens up the view to the pedestrian and they move west to east towards the viewpoint at the end of Gaines.

B. On Balance, the proposal will be consistent with the purpose for which a modification is requested.

The proposal is consistent with the desire to provide visual access, sunlight and an urban for that is visually permeable and varied.

VISUAL ACCESS
By setting the entire building face back from the lot line visual access is increased for both pedestrians in both the east and west direction. Views from east side of the river are blocked by Ross Island. The designated viewpoints from the east are located further north and the view of Gaines is effectively blocked by the Atwater tower podium. Views from the hills to the west are enhanced by a tower not rising from the podium base and the additional 6' setback from the centerline of Gaines. Views from Riva, the only tower within the district affected, down Gaines

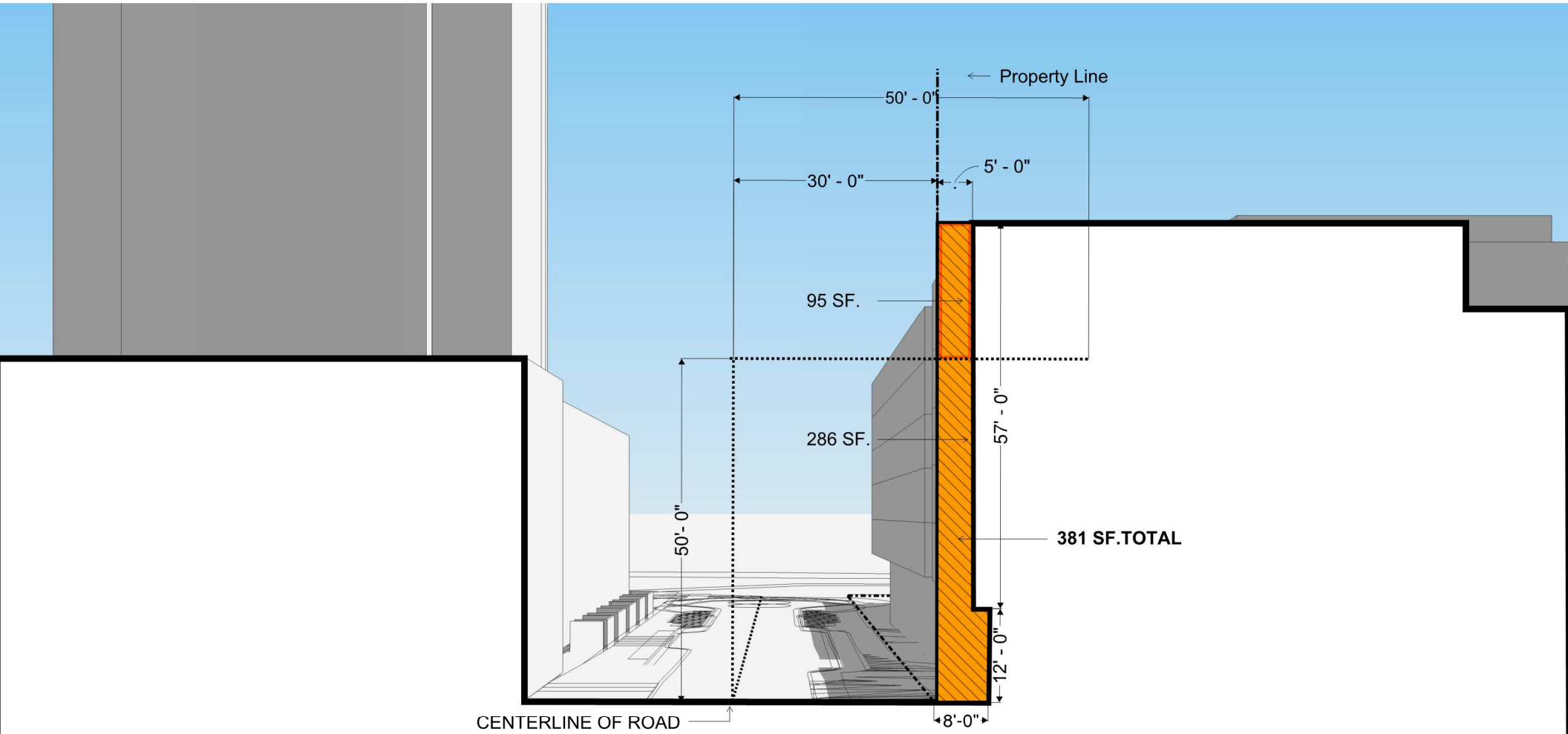
will be slightly impacted for the podium of the Ardea is 50' tall which means that a small 22' portion of the building will impact that view.

SUNLIGHT

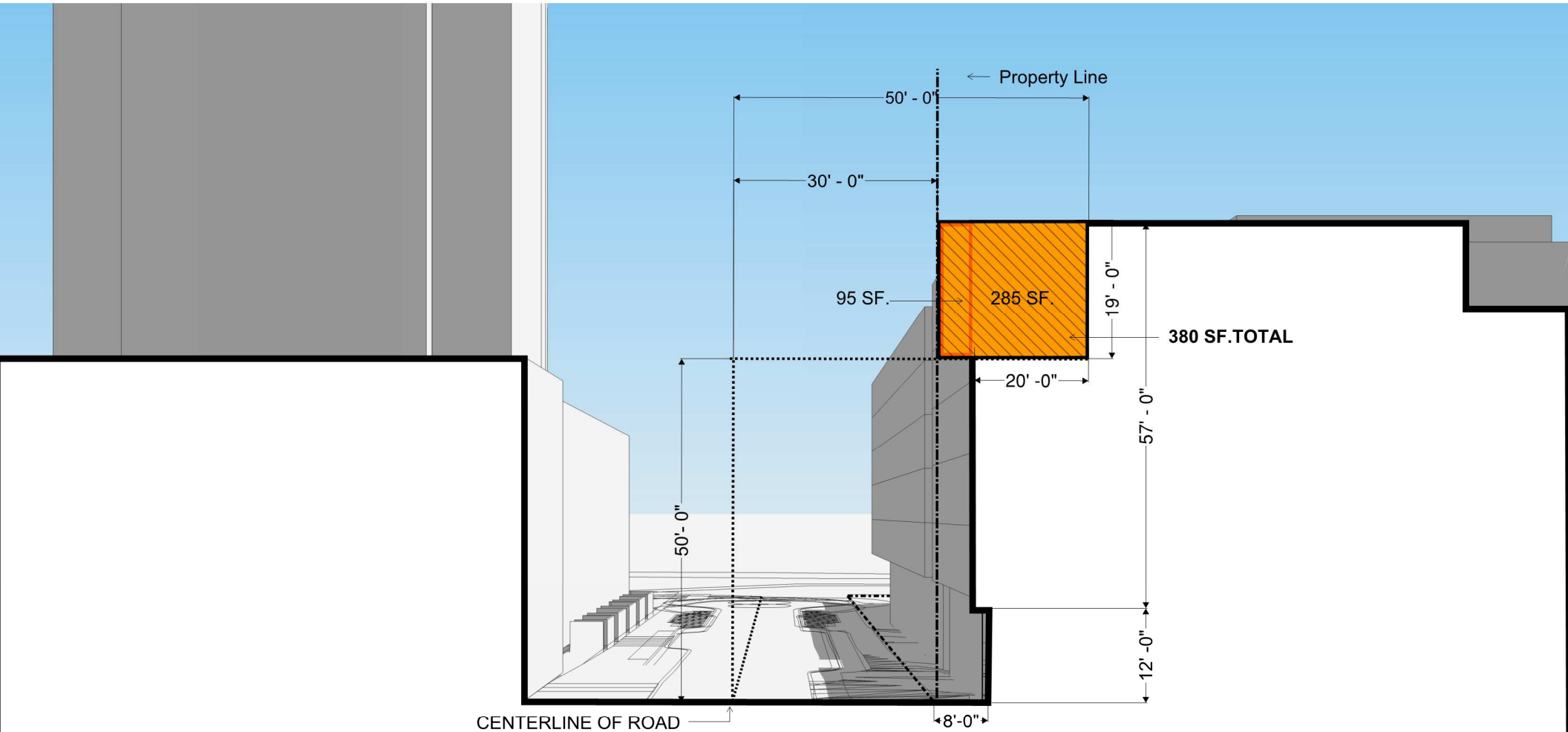
Sunlight along Gaines is not affected by the increased building height. A tower is allowed to be built on the site which would create greater shading on both Gaines and the greenway than the podium. In addition, modeling the entire building at 50' tall 50' from the centerline shows that the surrounding towers shade Gaines more than the increased building height.

URBAN FORM

The building form is varied from the surrounding podiums in that they are all towers that sit on a podium that is no more than 3 stories or 50'. This building creates a strong urban edge while enhancing permeability by setting the building back and increase the vision cone to the river view.



CORRIDOR STUDY - CURRENT DESIGN



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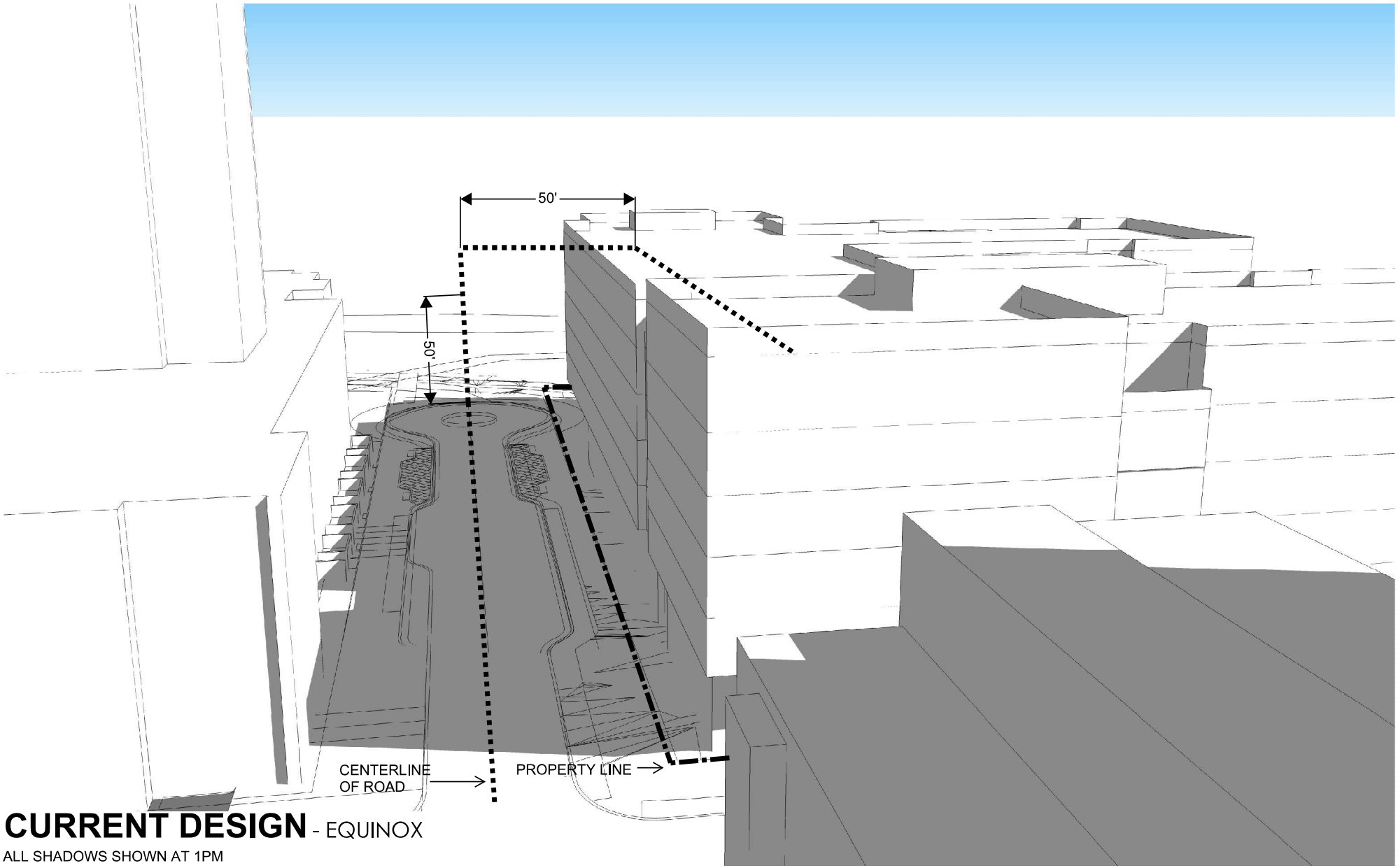

CURRENT DESIGN - EQUINOX

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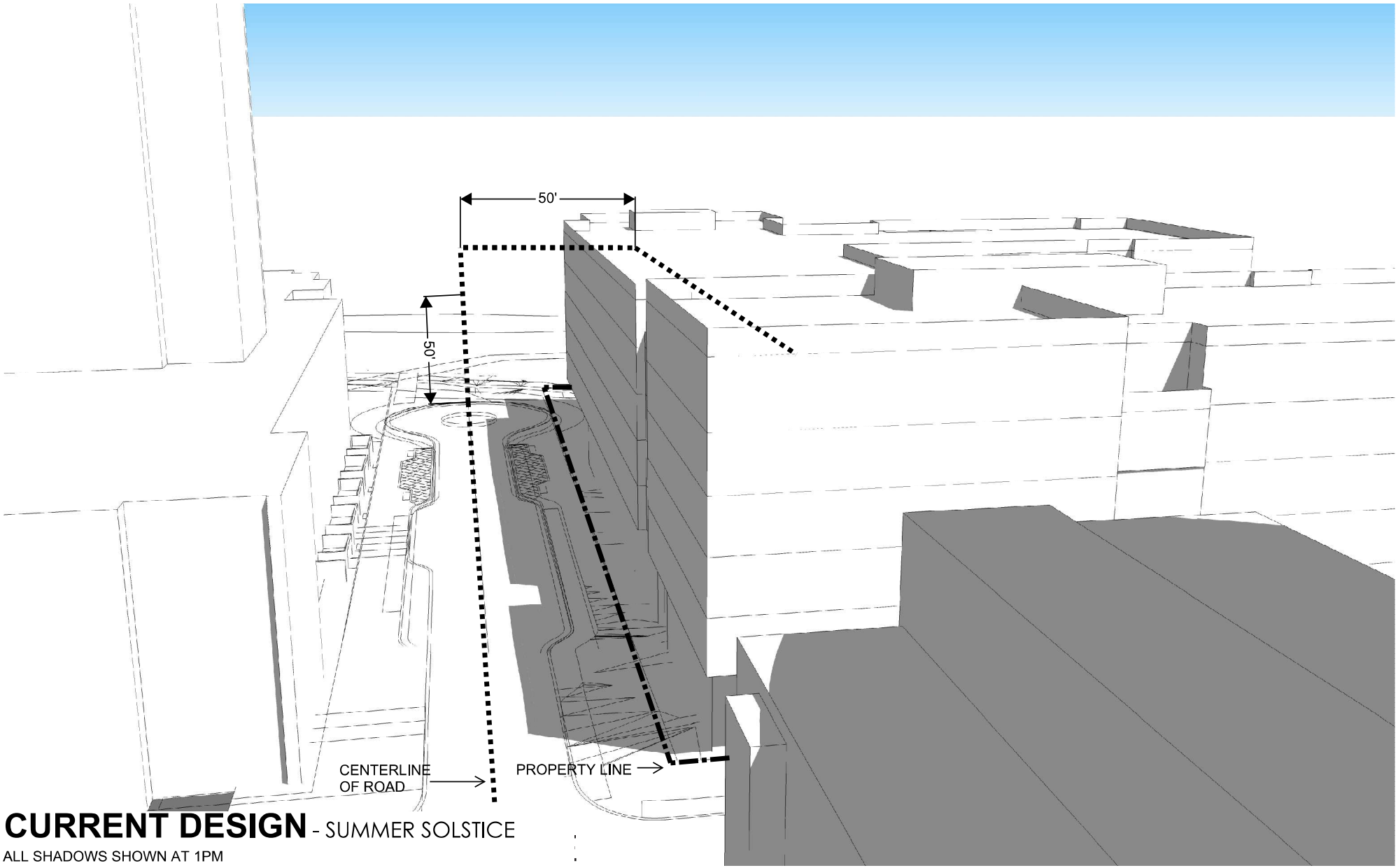

CURRENT DESIGN - SUMMER SOLSTICE

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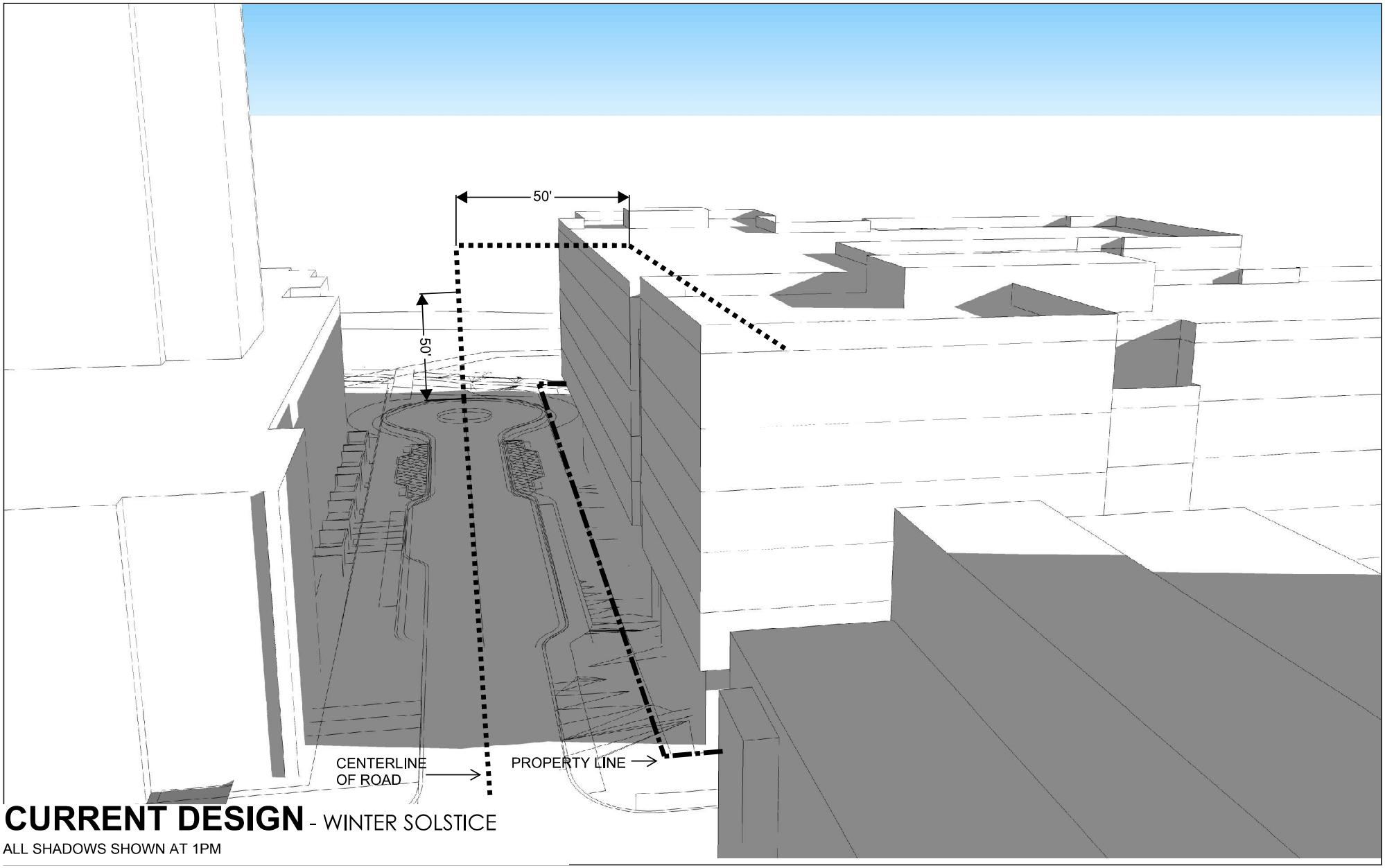

CURRENT DESIGN - WINTER SOLSTICE

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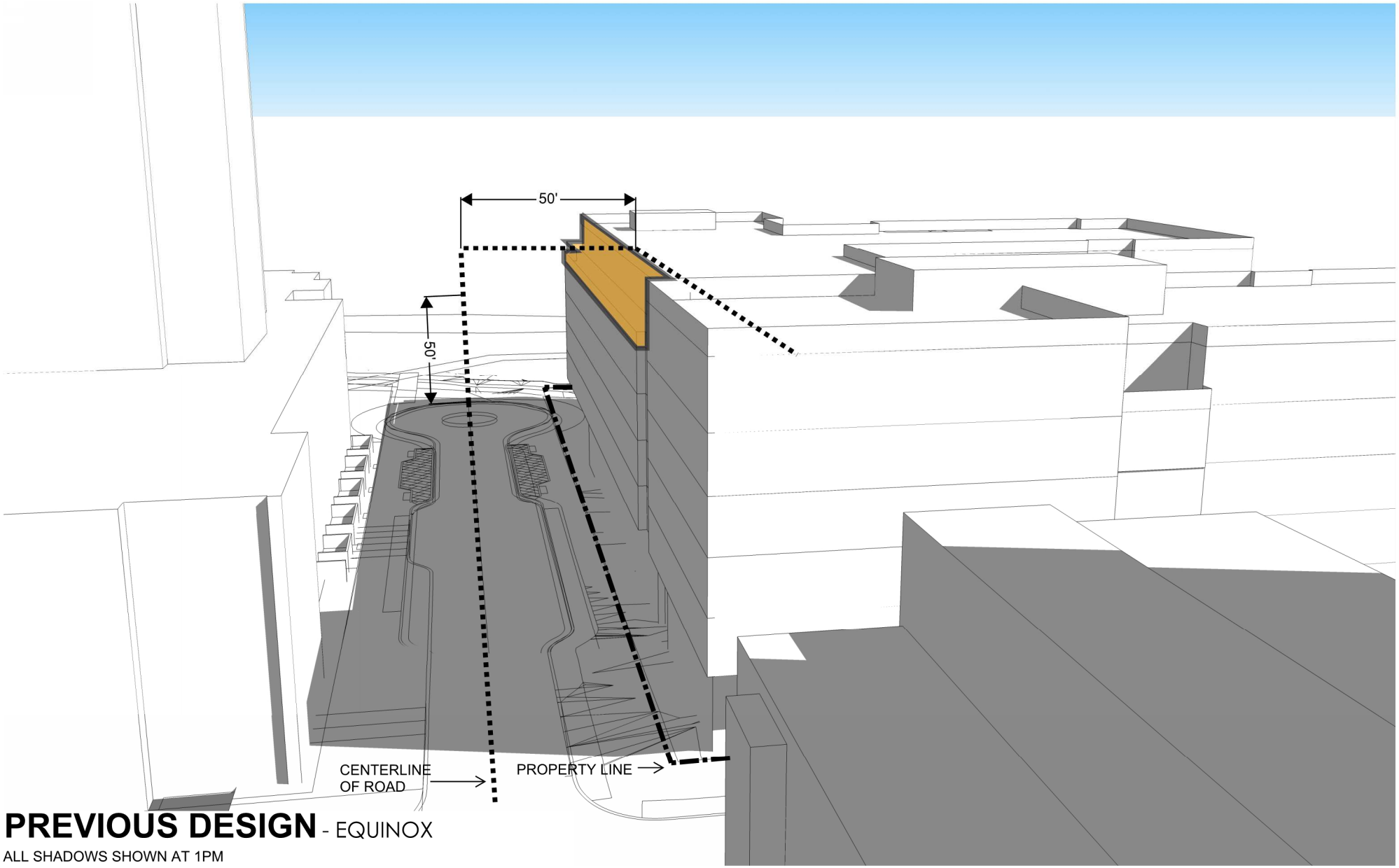

PREVIOUS DESIGN - EQUINOX

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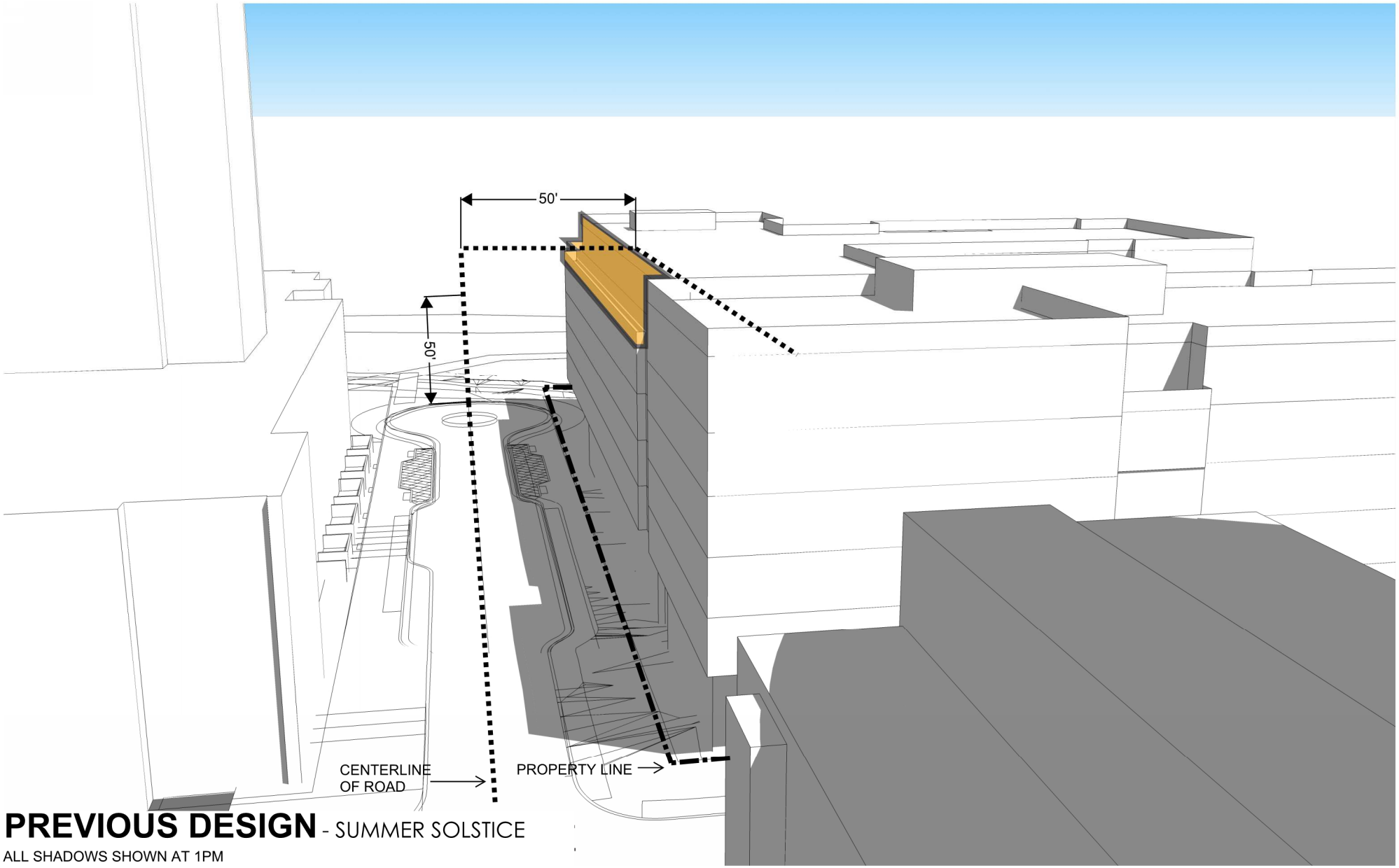

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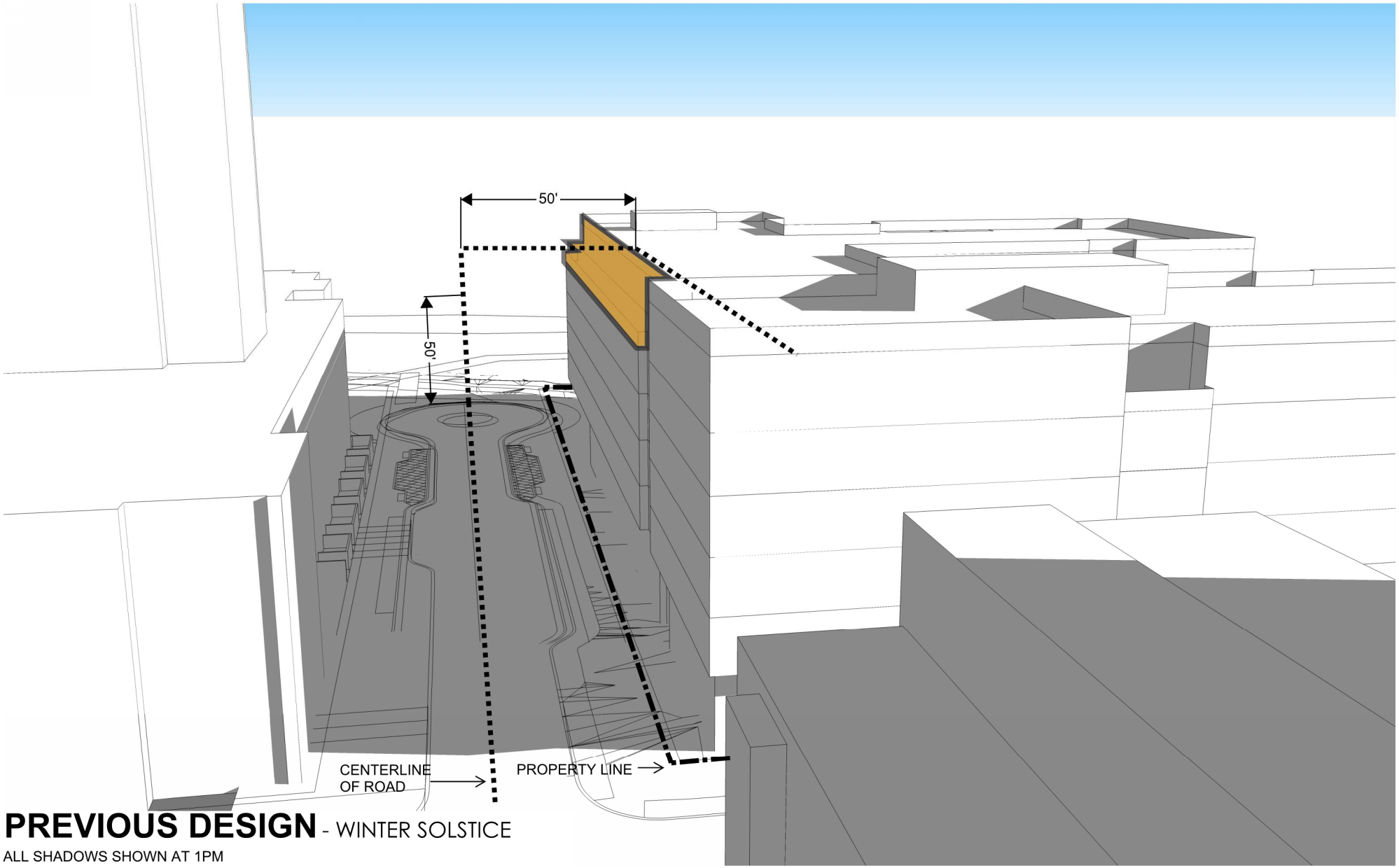

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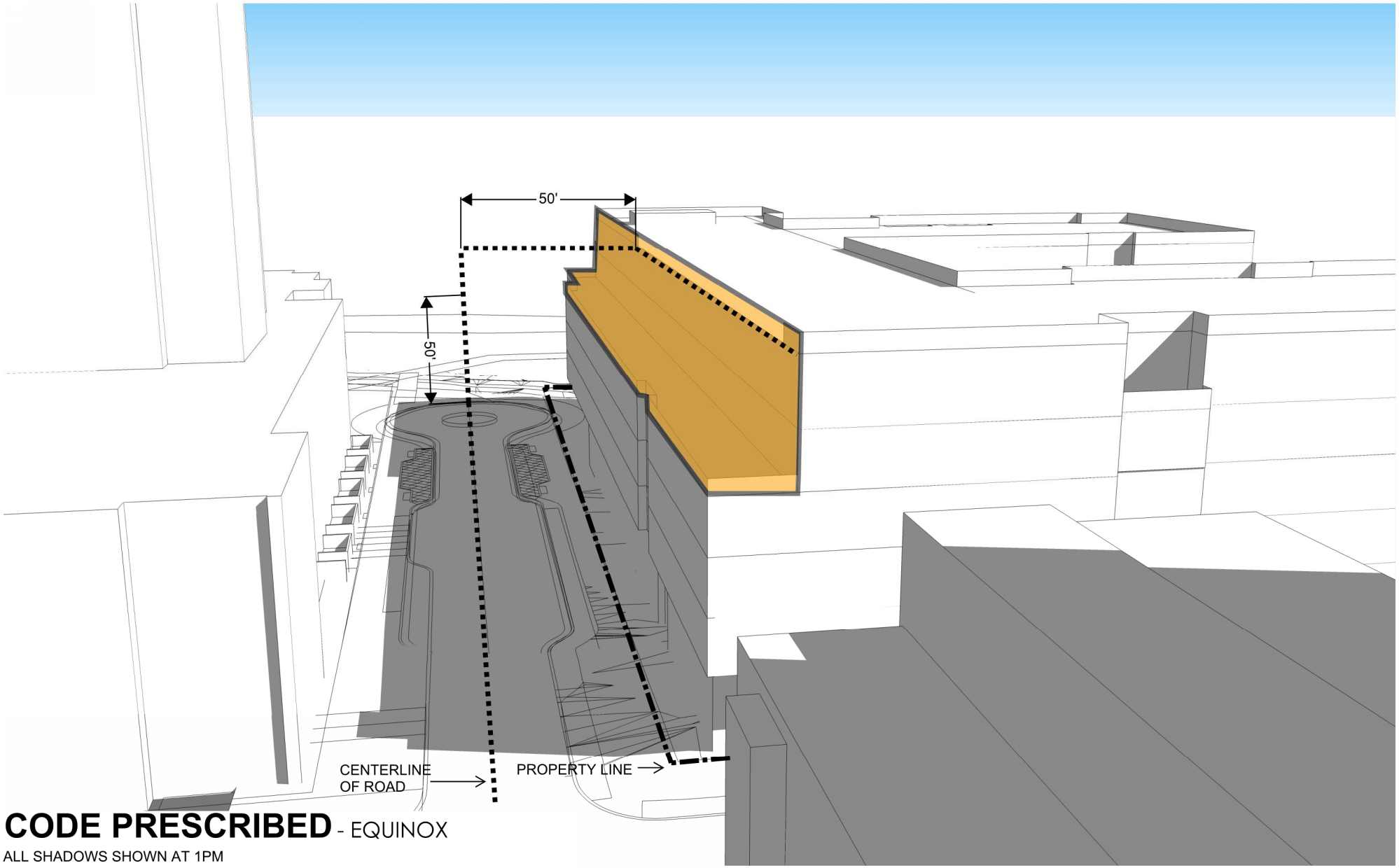

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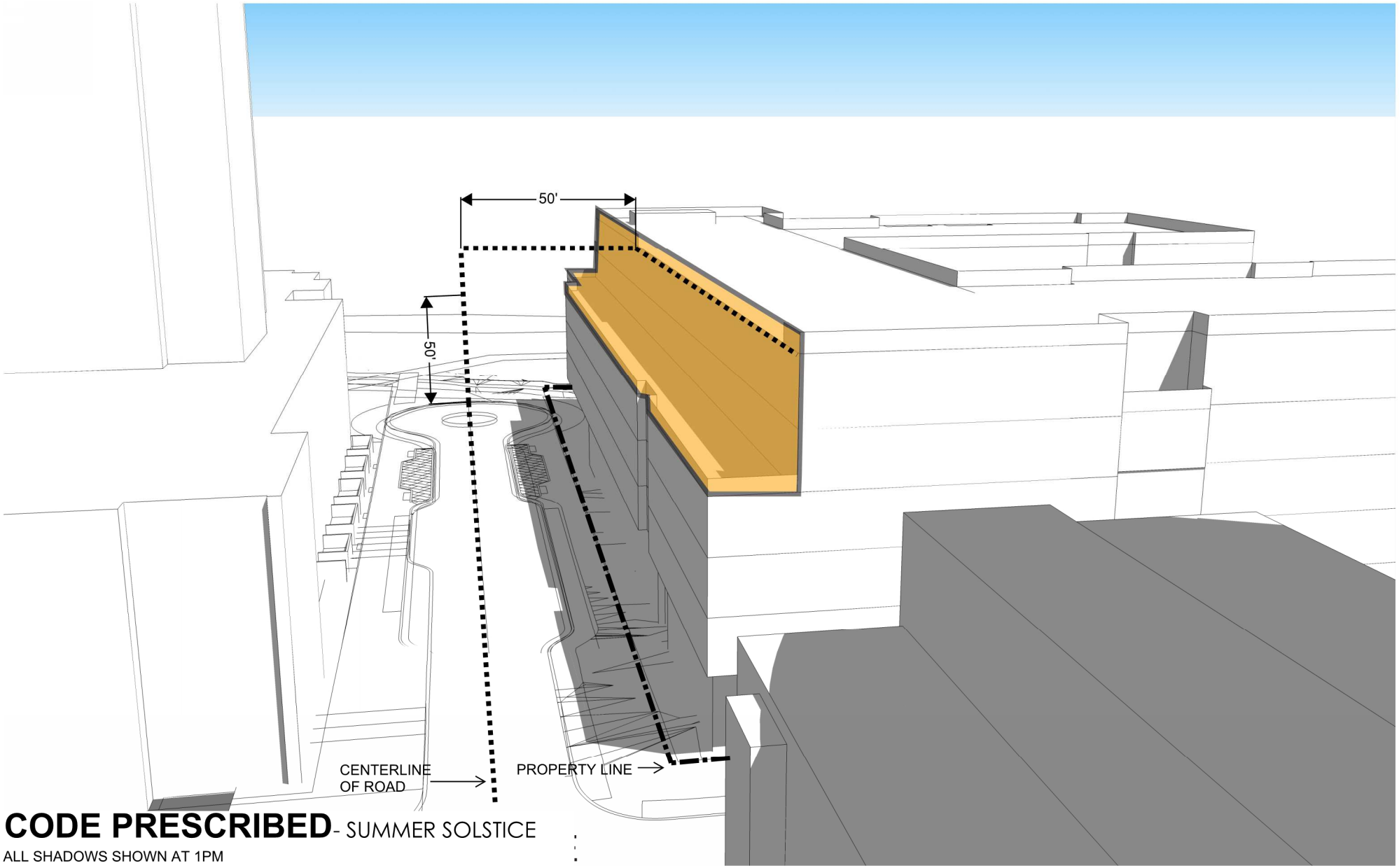

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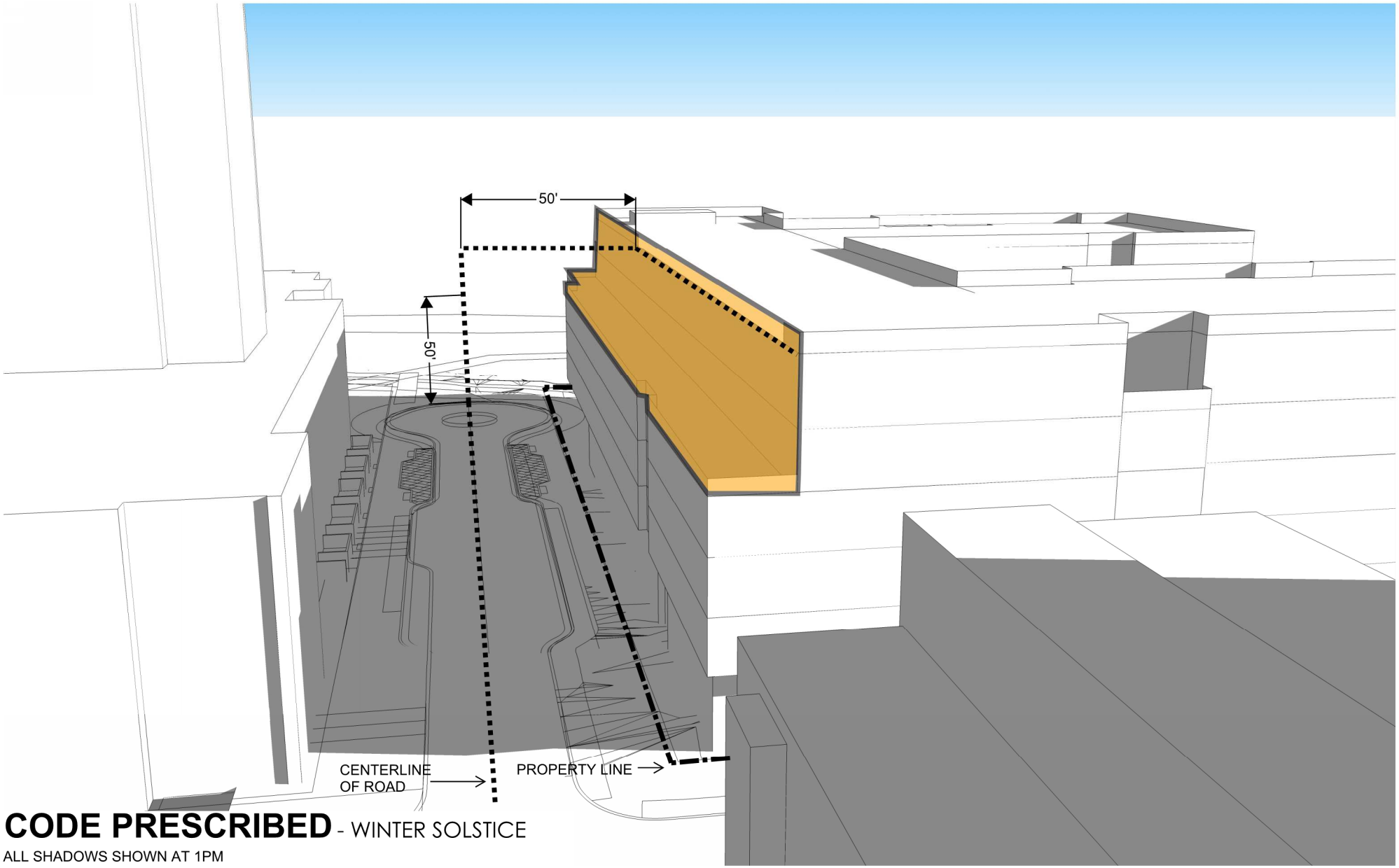

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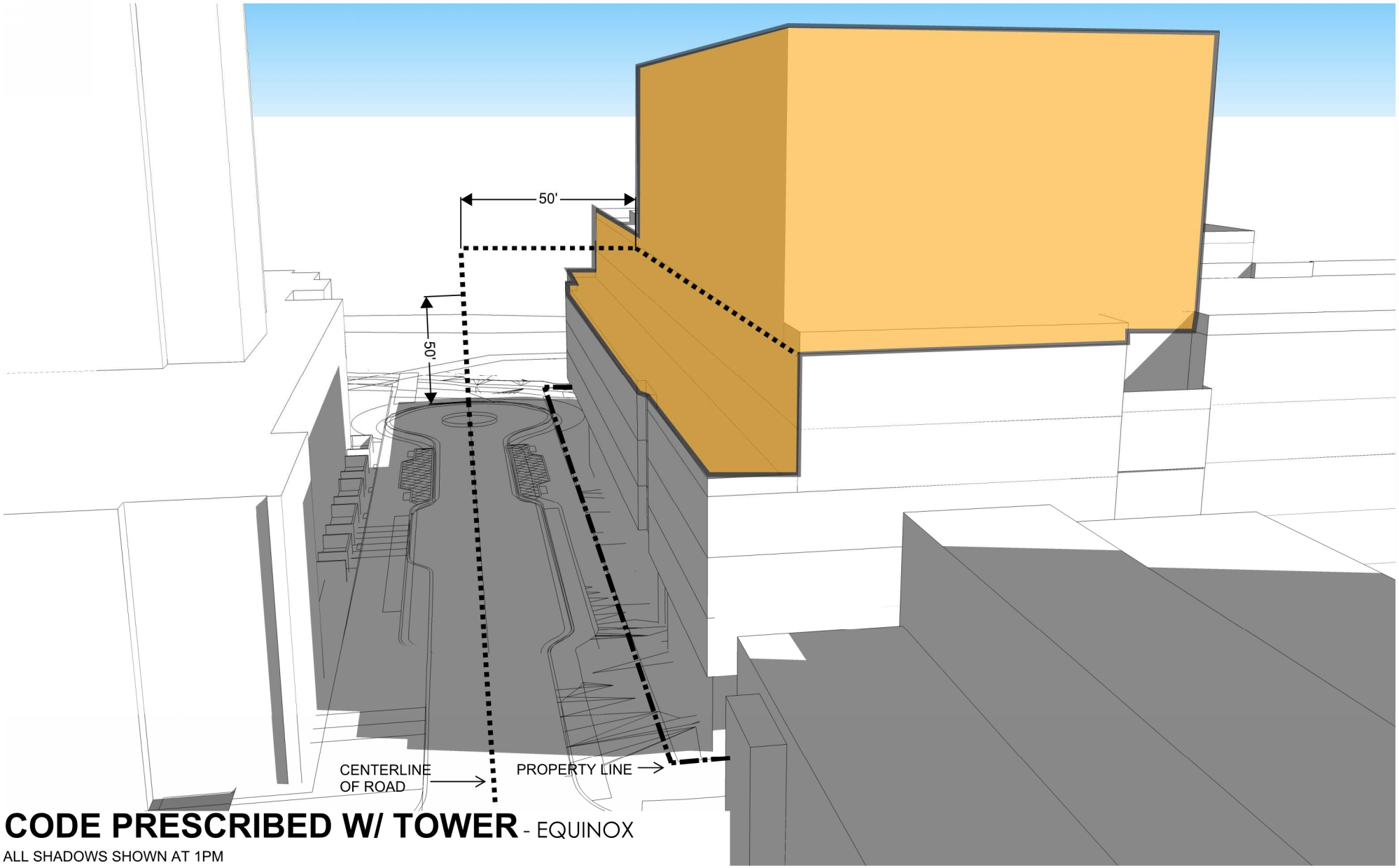

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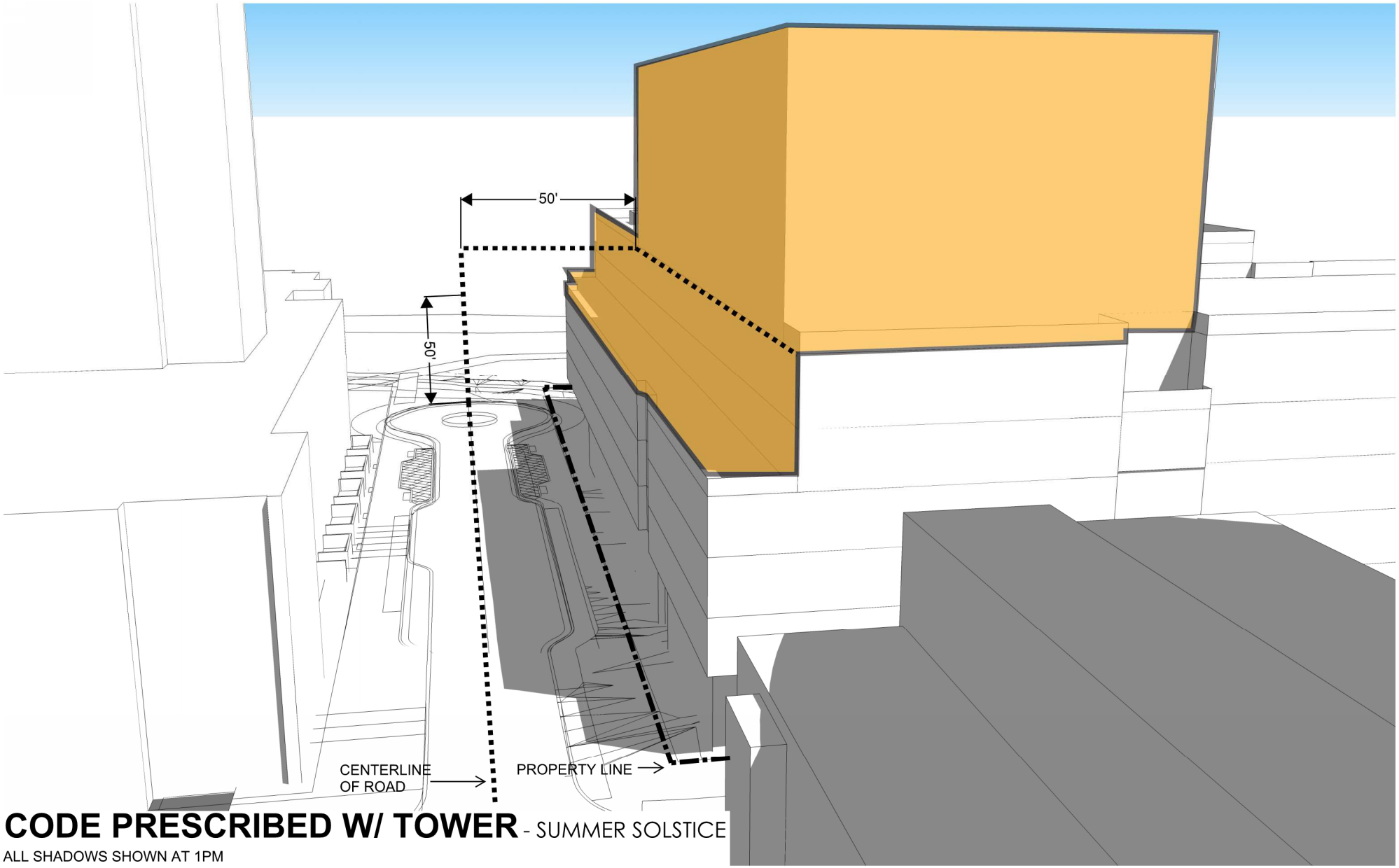

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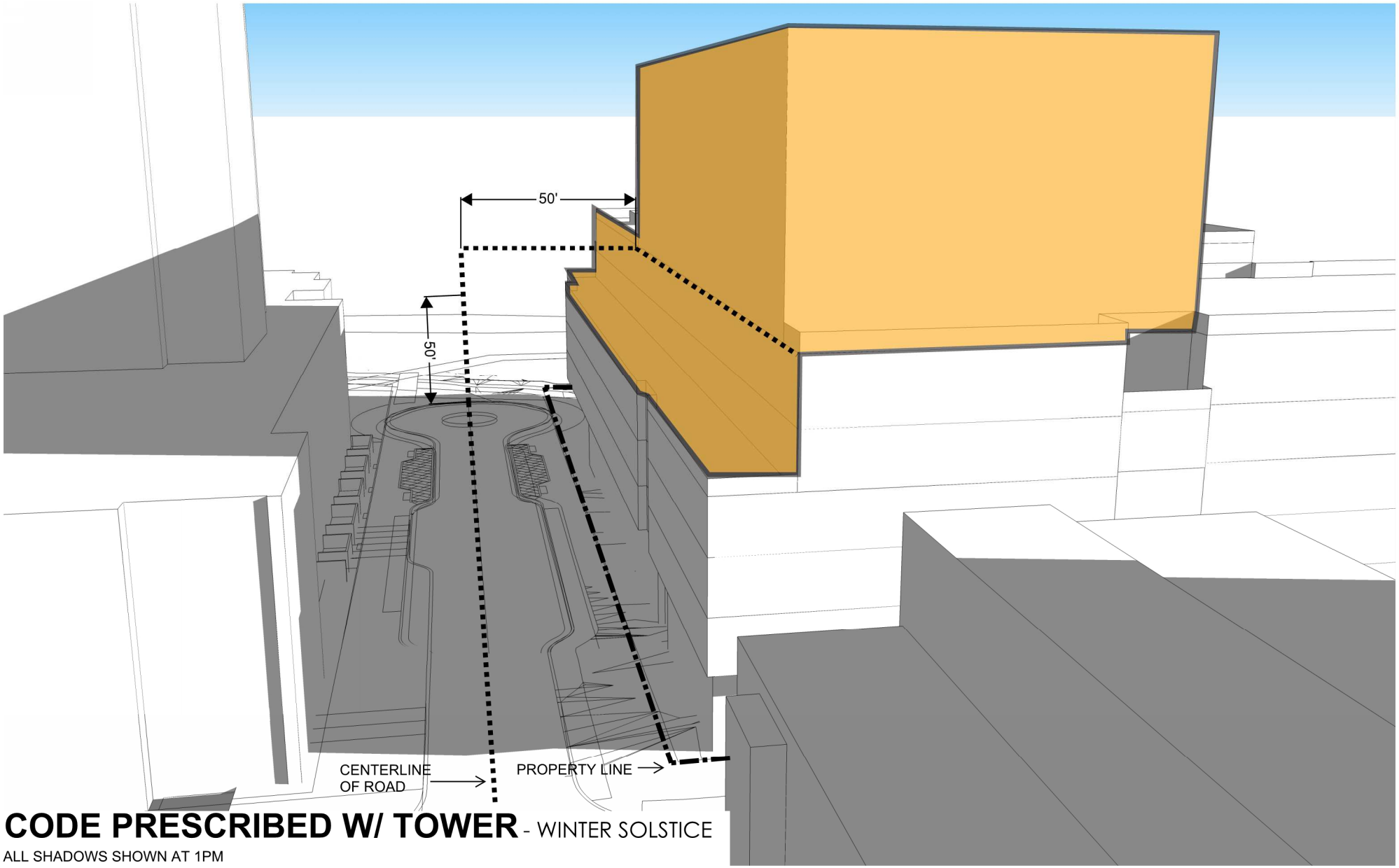


CODE PRESCRIBED W/ TOWER - WINTER SOLSTICE

ALL SHADOWS SHOWN AT 1PM

MODIFICATION 2

ACCESSWAY

(33.510.252)

B.3. Setback

If the accessway is 60' wide or less, buildings must be setback at least 30 feet from the centerline of the accessway.

PURPOSE

Accessways provide physical access and connections to the Greenway trail that provide safe and convenient bicycle and pedestrian connection to and from the greenway trail while contributing to the stormwater management in the subdistrict. They also provide visual connection to the greenway and transition from the natural emphasis of the greenway to the urban emphasis of the rest of the district.

PROPOSAL

SW Lane is an accessway. The ground floor of the building is setback 30' from the centerline of the accessway. The upper levels of the building project to the property line. The project team is working with Portland Parks and Recreation to provide a connection to the greenway trail.

APPROVAL CRITERIA:

A. The resulting development will better meet the applicable designed guidelines:

At the ground floor, the building is setback 30 feet from the centerline of SW Lane and complies with the standard. The upper levels of the building project past the 30' setback requirements to provide weather protection, to better integrate lighting and to create variety in the façade, by breaking up massing planes.

B. On Balance, the proposal will be consistent with the purpose for which a modification is requested.

The proposal is consistent with the desire to provide convenient pedestrian, bicycle and visual connection to the greenway and stormwater management.

CONNECTION
The building is setback at the ground level and therefore provides ample pedestrian and bicycle connection to the greenway. Since the greenway trail will be completed prior to the completion of Block 37, the trail as currently design ends at the SW Lane alignment but does not connect. The project team is working with Portland Parks and Recreation to build the connection with SW Lane as a part of the Block 37's construction. The building's upper floors only project about 3'-10" into the required setback, maintaining ample visual connection to the greenway .

STORMWATER MANAGEMENT

The project celebrates the treatment of stormwater along SW Lane with a stormwater waterfall that carries stormwater from the second level courtyard to the bio-swales in the accessway. The bio-swales use natural plantings to treat water as it makes its way to the river. Boardwalks cross the bio-swales to provide connection back to the stoops along SW. Lane. These treatments all work together to provide transition from the natural environment to the built urban form.

MODIFICATION 3

TANDEM PARKING

(33.266.130.F.1.a)

For parking areas where an attendant is not always present, each parking space must be accessible without having to move another vehicle.

PROPOSAL

There are five parking bays currently designed as Tandem stalls, in that the front stall does not have access to the drive aisle without moving the vehicle behind it adjacent to the aisle.

APPROVAL CRITERIA:

A. The resulting development will better meet the applicable designed guidelines:

   Tandem stalls support the applicable guidelines in that they allow for greater vehicle density to be parked in smaller amount of developed footprint while also relieving pressure from surface/street, or above grade structured parking that might otherwise be necessary.

B. On Balance, the proposal will be consistent with the purpose for which a modification is requested.

   The design of Tandem stalls coincides with sustainable development, particularly for projects within dense urban cores because it is efficient and sensible use of space and land. Additionally, it should be considered that these Tandem stalls are for use on a private residential use project and each pair of stalls is only intended and practical to be leased "in tandem" to the same unit tenants. Consequently, the tenants of that unit and the tandem stalls are effectively each other's full-time attendants and the use of the stalls is not impacted in a substantial manner.

TECHNICAL EXHIBITS

Block 37 Apartments

REQUIRED BICYCLE PARKING CALCULATIONS

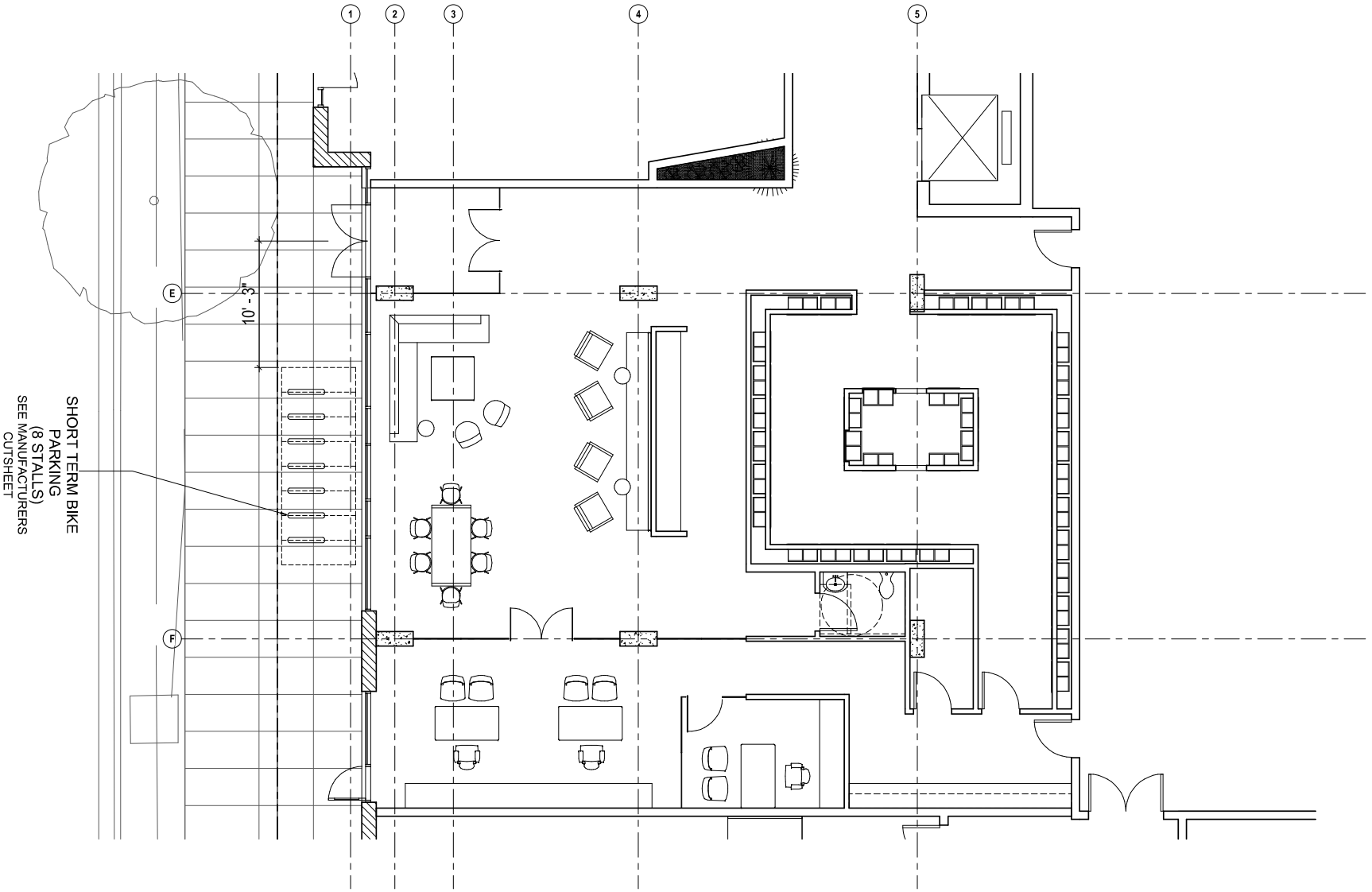
(33.266.220)

BICYCLE PARKING

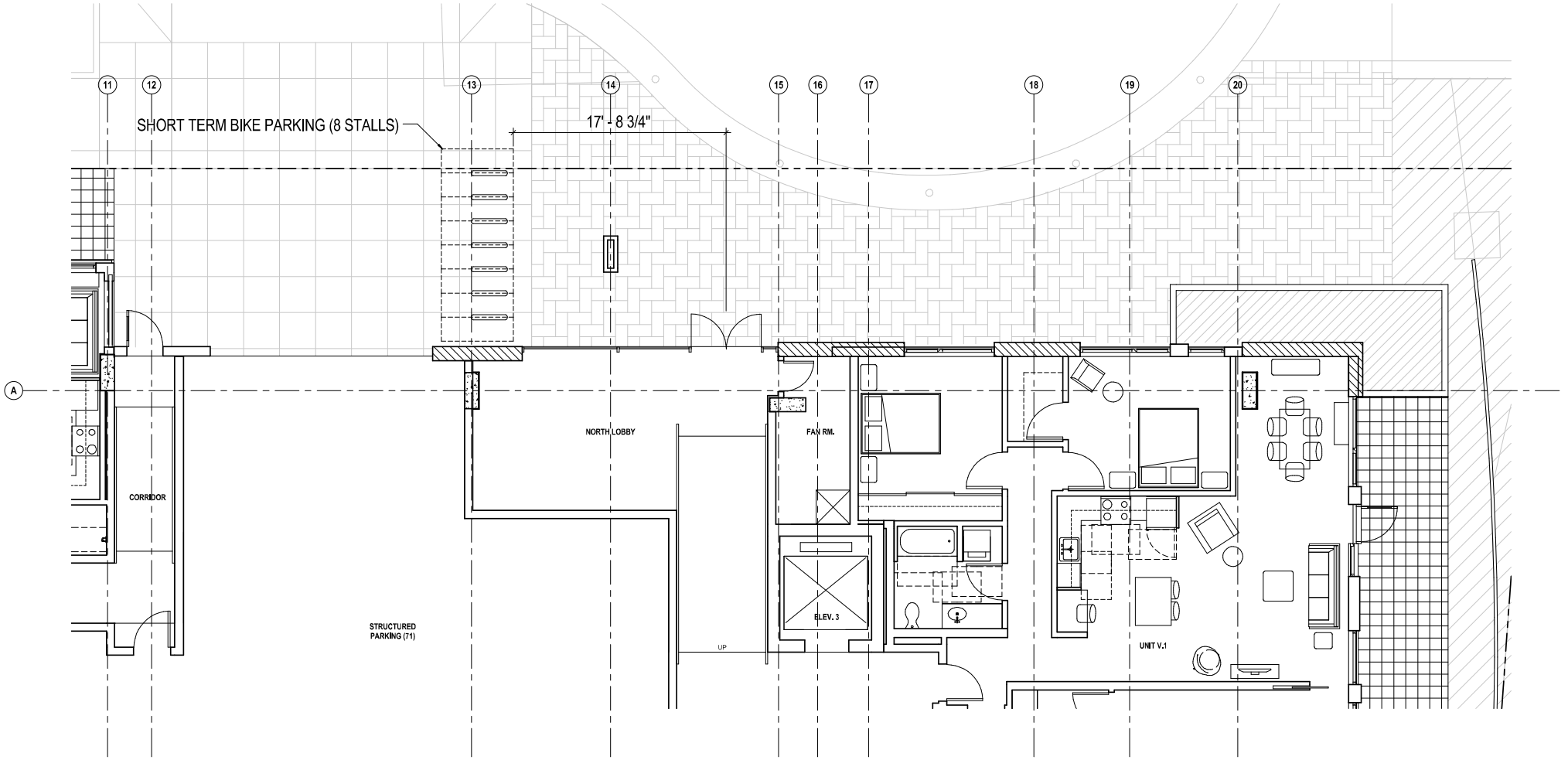
REQUIRED COUNTS

USE	AREA (NSF) / UNIT COUNT		LONG-TERM		SHORT-TERM	
			FACTOR	# STALLS	FACTOR	# STALLS
PHASE-I						
RETAIL-1 (SW / Multnomah)	6193	SF	2 or 1/12,000 sf	2	2 or 1/5,000 sf	2
APARTMENTS (West of Grid 15)	278	CT	1.5/1	417	2 or 1/20	14
PROJECT COMBINED TOTALS:				**419**		**16**

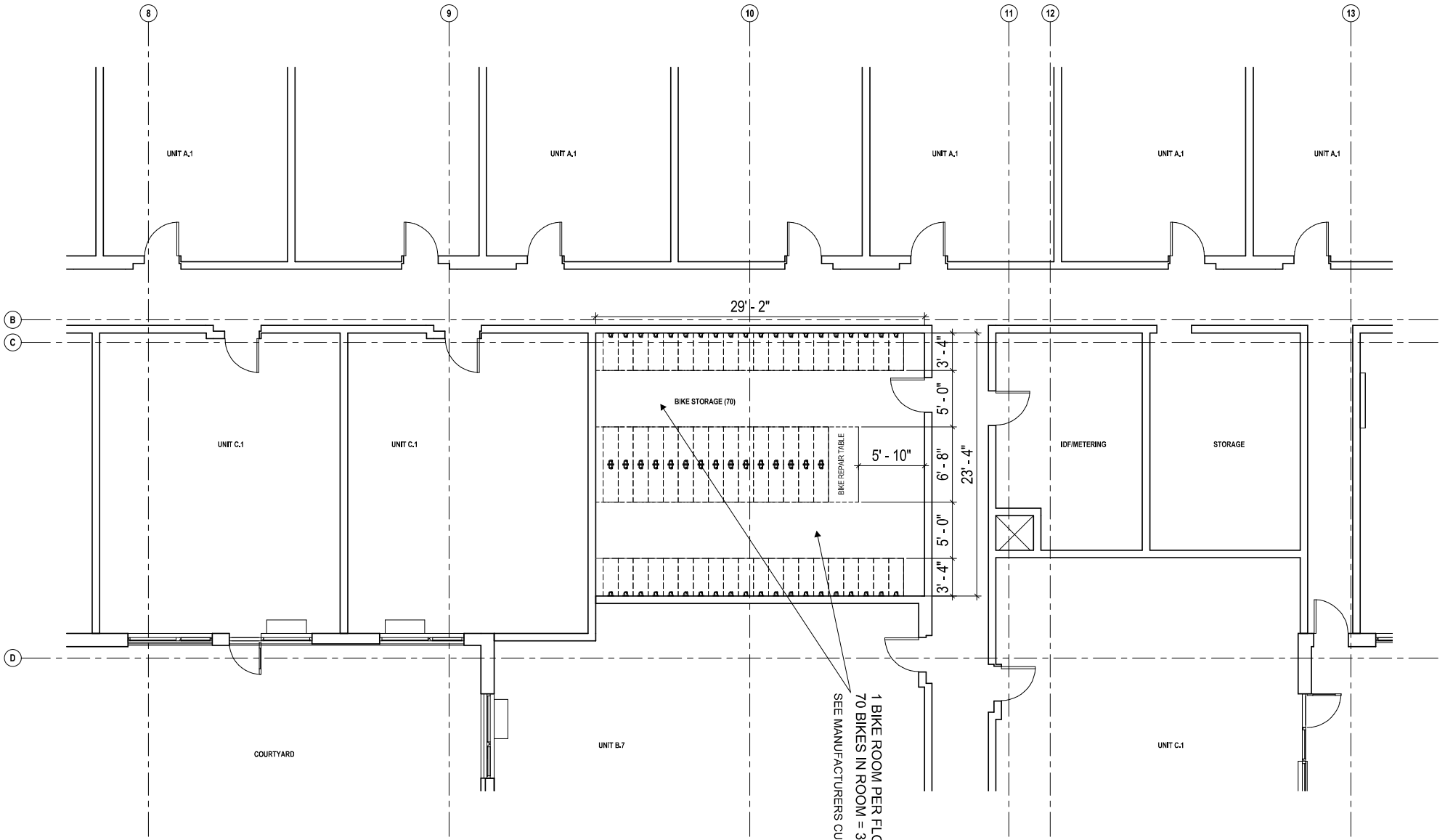
APARTMENTS - LONG TERM	REQUIRED:	278	PROVIDED	421
BIKE STALL TYPES & LOCATIONS				
LEVEL-01: Wall-mount vert. rail & hook in unit				21
LEVEL-02: Wall-mount vert. rail & hook in unit				10
LEVEL-03-04: Wall-mount vert. rail & hook in unit				20
LEVEL-05-06: Wall-mount vert. rail & hook in unit				20
LEVEL-02-06: Secoure Storage Room				350



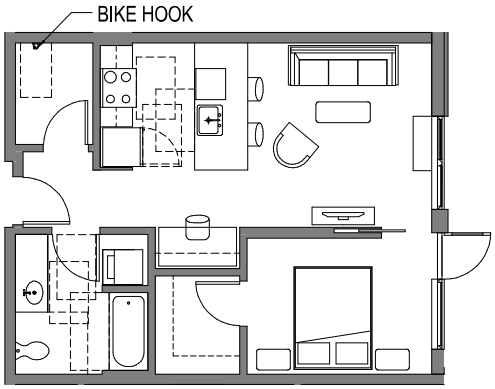
DESIGN REVIEW SHORT TERM BIKE PARKING - WEST



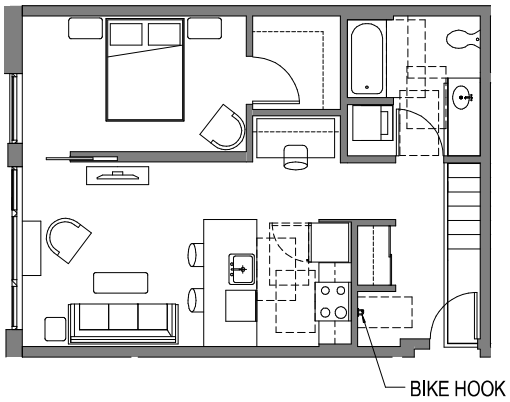
DESIGN REVIEW SHORT TERM BIKE PARKING - NORTH



DESIGN REVIEW TYPICAL LONG TERM BIKE PARKING



UNIT C.1



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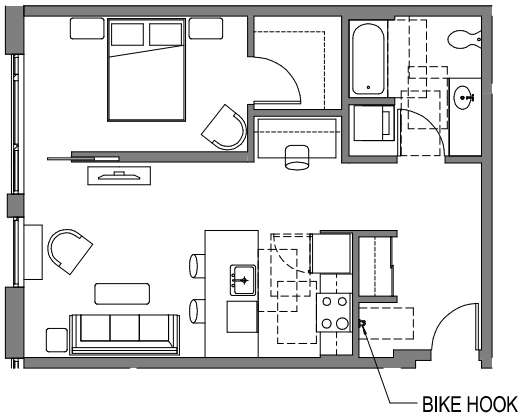

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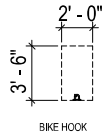
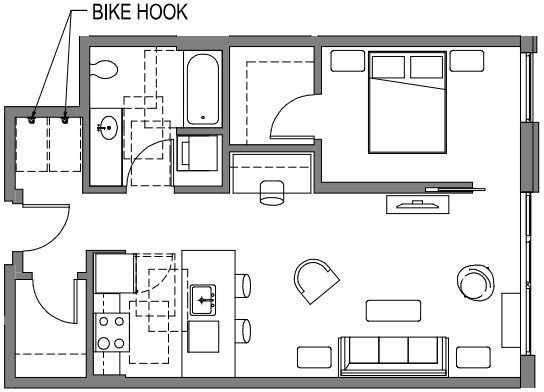


KEY PLAN

DESIGN REVIEW TYPICAL UNIT PLANS / BIKE PARKING



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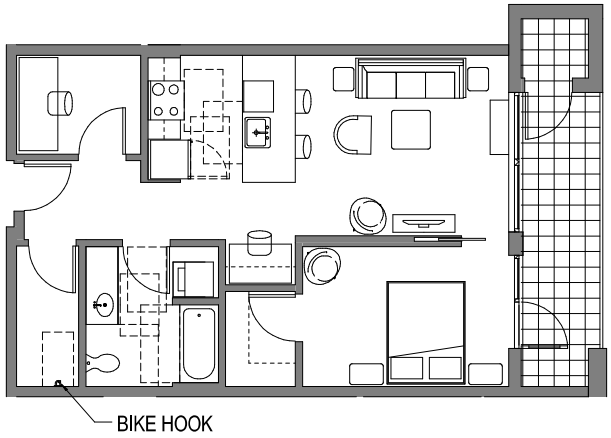
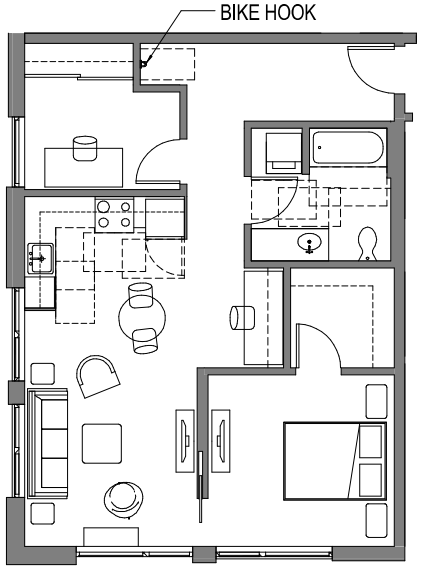
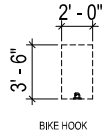


UNIT D.1

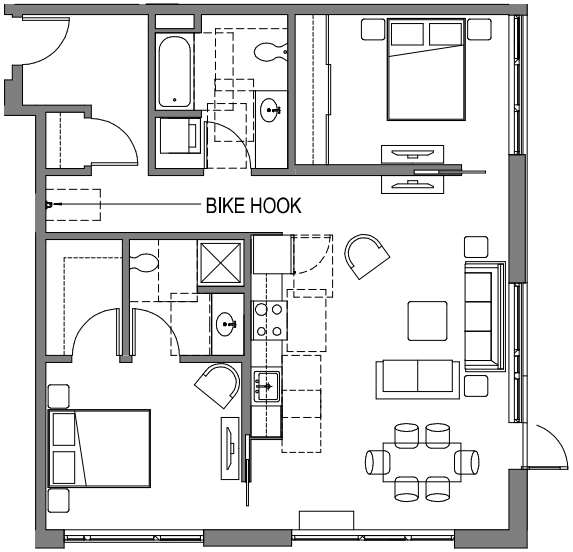


UNIT E.1

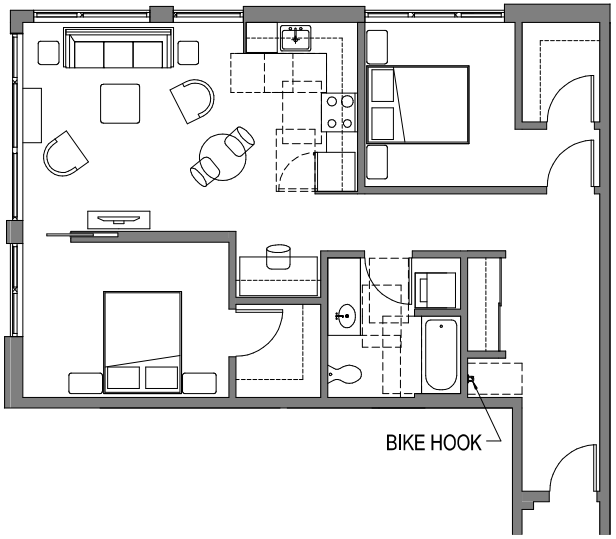


KEY PLAN

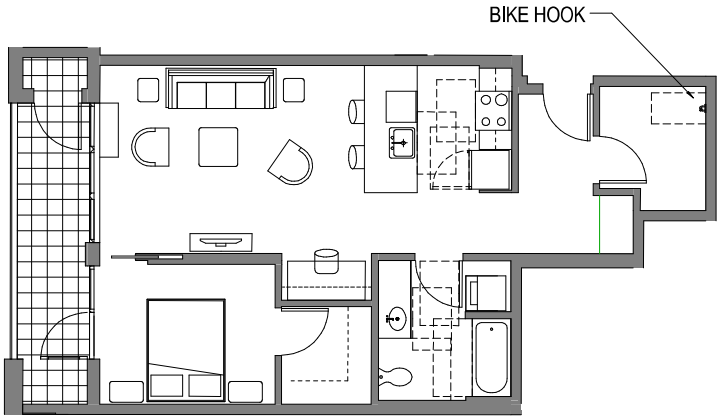
DESIGN REVIEW TYPICAL UNIT PLANS / BIKE PARKING



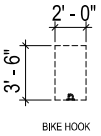
UNIT F



UNIT G



UNIT H



UNIT PLAN KEY

DESIGN REVIEW TYPICAL UNIT PLANS / BIKE PARKING

ACCESSWAY, REQ'D RETAIL, ACTIVE USE
33.510.252, 33.510.225

SETBACK REQUIREMENTS

33.510.252 SPECIAL BLD. HEIGHT @ GAINES PORTIONS OF BLDG. OVER 50'-0" TO SET BACK 50'-0" FROM CENTERLINE

33.510.252 ACCESSWAY @ LANE BLDG. TO SETBACK 30'-0" FROM CENTERLINE

REQUIRED RETAIL

33.510.252 REQUIRED RETAIL TO EXTEND A MINIMUM OF 25' FROM EACH CORNER

ACTIVE USE REQUIREMENT

33.510.225 ACTIVE USE @ GAINES 50% OF GROUND FLOOR WALL @ 25' DEEP.

159'-1" REQ'D ; 160-4 1/2" PROVIDED

60' 0" ROW

318' - 4"

49' - 6"
RETAIL DEPTH AND LENGTH
45' - 3 1/2"

37' - 10 1/2"
F.O. BLD. GRND. FLR.
35' - 0".
F.O. BLD. ABOVE

34' - 8"
RETAIL DEPTH AND LENGTH

9' - 0" | 9' - 0" | 6' - 0" | 4' - 6" | 9' - 0" | 6' - 0" | 9' - 0" | 9' - 0" | 3' - 0" | 4' - 6" | 7' - 6"

20' - 5 1/2" | 7' - 6" | 7' - 6" | 4' - 6"

GARAGE ENTRY

25' - 0".

37' - 1 1/2"

38' - 0"

UP

DN

LOADING

37' - 6"

205' - 1"

100' - 0"

WILLAMETTE GREENWAY

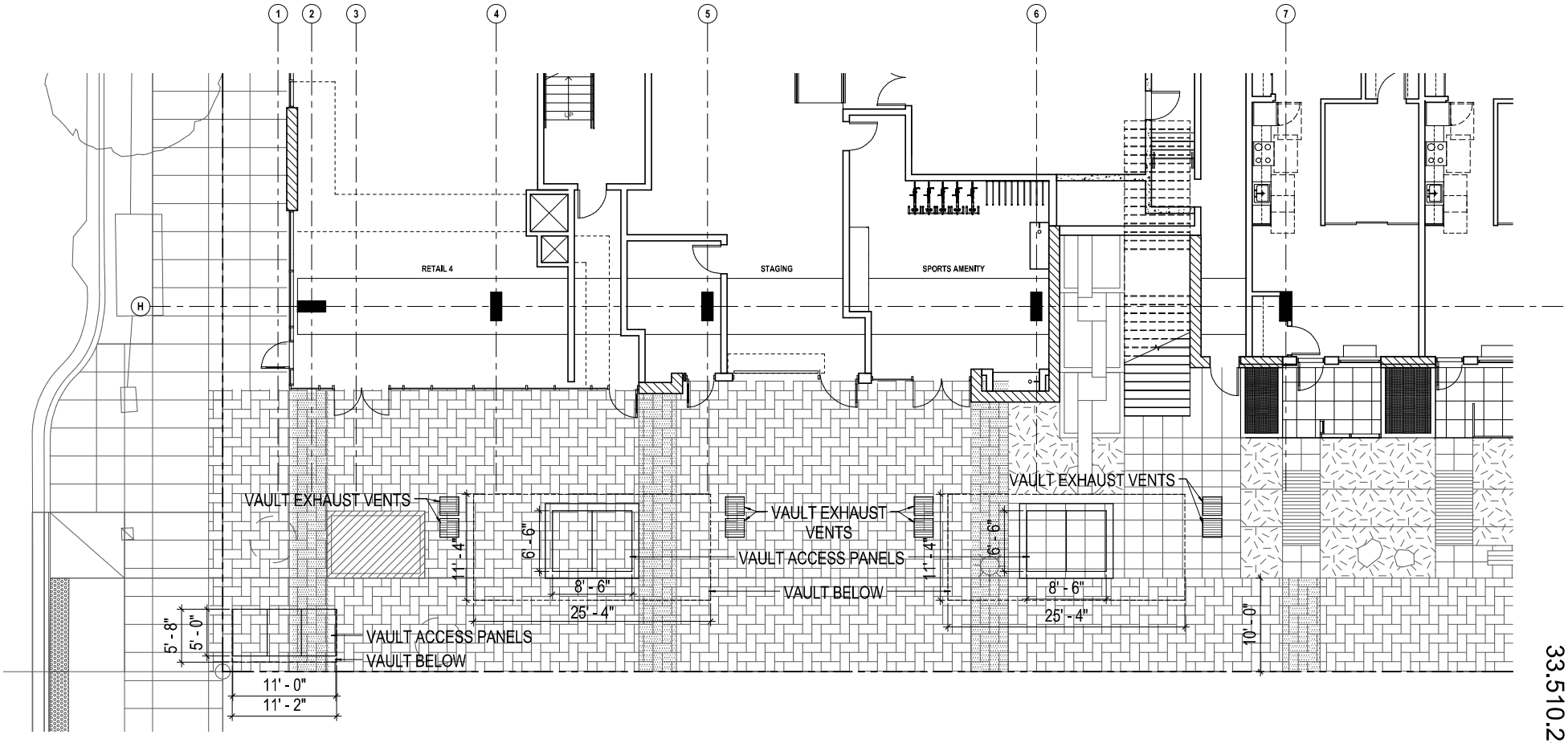
2002 TOP OF BANK LINE

GREENWAY BOUNDARY

50' - 0" ROW
25' - 0". CL OF R.O.W
30' - 2" F.O. BLD. GRND. FLR.
25' - 0". F.O. BLD. ABOVE

25' - 0" | 35' - 0"

286' - 0"



DESIGN REVIEW VAULT LOCATIONS

ACCESSWAY
33.510.252

2' 5' 10'

SOWA BLK 37 PORTLAND, OREGON.

GBD ARCHITECTS, INC.

FAR & PARKING
33.510.200, 33.266.150

BASE OPTION - 2014 March 25

SITEWORK & PARKING & USE

	Site GSF	Sitework GSF	Parking GSF	Parking Stalls	Patio GSF	Balcony GSF	Use
P 01			51,225	183			PARKING
1ST FLR	72,749	13,008	15,609	42	3255		PRKNG/HSNG/RET
2ND FLR					12387	421	HOUSING
3RD FLR					1614	421	HOUSING
4TH FLR						421	HOUSING
5TH FLR						620	HOUSING
6TH FLR					733	620	HOUSING
TOTALS	**72,749**	**13,008**	**66,834**	**225**	**17,989**	**2,503**	

HOUSING & RESTAURANT

Flr-Flr Hgt '	Bldg GSF	Housing GSF	Housing NSF	Housing Effic.	Housing Units	Amenity GSF	Retail GSF	Load/ Stor GSF	Bikes	Comments
11	51,225									48 tandem parking stalls
16	56,082	28,352	16,606	59%	18	566	6,054	1,143	21	Loading included in housing gross
10.5	45,922	45,922	37,532	82%	52	2,755		1002	80	Storage included in housing GSF
10.5	44,496	44,496	38,302	86%	52			1271	80	
10.5	42,315	42,315	37,188	88%	52			1002	80	
10.5	42,099	42,099	36,979	88%	52			1271	80	
12	41,366	41,366	36,246	88%	52			1002	80	
70.0	**323,505**	**244,550**	**202,853**	**83%**	**278**	**3,321**	**6,054**	**6,691**	**421**	

1. Amenity SF included in housing GSF/NSF.

2. Loading SF not included in Housing GSF/NSF.
3. Retail SF includes 1,200 SF of retail trash and restroom areas.
4. Enclosed balcony storage included in GSF/NSF.
5. Exterior balcony not included in GSF/NSF.
6. Bike storage rooms will hold 50 bikes per floor.
7. One bike hook provided for each unit except for shotgun units.
8. [not used]
9. [not used]
10. [not used]
11. [not used]
12. [not used]

ZONING SUMMARY	
Site Area	72,749
Max. FAR	6
Actual FAR	3.78
Max. GSF	436,494
Actual GSF	**323,505**
FAR GSF	274,783
FAR Delta	161,711
MAX Height	250'
Actual HT.	70.0
Bikes Req'd	417.0
PARKING	
Parking Ratio	**0.81**
SF/Stall	**297**

UNIT SUMMARY	
SHOTGUN	*128*
1 BEDROOM	*66*
1 BEDROOM +	*49*
2 BEDROOM	*11*
2 BEDROOM/ 2 BA	*21*
TOWNHOME (2 BEDROOM)	*3*
TOTAL	*278*

UNIT MATRIX

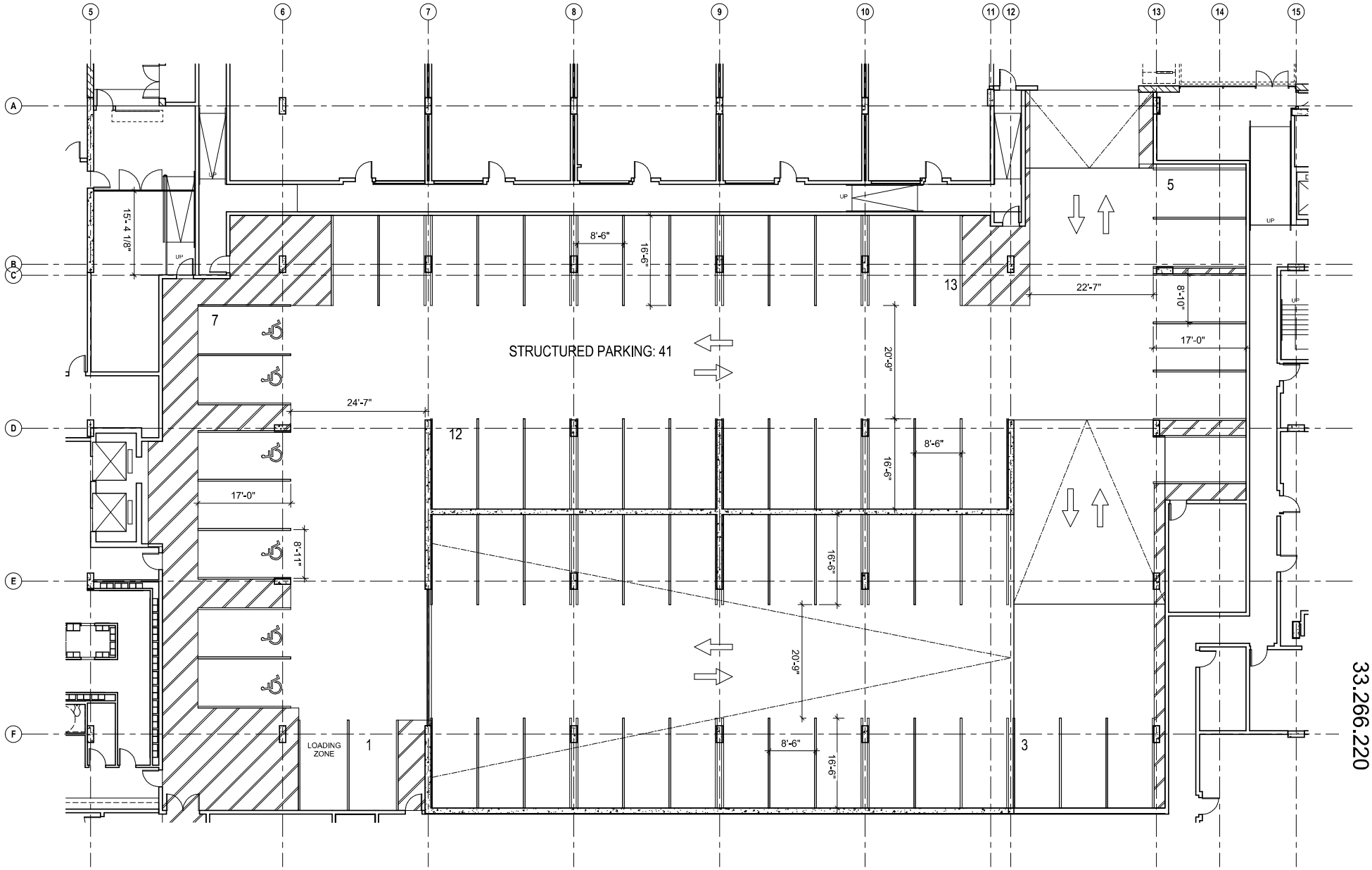
	UNIT A (637 sf)	UNIT B (579 sf)	UNIT C (616sf)	UNIT D (708 sf)	UNIT E (827 sf)	UNIT F (1085 sf)	UNIT G (997 sf)	UNIT H (714 sf)	UNIT I (1052 sf)	UNIT J (1217 sf)	UNIT K (803 sf)
	HU SHTGN	*GBD SHTGN*	*1 BDRM*	*1 BDRM +*	*1 BDRM +*	*2 BDRM /2BA*	*2 BDRM*	*1 BDRM +*	*2 BDRM /2BA*	*2 BDRM /2BA*	*1 BDRM +*
1ST FLR											
2ND FLR	*12*	*12*	*14*	*5*	*2*	*1*	*1*	*1*	*1*	*1*	*1*
3RD FLR	*13*	*12*	*13*	*5*	*2*	*1*	*1*	*1*			
4TH FLR	*13*	*12*	*13*	*5*	*2*	*1*	*1*	*1*			
5TH FLR	*12*	*12*	*13*	*5*	*2*	*1*	*1*	*1*			
6TH FLR	*9*	*12*	*13*	*5*	*2*	*1*	*1*	*1*			
	59	**60**	**66**	**25**	**10**	**5**	**5**	**5**	**1**	**1**	**1**
	21%	**22%**	**24%**	**9%**	**4%**	**2%**	**2%**	**2%**	**0%**	**0%**	**0%**

UNIT MATRIX

	UNIT L (1110 sf)	UNIT M (795sf)	UNIT N (1155 sf)	UNIT O (1366 sf)	UNIT P (1148 sf)	UNIT Q (676 sf)	UNIT R (980 sf)	UNIT S (973 sf)	UNIT T (832 sf)	UNIT U (1157 sf)	UNIT V (1354 sf)
	TWNHME	*1 BDRM +*	*2 BDRM /2BA*	*2 BDRM /2BA*	*2 BDRM /2BA*	*1 BDRM +*	*2 BDRM*	*2 BDRM*	*2 BDRM*	*2 BDRM /2BA*	*2 BDRM /2BA*
1ST FLR						*4*		*2*		*2*	*1*
2ND FLR	*3*										
3RD FLR		*1*	*1*	*1*	*1*						
4TH FLR		*1*	*1*	*1*	*1*						
5TH FLR		*1*	*1*	*1*	*1*		*1*				
6TH FLR		*1*					*1*		*1*		
	3	**4**	**3**	**3**	**3**	**4**	**2**	**2**	**1**	**2**	**1**
	1%	**1%**	**1%**	**1%**	**1%**	**1%**	**1%**	**1%**	**0%**	**1%**	**0%**

UNIT MATRIX

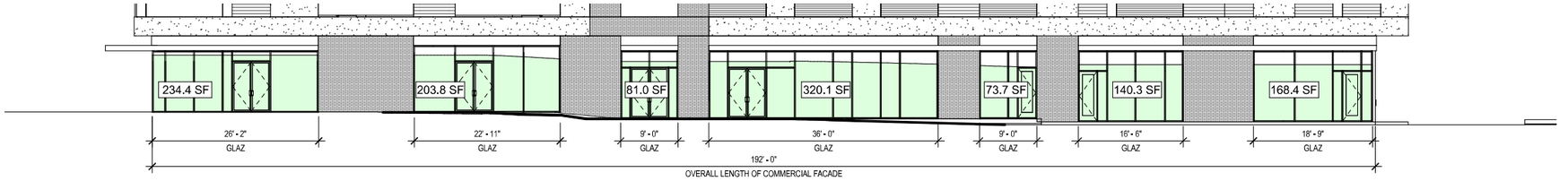
	UNIT W (1291 sf)	UNIT X (864 sf)	UNIT Y (805 sf)	UNIT Z (1019 sf)	UNIT AA (476 sf)						
	2 BDRM /2BA	*2 BDRM*	*SHOTGN*	*2 BDRM /2BA*	*SHOTGN*						
1ST FLR	*1*	*1*	*7*								
2ND FLR											
3RD FLR											
4TH FLR											
5TH FLR											
6TH FLR				*1*	*2*						
	1	**1**	**7**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**
	0%	**0%**	**3%**	**0%**	**1%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**



DESIGN REVIEW ENLARGED PARKING PLAN P1

PARKING
33.266.220

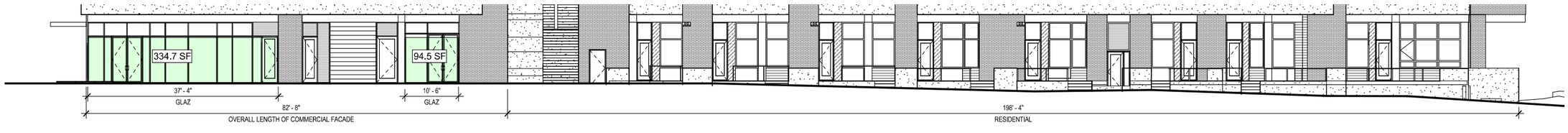
GROUND FLOOR WINDOWS
33.130.230, 33.510.220



GROUND FLOOR WINDOWS SUMMARY
FACADE LENGTH : 97.2' REQUIRED / 147'-4" PROVIDED (76.7%)
WINDOW AREA : 437.4 SF. REQUIRED / 1211.6 SF PROVIDED (70.1%)

3 West - SW RIVER PKWY

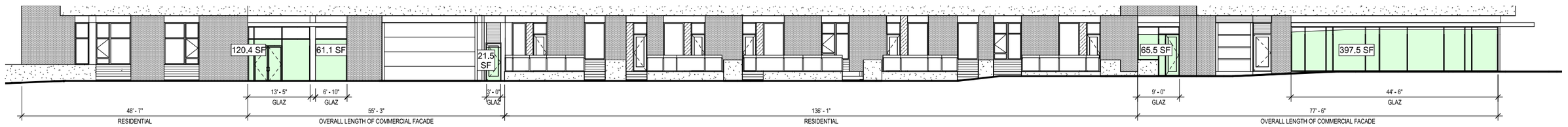
3/32" = 1'-0"



GROUND FLOOR WINDOWS SUMMARY
FACADE LENGTH : 41'-4" REQUIRED / 47'-10" PROVIDED (57.9%)
WINDOW AREA : 182 SF. REQUIRED / 574 SF PROVIDED (57.9%)

2 South - SW LANE

3/32" = 1'-0"



GROUND FLOOR WINDOWS SUMMARY
FACADE LENGTH : 70'-10" REQUIRED / 76'-9" PROVIDED (57.8%)
WINDOW AREA : 318.75 SF. REQUIRED / 666 SF PROVIDED (55.7%)

1 North - SW GAINES

3/32" = 1'-0"

STORMWATER MANAGEMENT PLAN

Block 37 Apartments

Harper
Houf Peterson
Righellis Inc.

Block 37

Stormwater Management Report

2/13/2014

Prepared For:

GBD Architects
1120 NW Couch St.
Ste. 300
Portland, Oregon

GBD-49

Prepared By:

Harper Houf Peterson Righellis Inc.
205 SE Spokane Street, Suite 200
Portland, OR 97202
P: 503-221-1131 F: 503-221-1171

Janelle Brannan, P.E.

HHPR

ENGINEERS ◆ PLANNERS
LANDSCAPE ARCHITECTS ◆ SURVEYORS

Designer's Certification Statement

I hereby certify that this Stormwater Management Report for the South Waterfront Block 37 development has been prepared by me or under my supervision and meets minimum standards of the City of Portland and normal standards of engineering practice. I hereby acknowledge and agree that the jurisdiction does not and will not assume liability for the sufficiency, suitability, or performance of the drainage facilities designed by me.

Table of Contents

Project Description

The South Waterfront Block 37 project is located at SW River Parkway and SW Gaines Street. The proposed development includes construction of a mixed use building and pedestrian pathway to the South Waterfront Greenway Trail. Frontage improvements for the project includes construction of the sidewalk corridor on SW River Parkway and on SW Gaines Street.

Existing Site Conditions

The existing 1.67 acre site is undeveloped gravel with some raised planters. The existing roadway is developed to including curb and gutter with a temporary asphalt sidewalk behind the curb.

The site is directly west of the Willamette River, and generally slopes toward the river. Geotechnical Reports have been completed for the site by GeoDesign the most current dated February 1st 2013. The report generally describes the soil composed of fill overlying alluvial silt, sand, and gravel, then overlying the dense to very dense gravel of the Troutdale Formation. The fill was noted to be between 7 and 17 feet below the ground surface. Groundwater was noted to be at approximately 15 to 16 feet below the ground surface. During extreme flooding of the Willamette River, the groundwater levels are expected to rise to elevation 31 feet (COP Datum)

GeoDesign has completed a Level 1 Environmental Site Assessment for the project site, dated September 12, 2012. The project site was identified having historical operations that resulted in soil and groundwater contamination. Further investigation of the site is ongoing to determine if the soil is contaminated.

Proposed Site Improvements / Stormwater Management Requirements

The proposed public and private improvements will create additional impervious areas. These impervious surfaces will need to be managed per the 2008 City of Portland Stormwater Management Manual (SWMM). Per the SWMM, the Stormwater Infiltration and Discharge Hierarchy is to be used to determine the feasibility of the stormwater option to be used for the site. The following addresses each category in the Hierarchy;

Category 1: Requires total onsite infiltration with vegetated infiltration facilities.

Total on-site stormwater infiltration will not be feasible on this site due the contaminated soils.

Category 2: Requires total onsite infiltration with a vegetated facility that overflows to a subsurface infiltration facility.

Total on-site stormwater infiltration will not be feasible on this site due the contaminated soils.

Category 3: Requires onsite detention with vegetated facilities that overflow to a drainage way, river, or storm-only pipe.

The stormwater management for this project falls into this category. The building roof area and pedestrian easement area (SW Lane) will meet water quality requirements using a combination of flow through planters located on the second level terrace of the building, and water quality

swale located within the pedestrian easement. SW Gaines Street has been noted as a green street, with this project a stormwater planter will be constructed to treat stormwater runoff from the southerly half of SW Gaines from the intersection of SW River Parkway to the location of the stormwater planter.

Detention will not be required for this site since both the public storm only line in SW Gaines, and the private storm only line in SW Lane outfall to the Willamette River directly east of the site.

Category 4: Required onsite detention with vegetated facilities that overflow to the combined sewer system.

There is not a combined sewer system adjacent to the site.

Conclusion

The stormwater management for the site falls under Category 3 of the Stormwater Infiltration and Discharge Hierarchy of the 2008 City of Portland Stormwater Management Manual. Stormwater management requirements for the 1.67 acre site will be met using a combination of Stormwater Planters and Swales.

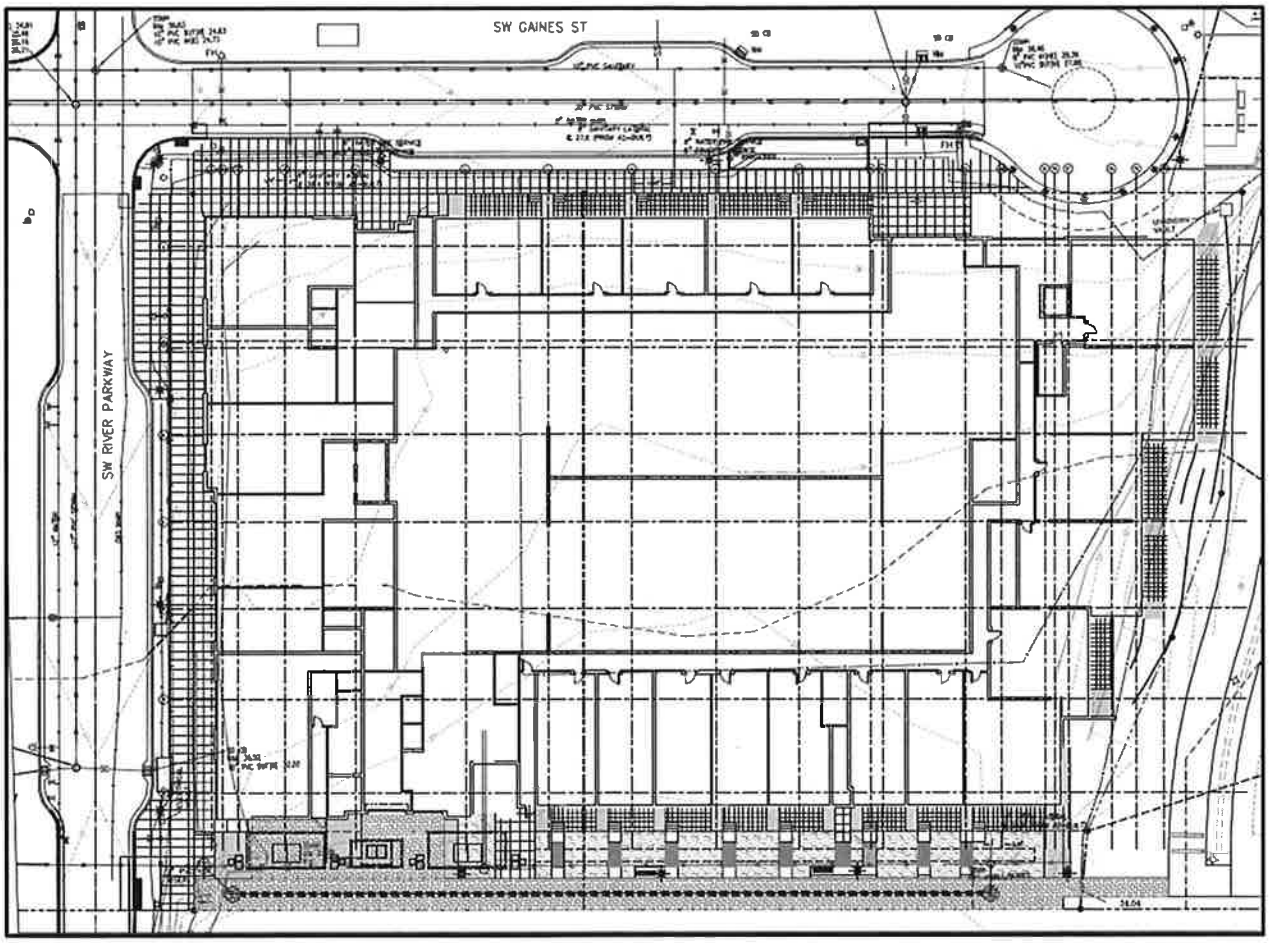
Maps and Calculations

Existing Conditions Aerial

EXISTING CONDITIONS

NTS

Proposed Site Plan



SITE PLAN

NTS

SW Gaines Street (Public)

SW Gaines Street has been identified as a green street. The proposed stormwater planter will be located toward the easterly end of the street, mirroring the stormwater planter on the north side of the street.

SW Gaines is developed with a concrete intersection at SW River Parkway and asphalt roadway with a cul-de-sac at the east end terminating the street. The basin area for the proposed planter will be the southerly half of SW Gaines, begin at the intersection of SW Gaines and SW River Parkway and continuing to the proposed planter location.

Impervious Area: 6,900sf
The proposed planter dimensions: 44lf by 9ft wide
Roadway slope 1.4%
Proposed Check Dam at 22lf

Using the City of Portland's PAC to calculate stormwater management requirements:

RESULTS

		Overflow Volume			
Pollution Reduction	PASS	0 CF	4%	Surf. Cap. Used	Run PAC
			17%	Rock Cap. Used	

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.005	0.043	0.122	0.144

FACILITY FACTS

Total Facility Area Including Freeboard =	396 SF
Sizing Ratio (Total Facility Area / Catchment Area) =	0.057

Building and Pedestrian Easement (Private)

The Building roof area is being collected in four locations, divided up in this report as basins A through D. SW Lane, Pedestrian Easement, is basin E. The following table summarizes the basin information:

Basin	Location	Area	WQ	WQ Location
A	Roof Area (West)	14,628sf	Planter A	Interior Courtyard
B	Roof Area (Middle), Interior Courtyard	33,945sf	Swale A	SW Lane
C	Roof Area (NE)	5,696sf	Planter B	East 2nd level Terrace
D	2nd Level Terrace	5,169sf	Swale B	SW Lane
E	SW Lane	4,664sf	Swale A	SW Lane

Planter A Calculations

Planer A is a flat flow through planter located in the Courtyard area of the building.

Impervious Area: 14,628sf
Proposed planter area: 366sf
Proposed storage depth: 4"
Proposed freeboard depth: 2"

Using the City of Portland's PAC to calculate stormwater management requirements:

RESULTS

		Overflow Volume		
Pollution Reduction	PASS	0 CF	67%	Surf. Cap. Used

Run PAC

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.207	0.252	0.298	0.343

FACILITY FACTS

Total Facility Area Including Freeboard =	366 SF
Sizing Ratio (Total Facility Area / Catchment Area) =	0.025

Planter B Calculations

Planer B is a flat flow through planter located in the 2nd Level Terrace of the building.

Impervious Area: 5,696sf
Proposed planter area: 142sf
Proposed storage depth: 4”
Proposed freeboard depth: 2”

Using the City of Portland’s PAC to calculate stormwater management requirements:

RESULTS		Overflow Volume			
Pollution Reduction	PASS	0 CF	68%	Surf. Cap. Used	Run PAC

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.080	0.098	0.116	0.134

FACILITY FACTS	
Total Facility Area Including Freeboard =	142 SF
Sizing Ratio (Total Facility Area / Catchment Area) =	0.025

SW Lane Swale Calculations

Swale A will treat basins B and the majority of basin E.

Impervious Area: 38,609sf
Swale dimensions: 4ft bottom, 3:1 side slopes, downstream depth 12"
Swale Length 140LF
Swale Slope 1.7%
Check Dam at 30lf

Using the City of Portland's PAC to calculate stormwater management requirements:

RESULTS		Overflow Volume			Run PAC
Pollution Reduction	PASS	0 CF	82%	Surf. Cap. Used	

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.523	0.643	0.763	0.883

FACILITY FACTS	
Total Facility Area Including Freeboard =	1,400 SF
Sizing Ratio (Total Facility Area / Catchment Area) =	0.036

Swale B will treat basins D and the adjacent portion of basin E.

Impervious Area: 5,400sf
Swale dimensions: 4ft bottom, 3:1 side slopes, downstream depth 12"
Swale Length 200LF
Swale Slope 4.75%
Check Dam at 10lf

Using the City of Portland's PAC to calculate stormwater management requirements:

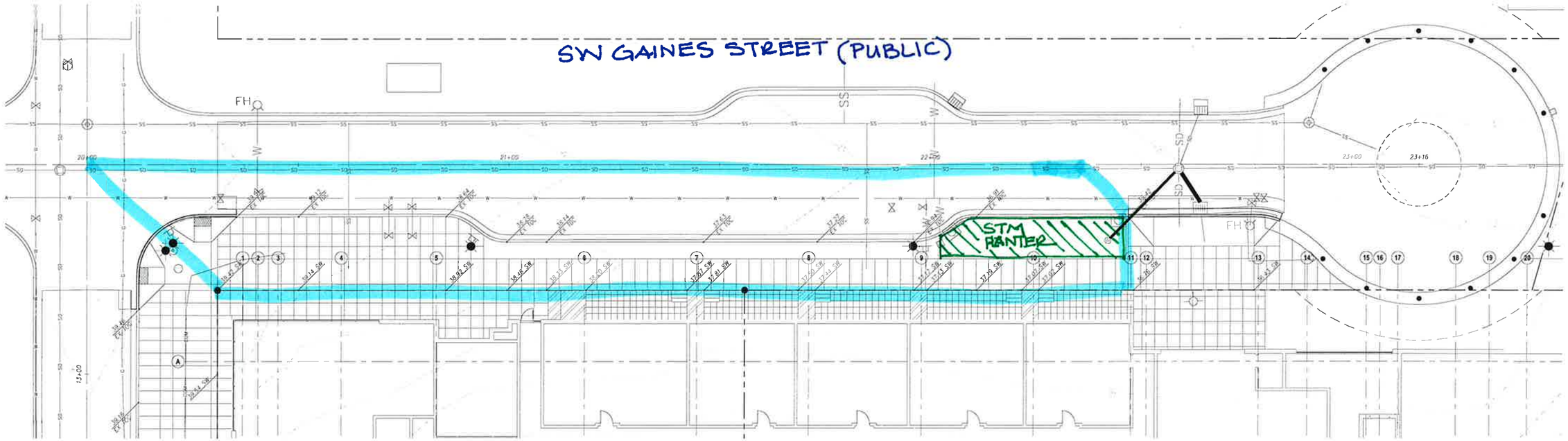
RESULTS		Overflow Volume			Run PAC
Pollution Reduction	PASS	0 CF	73%	Surf. Cap. Used	

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.073	0.090	0.107	0.123

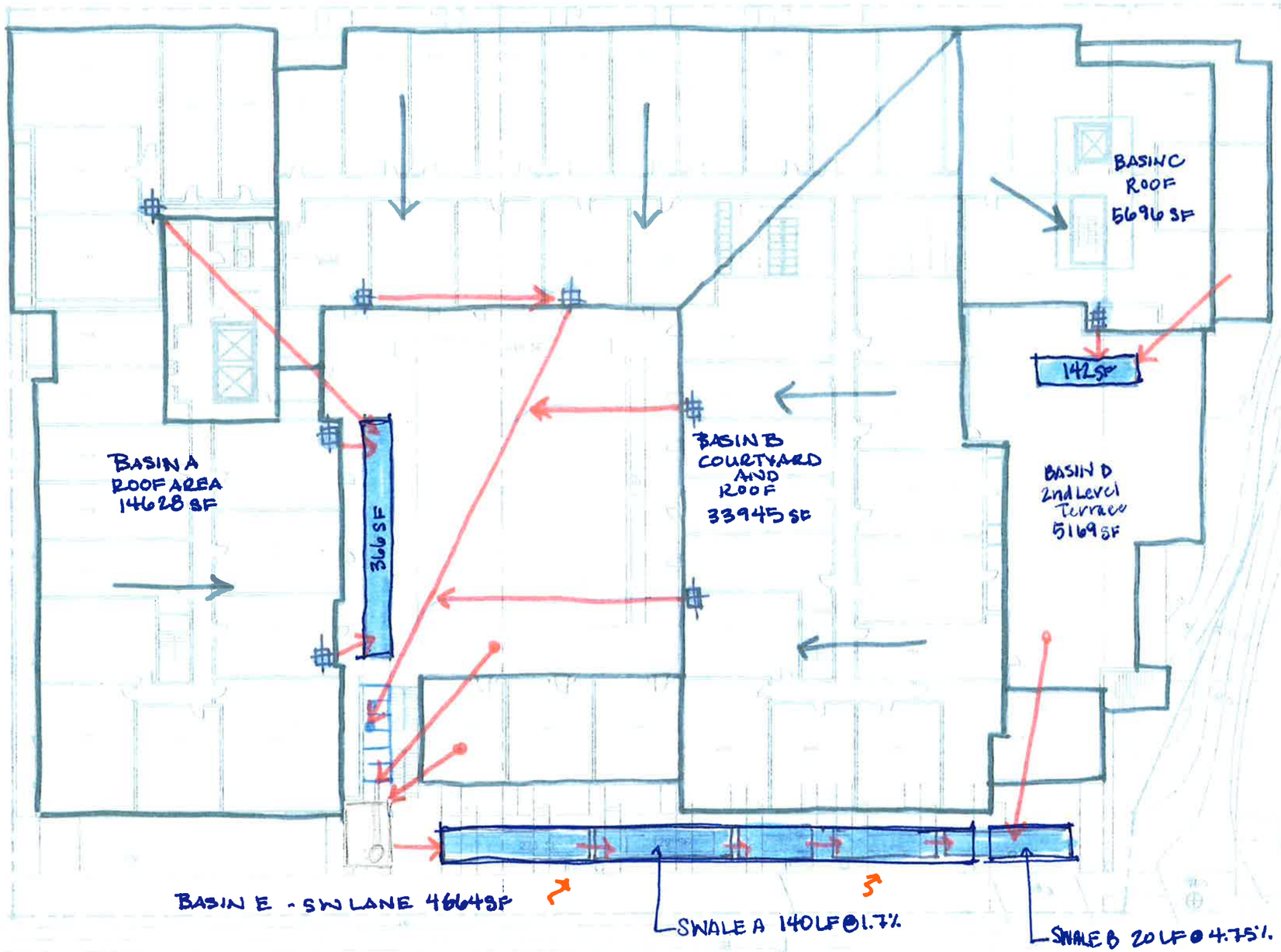
FACILITY FACTS	
Total Facility Area Including Freeboard =	200 SF
Sizing Ratio (Total Facility Area / Catchment Area) =	0.037

BASIN MAP



Impervious Area: 6900SF

BASIN MAP



BLOCK 37 - WC PLANTERS

Presumptive Approach Calculator ver. 1.2

Catchment Data

Catchment ID: Planter

Project Name: SW Gaines
Project Address: SW Gaines east of River Parkway
Designer: JLB
Company: HHPR

Date: 02/13/14
Permit Number: 0

Run Time 2/13/2014 9:37:22 AM

Drainage Catchment Information

Catchment ID	Planter	
	Catchment Area	
Impervious Area	6,900	SF
Impervious Area	0.16	ac
Impervious Area Curve Number, CN_{imp}	98	
Time of Concentration, Tc, minutes	5	min.

Site Soils & Infiltration Testing Data

Infiltration Testing Procedure:	Open Pit Falling Head	
Native Soil Field Tested Infiltration Rate (I_{test}):	2	in/hr
Bottom of Facility Meets Required Separation From High Groundwater Per BES SWMM Section 1.4:	Yes	

Correction Factor Component

CF_{test} (ranges from 1 to 3)	2	

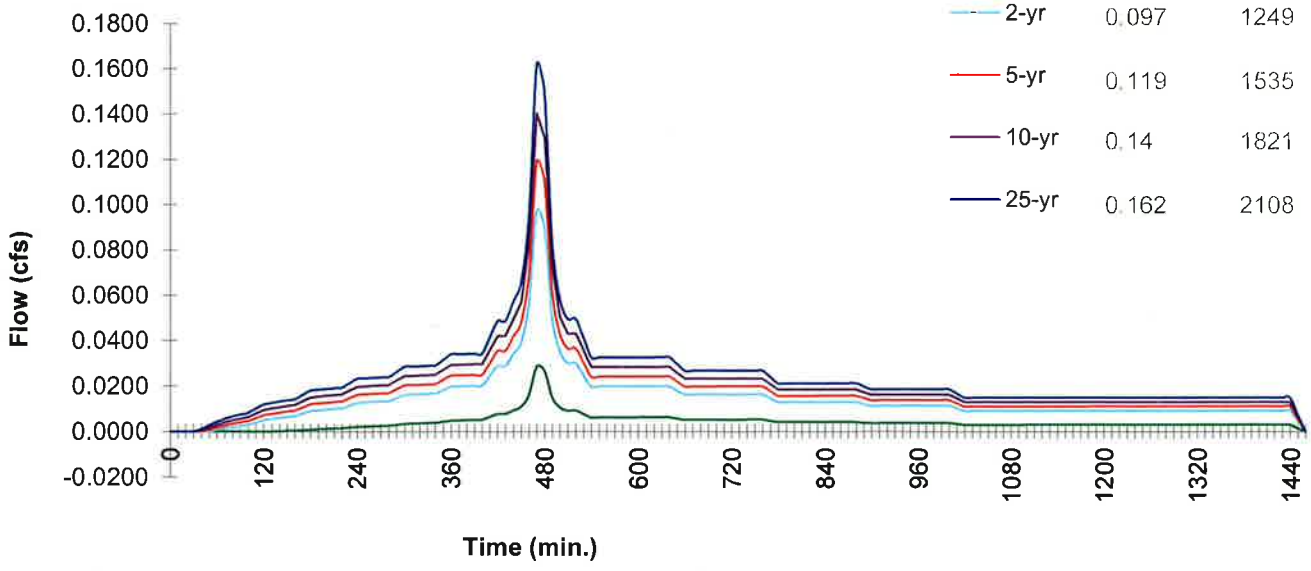
Design Infiltration Rates

I_{dsgn} for Native (I_{test} / CF_{test}):	1.00	in/hr
I_{dsgn} for Imported Growing Medium:	2.00	in/hr

Execute SBUH

SBUH Results

	Peak Rate (cfs)	Volume (cf)
PR	0.028	361
2-yr	0.097	1249
5-yr	0.119	1535
10-yr	0.14	1821
25-yr	0.162	2108



Printed: 2/13/2014 9:37 AM

Presumptive Approach Calculator ver. 1.2

Catchment ID: Planter

Run Time 2/13/2014 9:37:22 AM

Project Name: SW Gaines **Catchment ID:** Planter **Date:** 2/13/2014

Instructions:
1. Identify which Stormwater Hierarchy Category the facility.
2. Select Facility Type.
3. Identify facility shape of surface facility to more accurately estimate surface volume, except for Swales and sloped planters that use the PAC Sloped Facility Worksheet to enter data.
4. Select type of facility configuration.
5. Complete data entry for all highlighted cells.

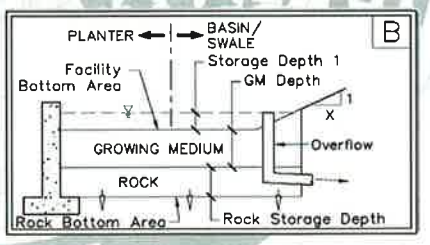
Catchment facility will meet Hierarchy Category: 3

Goal Summary:

Hierarchy Category	SWMM Requirement	RESULTS box below needs to display...	
		Pollution Reduction as a	10-yr (aka disposal) as a
3	Off-site flow to drninageway, river, or storm-only pipe system	PASS	N/A

Facility Type = Planter (Sloped)

Facility Configuration: B



Refer to Sloped Facility Worksheet and enter Variable Parameters

Calculation Guide
Max. Rock Stor. Bottom Area
Per Swale Dims

DATA FOR ABOVE GRADE STORAGE COMPONENT

Infiltration Area = 395 sf
Surface Capacity Volume = 258.8 cf

Growing Medium Depth = 18 in
Freeboard Depth = N/A in

Surface Capacity at Depth 1 = 259 cf
Infiltration Area at 75% Depth1 = -3 SF
GM Design Infiltration Rate = 2.00 in/hr
Infiltration Capacity = 0.018 cfs

BELOW GRADE STORAGE

Rock Storage Bottom Area = 352 sf
Rock Storage Depth = 30 in
Rock Void Ratio = 0.3

Rock Storage Capacity = 264 cf

Native Design Infiltration Rate = 1.00 in/hr
Infiltration Capacity = 0.008 cfs

RESULTS

Pollution Reduction: **PASS**

Overflow Volume: 0 CF

4% Surf. Cap. Used

17% Rock Cap. Used

Run PAC

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.005	0.043	0.122	0.144

FACILITY FACTS

Total Facility Area Including Freeboard = 396 SF
Sizing Ratio (Total Facility Area / Catchment Area) = 0.057

Presumptive Approach Calculator Ver 1.2

Instructions:

1. Refer to facility graphics on the Graphics tab, then fill in all relevant facility parameters in the Data Entry table below. Data entry cells vary based on Facility Configuration selected on Facility Design Data tab.
2. Delete all facility parameters that may have been entered by the previous iteration that are no longer applicable.

Run Time 2/13/2014 9:37:22 AM

Project Name: SW Gaines **Date:** 2/13/2014 **Catchment ID:** Planter

Data Entry

Parameters | **Rock Storage Parameters** | **Error Messages**

Facility Segment	Length of facility segment (ft) $L_{segment}$	Downstream Check Dam Length (ft) L_{dam}	Longitudinal Facility Slope (ft/ft) S	Bottom Width (ft) W_{bottom}	Side Slope Right X_{right}:1	Side Slope Left X_{left}:1	Downstream Depth (inches) D_{ds}	Landscape Width (ft) $W_{landscape}$	Rock Storage Width (ft) W_{rock}	Rock Storage Depth (inches) D_{rock}	Rock Void Ratio v
1	22	0	0.014	9	0	0	9.7	9	8	30	0.3
2	22	0.16	0.014	9	0	0	9.7	9	8		
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

Project Name: Depth 2= Depth 3=

Worksheet Calculations

Parameters | **Rock Storage Parameters**

Facility Segment	Adjusted Length of facility segment (ft) L_{adjust}	Adjusted Length if $D_{up} = 0$ (ft) $L_{adjust2}$	Upstream Depth (inches) D_{up}	Downstream Top Width (ft) $W_{top\text{-}ds}$	Upstream Top Width (ft) $W_{top\text{-}up}$	Downstream Cross-sectional Area (sf) A_{ds}	Upstream Cross-sectional Area (sf) A_{up}	**Surface Capacity Volume** (cf) $V_{surface}$	75% of Max. Downstream Depth (inches) $D_{ds75\%}$	75% of Max. Upstream Depth (inches) $D_{up75\%}$	75% of Max. Adjusted Length if $D_{up75\%} = 0$ (ft) $L_{adjust3}$	75% of Max. Downstream Top Width (ft) $W_{top\text{-}ds75\%}$	75% of Max. Upstream Top Width (ft) $W_{top\text{-}up75\%}$	**Infiltration Area @ 75% Full** (sf) $A_{75\%}$	Rock Storage Length (ft) L_{rock}	**Rock Storage Bottom Area** (sf) A_{rock}	**Rock Storage Capacity Volume** (cf) V_{rock}
1	22.00	N/A	6.00	9.00	9.00	7.28	4.50	130	7.28	3.58	N/A	9.00	9.00	198	22	176	132
2	21.92	N/A	6.02	9.00	9.00	7.28	4.51	129	7.28	3.59	N/A	9.00	9.00	197	22	176	132
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
								259	$V_{surface}$ @ Depth1					395		352	264

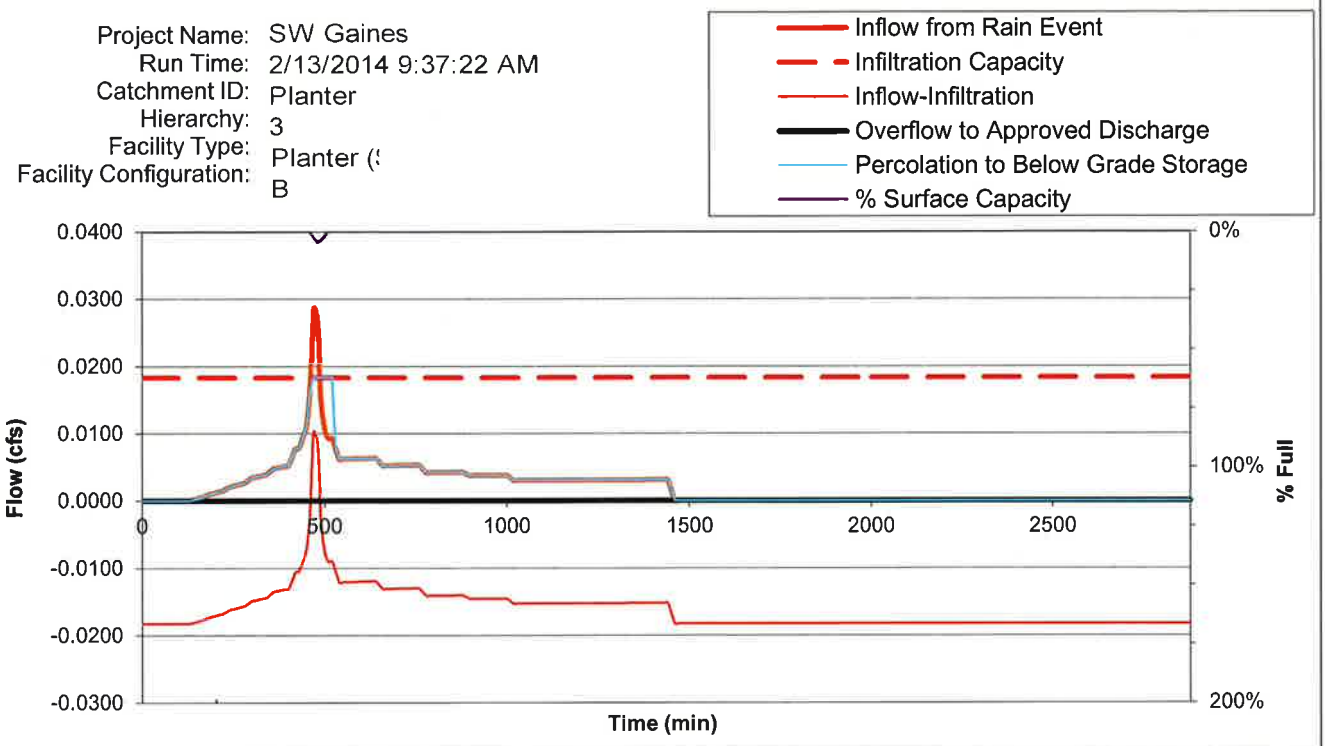
Printed: 2/13/2014 9:38 AM

BES - Presumptive Approach Calculator - Ver 1.2

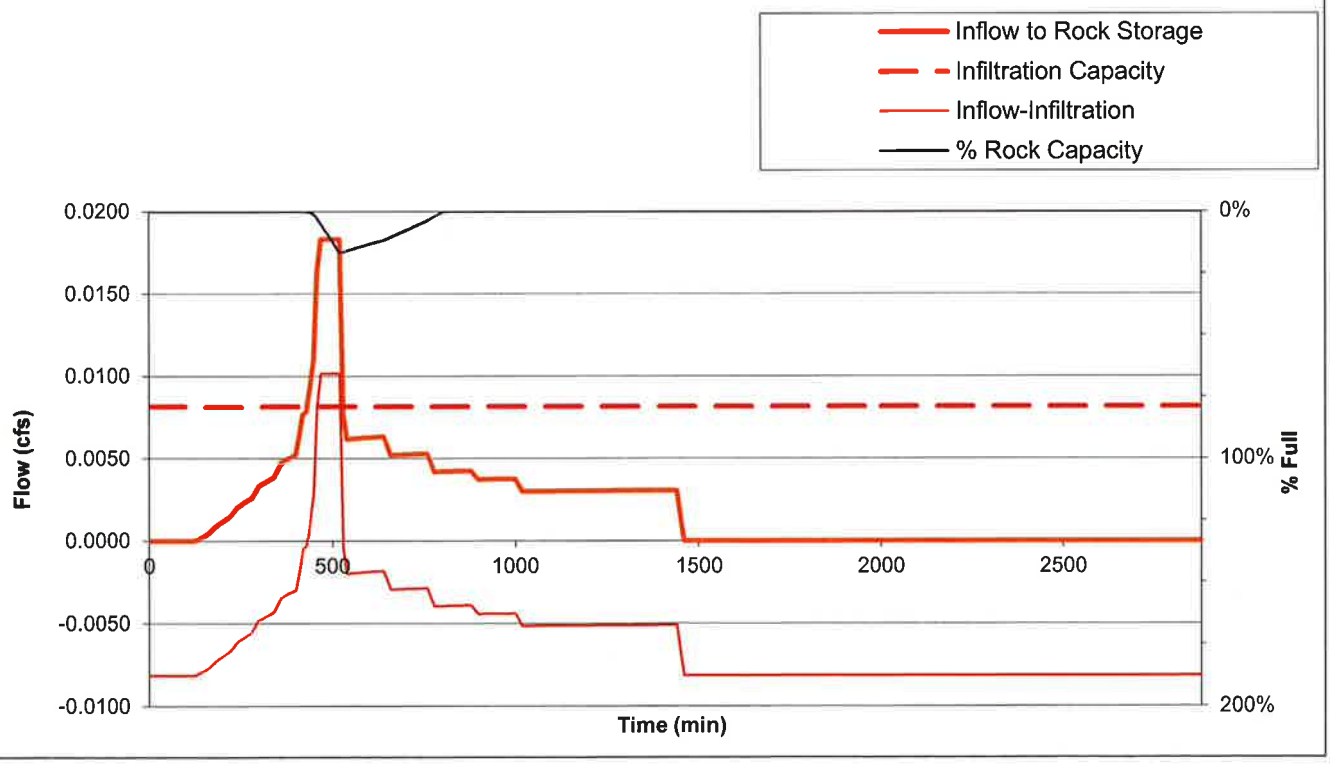
PR Con-A&B

Pollution Reduction Event
Surface Facility Modeling

Project Name: SW Gaines
Run Time: 2/13/2014 9:37:22 AM
Catchment ID: Planter
Hierarchy: 3
Facility Type: Planter (
Facility Configuration: B



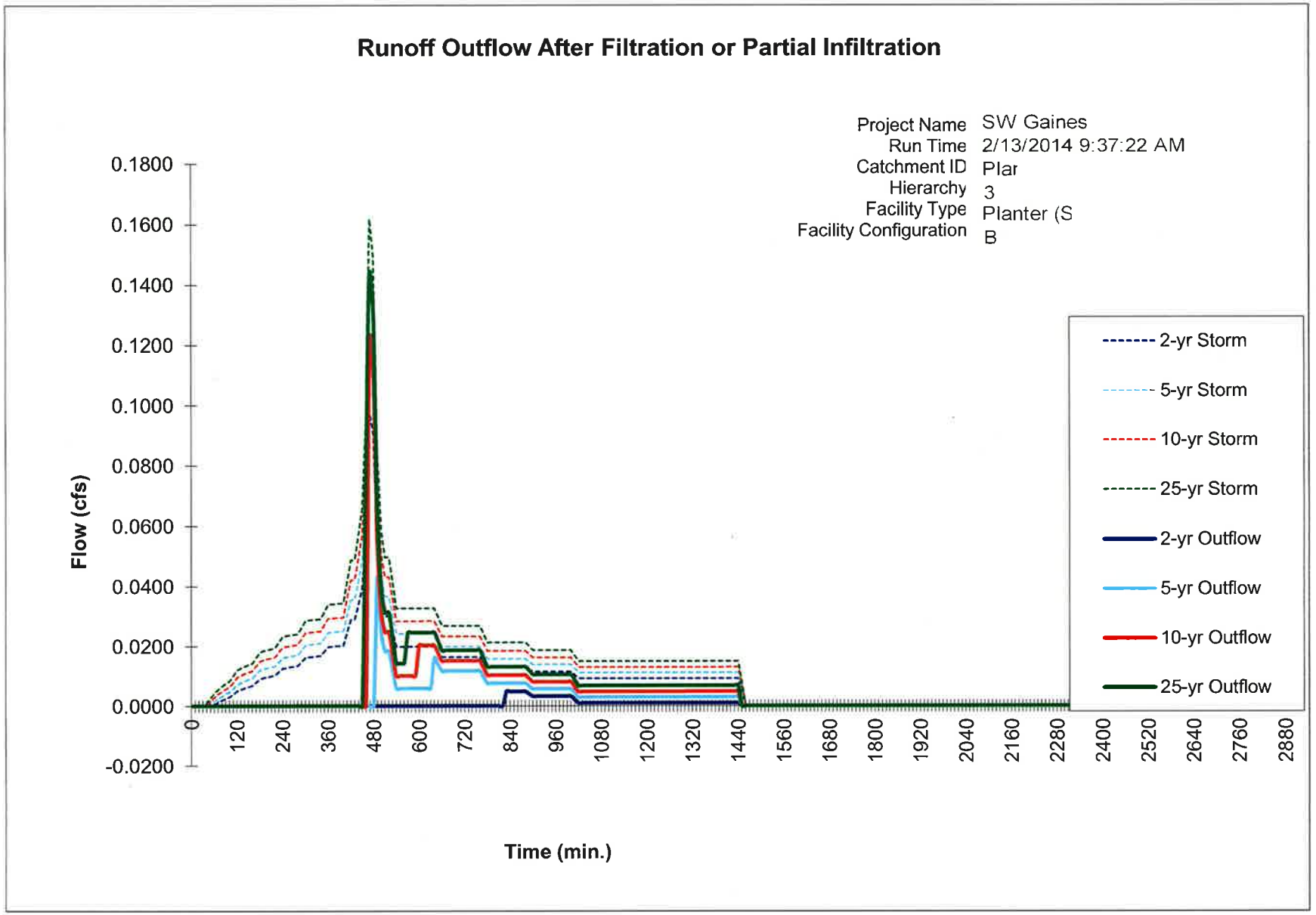
Pollution Reduction Event
Below Grade Modeling



Printed: 2/13/2014 9:38 AM

BES - Presumptive Approach Calculator - Ver 1.2

Output Chart



Presumptive Approach Calculator ver. 1.2

Catchment Data

Catchment ID: Planter A

Project Name: SouthWaterFront - Block37
Project Address: SW River Parkway and SW Gaines
Portland Oregon
Designer: JLB
Company: HHPR

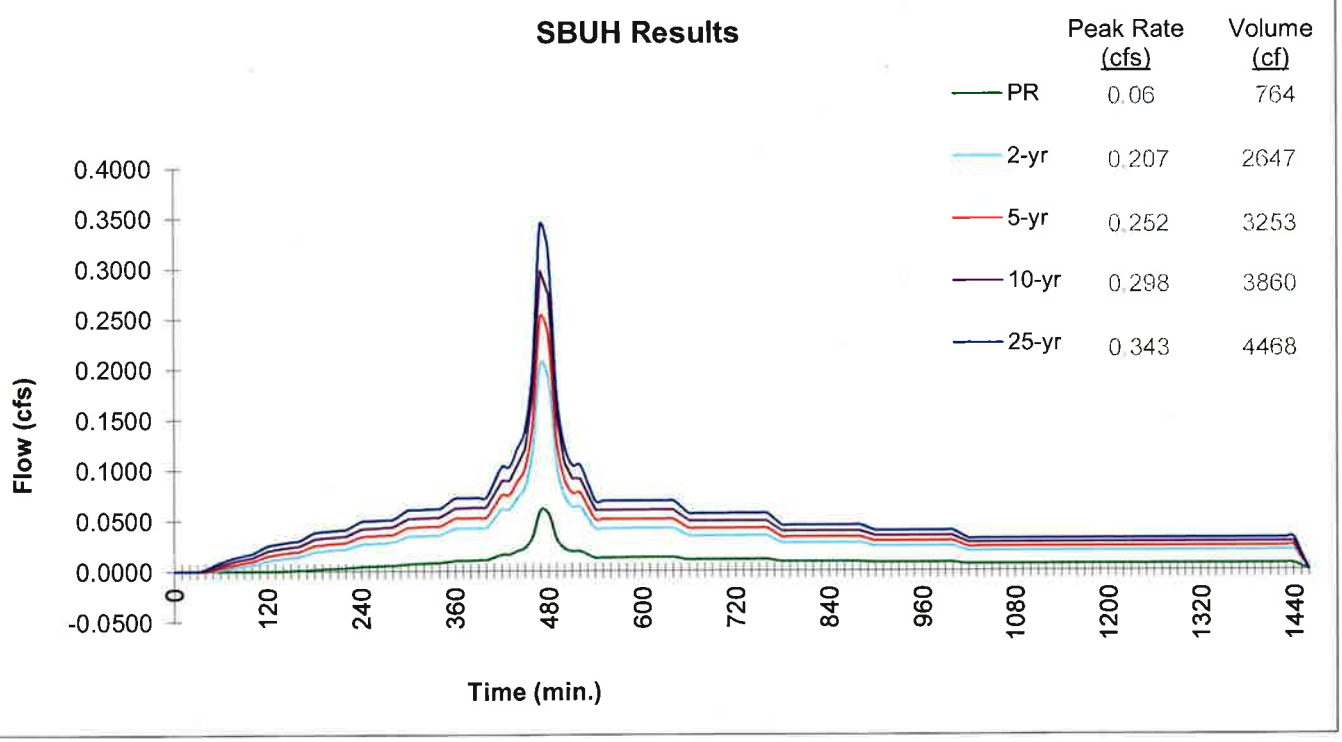
Date: 02/03/14
Permit Number: 0

Run Time 2/14/2014 7:26:32 AM

Drainage Catchment Information		
Catchment ID	Planter A	
	Catchment Area	
Impervious Area	14,628	SF
Impervious Area	0.34	ac
Impervious Area Curve Number, CN_{imp}	98	
Time of Concentration, Tc, minutes	5	min.
Site Soils & Infiltration Testing Data		
Infiltration Testing Procedure:	Open Pit Falling Head	
Native Soil Field Tested Infiltration Rate (I_{test}):	10	in/hr
Bottom of Facility Meets Required Separation From High Groundwater Per BES SWMM Section 1.4:	Yes	
Correction Factor Component		
CF_{test} (ranges from 1 to 3)	2	
Design Infiltration Rates		
I_{dsgn} for Native (I_{test} / CF_{test}):	5.00	in/hr
I_{dsgn} for Imported Growing Medium:	2.00	in/hr

Execute SBUH

SBUH Results



Printed: 2/14/2014 7:26 AM

Presumptive Approach Calculator ver. 1.2

Catchment ID: Planter A

Run Time 2/14/2014 7:26:32 AM

Project Name: SouthWaterFront - Block37 **Catchment ID:** Planter A **Date:** 2/3/2014

imported file Planter A 02132014.xls - 2/14/2014 7:26:34 AM

Instructions:

1. Identify which Stormwater Hierarchy Category the facility.
2. Select Facility Type.
3. Identify facility shape of surface facility to more accurately estimate surface volume, except for Swales and sloped planters that use the PAC Sloped Facility Worksheet to enter data.
4. Select type of facility configuration.
5. Complete data entry for all highlighted cells.

Catchment facility will meet Hierarchy Category: 3

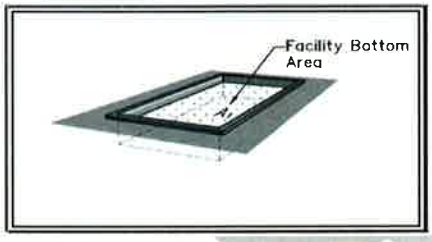
Goal Summary:

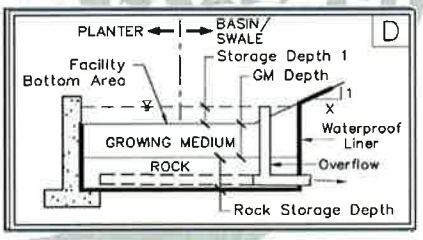
Hierarchy Category	SWMM Requirement	RESULTS box below needs to display...	
		Pollution Reduction as a	10-yr (aka disposal) as a
3	Off-site flow to drainageway, river, or storm-only pipe system.	PASS	N/A

Facility Type = Planter (Flat)

Facility Shape: Rectangle/Square

Facility Configuration: D





Calculation Guide
Max. Rock Stor. Bottom Area
366 SF

DATA FOR ABOVE GRADE STORAGE COMPONENT

Facility Bottom Area = 366 sf
Bottom Width = 10.0 ft
Facility Side Slope = 0 to 1
Storage Depth 1 = 4 in <Warning
Growing Medium Depth = 18 in
Freeboard Depth = N/A in

Surface Capacity at Depth 1 = 122 cf
GM Design Infiltration Rate = 2.00 in/hr
Infiltration Capacity = 0.017 cfs

BELOW GRADE STORAGE

Rock Storage Capacity = _____ cf
Native Design Infiltration Rate = _____ in/hr
Infiltration Capacity = _____ cfs

RESULTS

Pollution Reduction	Overflow Volume		
PASS	0 CF	67%	Surf. Cap. Used

Run PAC

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.207	0.252	0.298	0.343

Current data has been imported:

Planter A 02132014.xls 2/14/2014 7:26:34 AM

FACILITY FACTS

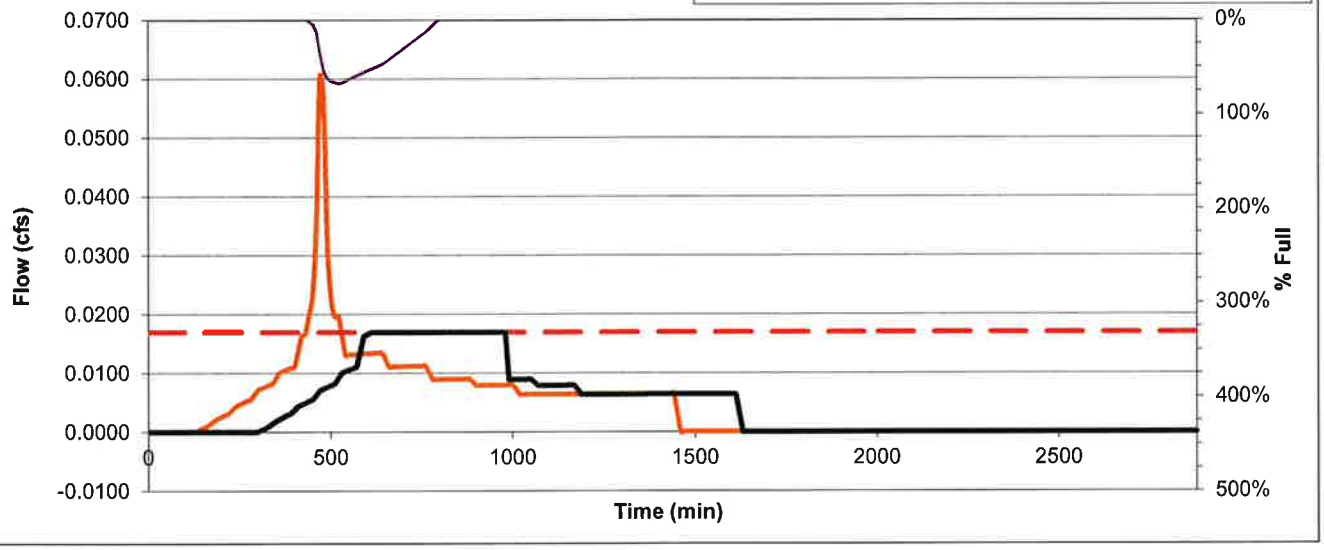
Total Facility Area Including Freeboard = 366 SF
Sizing Ratio (Total Facility Area / Catchment Area) = 0.025

BES - Presumptive Approach Calculator - Ver 1.2

PR Con-D

Pollution Reduction Event
Surface Facility Modeling

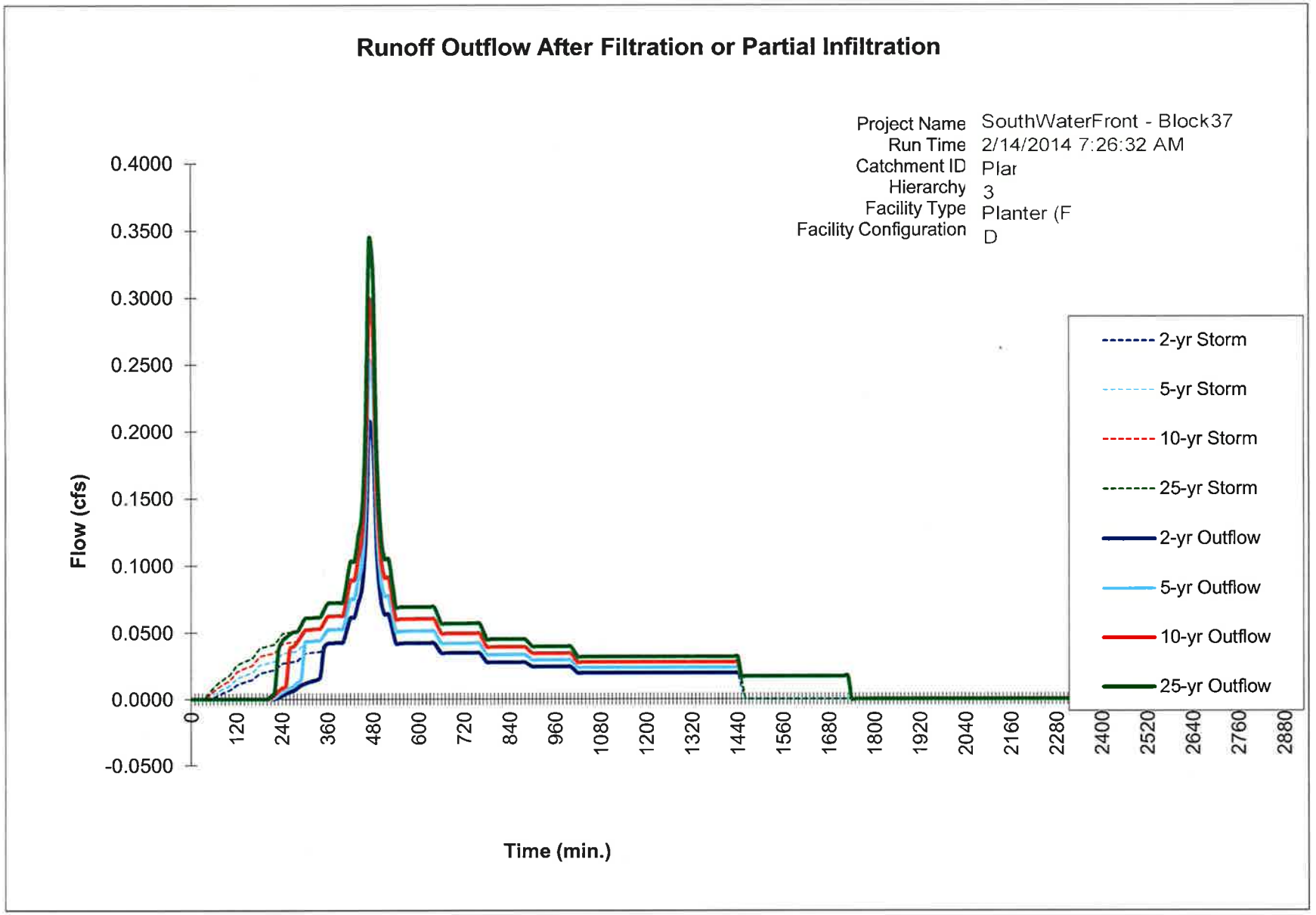
Project Name: SouthWaterFront - Block37
Run Time: 2/14/2014 7:26:32 AM
Catchment ID: Planter A
Hierarchy: 3
Facility Type: Planter (I
Facility Configuration: D



Printed: 2/14/2014 7:26 AM

BES - Presumptive Approach Calculator - Ver 1.2

Output Chart



Presumptive Approach Calculator ver. 1.2

Catchment Data

Catchment ID: Planter B

Project Name: SouthWaterFront - Block37
Project Address: SW River Parkway and SW Gaines
Portland Oregon
Designer: JLB
Company: HHPR

Date: 02/03/14
Permit Number: 0

Run Time 2/14/2014 7:28:00 AM

Drainage Catchment Information

	Planter B Catchment Area	
Impervious Area	5,696	SF
Impervious Area	0.13	ac
Impervious Area Curve Number, CN_{imp}	98	
Time of Concentration, Tc, minutes	5	min.

Site Soils & Infiltration Testing Data

Infiltration Testing Procedure:	Open Pit Falling Head	
Native Soil Field Tested Infiltration Rate (I_{test}):	10	in/hr
Bottom of Facility Meets Required Separation From High Groundwater Per BES SWMM Section 1.4:	Yes	

Correction Factor Component

CF_{test} (ranges from 1 to 3)	2	

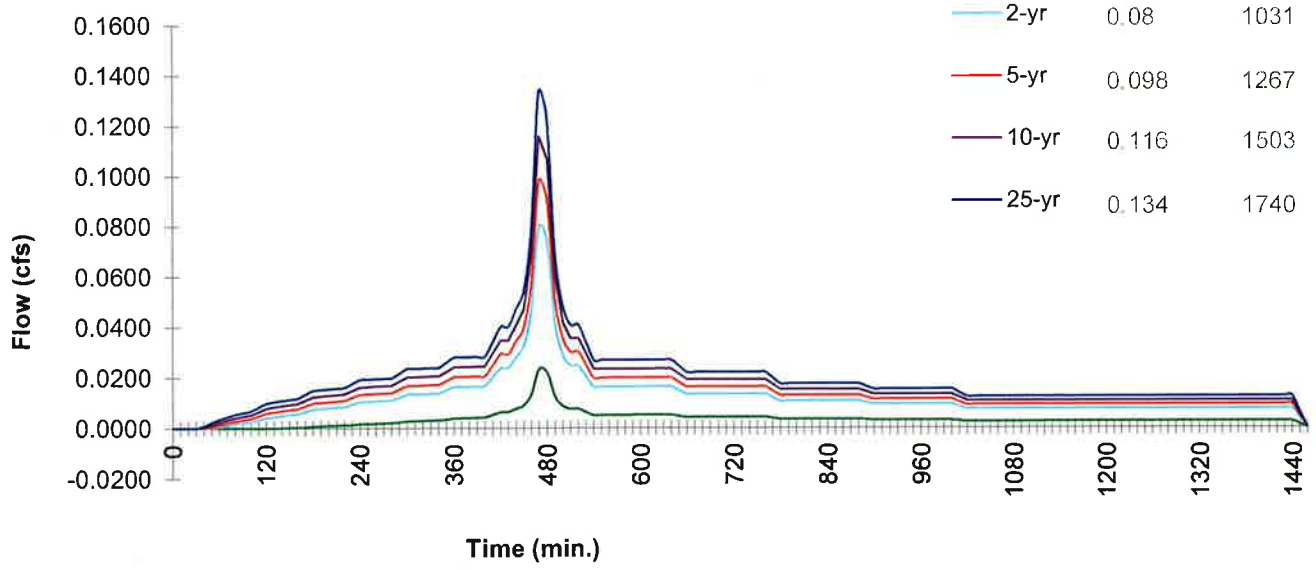
Design Infiltration Rates

I_{dsgn} for Native (I_{test} / CF_{test}):	5.00	in/hr
I_{dsgn} for Imported Growing Medium:	2.00	in/hr

Execute SBUH

SBUH Results

	Peak Rate (cfs)	Volume (cf)
PR	0.024	298
2-yr	0.08	1031
5-yr	0.098	1267
10-yr	0.116	1503
25-yr	0.134	1740



Printed: 2/14/2014 7:28 AM

Presumptive Approach Calculator ver. 1.2

Catchment ID: Planter B

Run Time 2/14/2014 7:28:00 AM

Project Name: SouthWaterFront - Block37 **Catchment ID:** Planter B **Date:** 2/3/2014

imported file Planter B 02132014.xls - 2/14/2014 7:28:02 AM

Instructions:

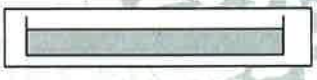
1. Identify which Stormwater Hierarchy Category the facility.
2. Select Facility Type.
3. Identify facility shape of surface facility to more accurately estimate surface volume, except for Swales and sloped planters that use the PAC Sloped Facility Worksheet to enter data.
4. Select type of facility configuration.
5. Complete data entry for all highlighted cells.

Catchment facility will meet Hierarchy Category: 3

Goal Summary:

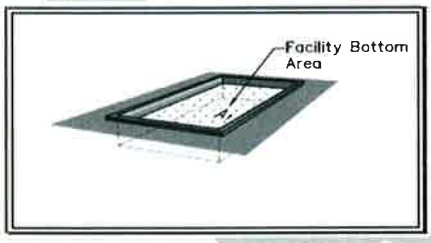
Hierarchy Category	SWMM Requirement	RESULTS box below needs to display...	
		Pollution Reduction as a	10-yr (aka disposal) as a
3	Off-site flow to drainageway, river, or storm-only pipe system.	PASS	N/A

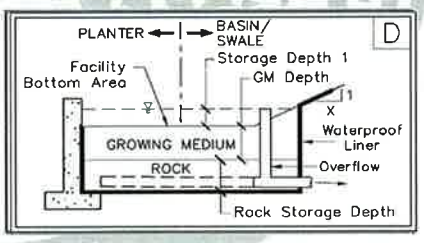
Facility Type = Planter (Flat)



Facility Shape: Rectangle/Square

Facility Configuration: D





Calculation Guide
Max. Rock Stor. Bottom Area
142 SF

DATA FOR ABOVE GRADE STORAGE COMPONENT

Facility Bottom Area =	142	sf
Bottom Width =	10.0	ft
Facility Side Slope =	0	to 1
Storage Depth 1 =	4	in <Warning
Growing Medium Depth =	18	in
Freeboard Depth =	N/A	in

BELOW GRADE STORAGE

Rock Storage Capacity =		cf
Native Design Infiltration Rate =		in/hr
Infiltration Capacity =		cfs

Surface Capacity at Depth 1 =	47	cf		
GM Design Infiltration Rate =	2.00	in/hr		
Infiltration Capacity =	0.007	cfs		

RESULTS

Pollution Reduction	Overflow Volume		
PASS	0 CF	68%	Surf. Cap. Used

Run PAC

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.080	0.098	0.116	0.134

Current data has been imported:

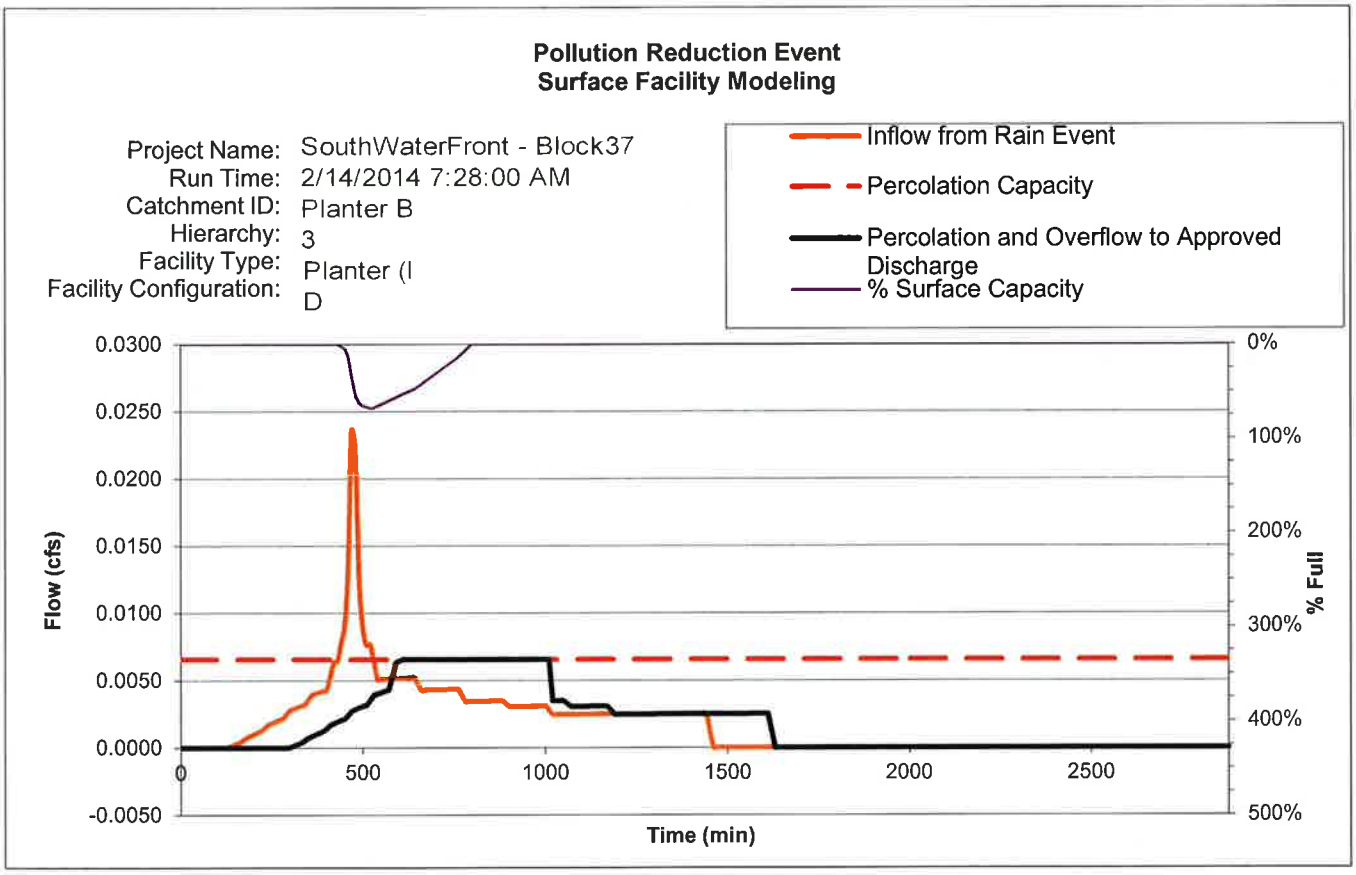
Planter B 02132014.xls 2/14/2014 7:28:02 AM

FACILITY FACTS

Total Facility Area Including Freeboard =	142 SF
Sizing Ratio (Total Facility Area / Catchment Area) =	0.025

BES - Presumptive Approach Calculator - Ver 1.2

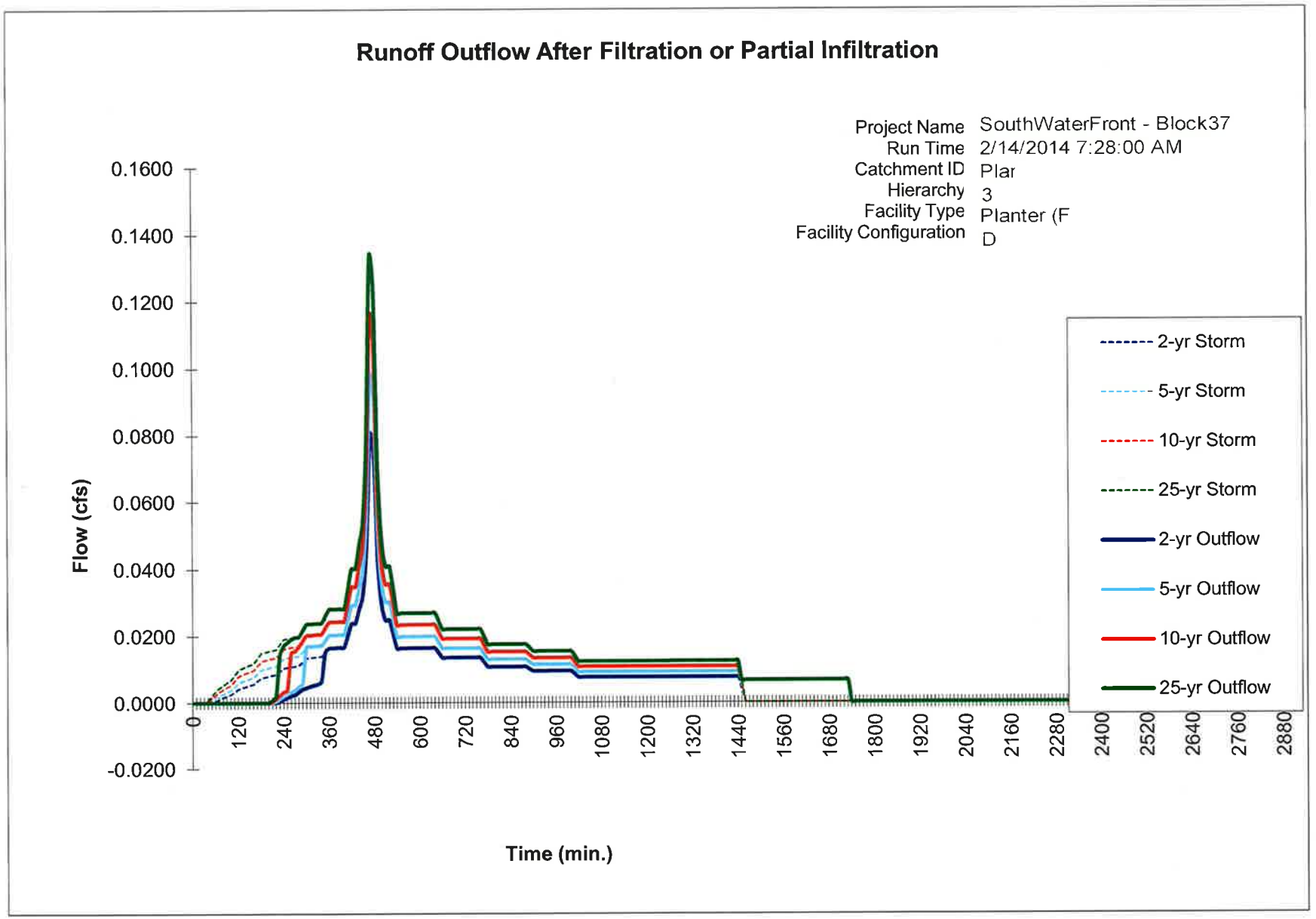
PR Con-D



Printed: 2/14/2014 7:28 AM

BES - Presumptive Approach Calculator - Ver 1.2

Output Chart



Presumptive Approach Calculator ver. 1.2

Catchment Data

Catchment ID: Swale A
Date: 02/12/14
Permit Number: 0
Run Time 2/12/2014 5:52:28 PM

Project Name: BLOCK 37
Project Address: SW River Parkway and SW Gaines
Portland Oregon
Designer: JLB
Company: HHPR

Drainage Catchment Information

Catchment ID	Swale A	
	Catchment Area	
Impervious Area	38,609	SF
Impervious Area	0.89	ac
Impervious Area Curve Number, CN_{imp}	98	
Time of Concentration, Tc, minutes	5	min.

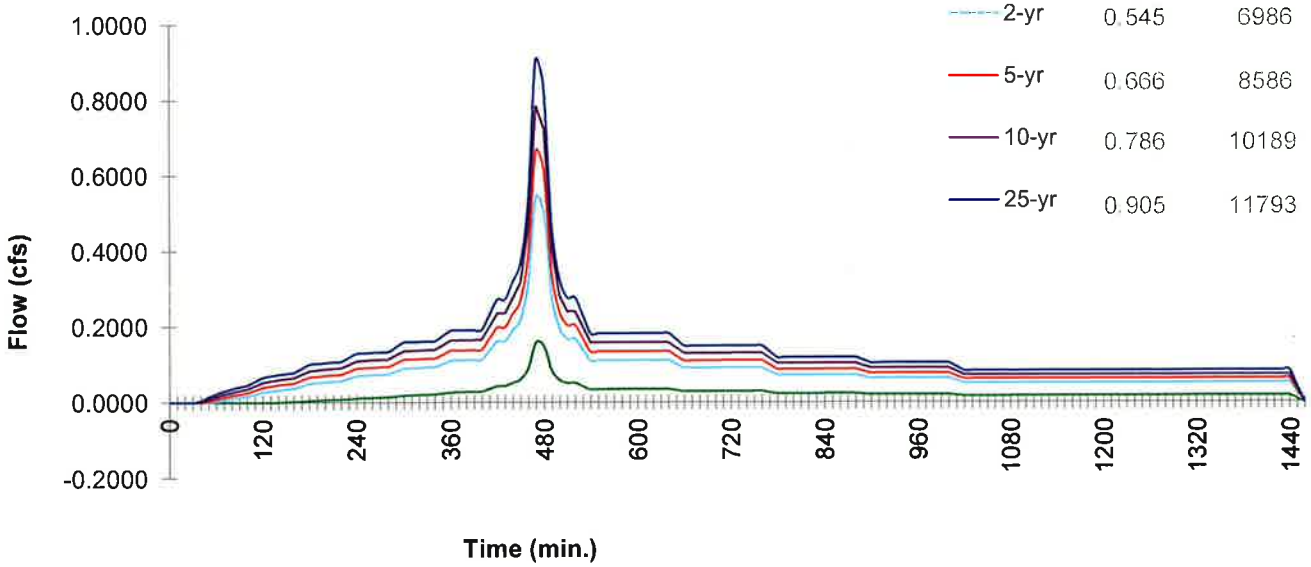
Site Soils & Infiltration Testing Data

Infiltration Testing Procedure:	Open Pit Falling Head	
Native Soil Field Tested Infiltration Rate (I_{test}):	2	in/hr
Bottom of Facility Meets Required Separation From High Groundwater Per BES SWMM Section 1.4:	Yes	
Correction Factor Component		
CF_{test} (ranges from 1 to 3)	2	
Design Infiltration Rates		
I_{dsgn} for Native (I_{test} / CF_{test}):	1.00	in/hr
I_{dsgn} for Imported Growing Medium:	2.00	in/hr

Execute SBUH

SBUH Results

	Peak Rate (cfs)	Volume (cf)
PR	0.159	2017
2-yr	0.545	6986
5-yr	0.666	8586
10-yr	0.786	10189
25-yr	0.905	11793



Printed: 2/12/2014 5:53 PM

Presumptive Approach Calculator ver. 1.2

Catchment ID: Swale

Run Time 2/12/2014 5:52:28 PM

Project Name: BLOCK 37 **Catchment ID:** Swale **Date:** 2/12/2014

Instructions:
1. Identify which Stormwater Hierarchy Category the facility.
2. Select Facility Type.
3. Identify facility shape of surface facility to more accurately estimate surface volume, except for Swales and sloped planters that use the PAC Sloped Facility Worksheet to enter data.
4. Select type of facility configuration.
5. Complete data entry for all highlighted cells.

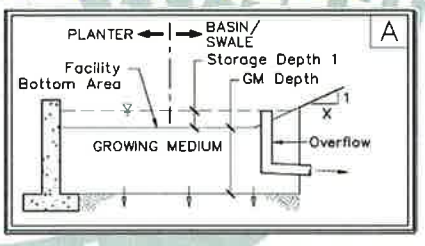
Catchment facility will meet Hierarchy Category: 3

Goal Summary:

Hierarchy Category	SWMM Requirement	RESULTS box below needs to display...	
		Pollution Reduction as a	10-yr (aka disposal) as a
3	Off-site flow to drainageway, river, or storm-only pipe system.	PASS	N/A

Facility Type = Swale

Facility Configuration: A



Refer to Sloped Facility Worksheet and enter Variable Parameters

Calculation Guide
Max. Rock Stor. Bottom Area
Per Swale Dims

DATA FOR ABOVE GRADE STORAGE COMPONENT

Infiltration Area = 969 sf
Surface Capacity Volume = 661.1 cf

BELOW GRADE STORAGE

Rock Storage Bottom Area = 969 sf
Rock Storage Depth = 0 in

Growing Medium Depth = 18 in
Freeboard Depth = N/A in

Surface Capacity at Depth 1 = 661 cf
Infiltration Area at 75% Depth1 = 11 SF
GM Design Infiltration Rate = 2.00 in/hr
Infiltration Capacity = 0.045 cfs

Rock Storage Capacity = 0 cf
Native Design Infiltration Rate = 1.00 in/hr
Infiltration Capacity = 0.022 cfs

Native Infiltration Rate Used in PA

RESULTS

Pollution Reduction: PASS

Overflow Volume: 0 CF

82% Surf. Cap. Used

Run PAC

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.523	0.643	0.763	0.883

Current data has been exported:

Swale 02122014.xls 2/12/2014 5:52:40 PM

FACILITY FACTS

Total Facility Area Including Freeboard = 1,400 SF
Sizing Ratio (Total Facility Area / Catchment Area) = 0.036

Presumptive Approach Calculator Ver 1.2

Instructions:

1. Refer to facility graphics on the Graphics tab, then fill in all relevant facility parameters in the Data Entry table below. Data entry cells vary based on Facility Configuration selected on Facility Design Data tab.
2. Delete all facility parameters that may have been entered by the previous iteration that are no longer applicable.

Run Time 2/12/2014 5:52:28 PM

Project Name: BLOCK 37 **Date:** 2/12/2014 **Catchment ID:** Swale

Data Entry

Parameters | **Rock Storage Parameters** | **Error Messages**

Facility Segment	Length of facility segment (ft) $L_{segment}$	Downstream Check Dam Length (ft) L_{dam}	Longitudinal Facility Slope (ft/ft) S	Bottom Width (ft) W_{bottom}	Side Slope Right X_{right}:1	Side Slope Left X_{left}:1	Downstream Depth (inches) D_{ds}	Landscape Width (ft) $W_{landscape}$	Rock Storage Width (ft) W_{rock}	Rock Storage Depth (inches) D_{rock}	Rock Void Ratio v
1	30	0	0.017	4	3	3	12	10			
2	30	0.16	0.017	4	3	3	12	10			
3	30	0.16	0.017	4	3	3	12	10			
4	30	0.16	0.017	4	3	3	12	10			
5	20	0.16	0.017	4	3	3	10	10			
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

Project Name: Depth 2= Depth 3=

Worksheet Calculations

Parameters | **Rock Storage Parameters**

Facility Segment	Adjusted Length of facility segment (ft) L_{adjust}	Adjusted Length if $D_{up} = 0$ (ft) $L_{adjust2}$	Upstream Depth (inches) D_{up}	Downstream Top Width (ft) $W_{top\text{-}ds}$	Upstream Top Width (ft) $W_{top\text{-}up}$	Downstream Cross-sectional Area (sf) A_{ds}	Upstream Cross-sectional Area (sf) A_{up}	**Surface Capacity Volume (cf) $V_{surface}$**	75% of Max. Downstream Depth (inches) $D_{ds75\%}$	75% of Max. Upstream Depth (inches) $D_{up75\%}$	75% of Max. Adjusted Length if $D_{up75\%} = 0$ (ft) $L_{adjust3}$	75% of Max. Downstream Top Width (ft) $W_{top\text{-}ds75\%}$	75% of Max. Upstream Top Width (ft) $W_{top\text{-}up75\%}$	**Infiltration Area @ 75% Full (sf) $A_{75\%}$**	Rock Storage Length (ft) L_{rock}	**Rock Storage Bottom Area (sf) A_{rock}**	**Rock Storage Capacity Volume (cf) V_{rock}**
1	30.00	N/A	5.88	10.00	6.94	7.00	2.68	145	9.00	2.88	N/A	8.50	5.44	209	30	209	0
2	29.92	N/A	5.90	10.00	6.95	7.00	2.69	145	9.00	2.90	N/A	8.50	5.45	209	30	209	0
3	29.92	N/A	5.90	10.00	6.95	7.00	2.69	145	9.00	2.90	N/A	8.50	5.45	209	30	209	0
4	29.92	N/A	5.90	10.00	6.95	7.00	2.69	145	9.00	2.90	N/A	8.50	5.45	209	30	209	0
5	19.92	N/A	5.94	9.00	6.97	5.42	2.71	81	7.50	3.44	N/A	7.75	5.72	134	20	134	0
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
								661	$V_{surface}$ @ Depth1					969		969	0

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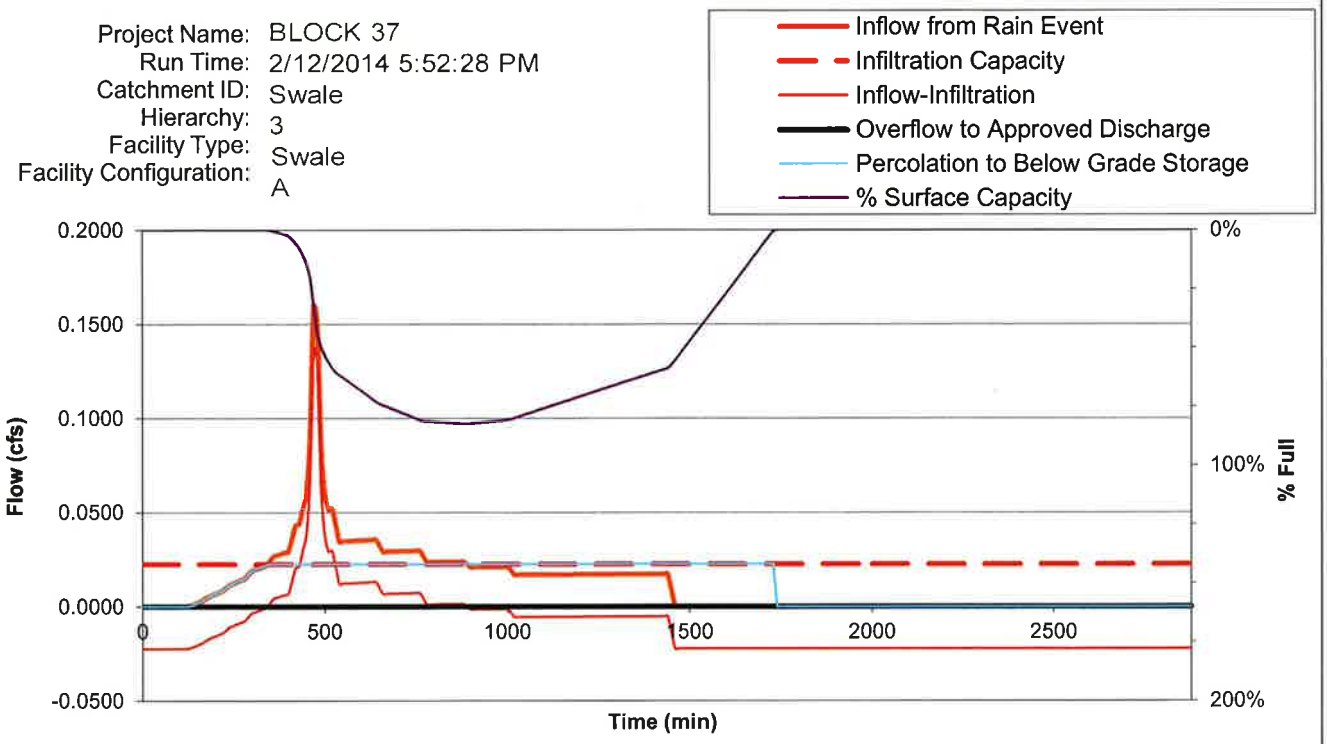
BES - Presumptive Approach Calculator - Ver 1.2

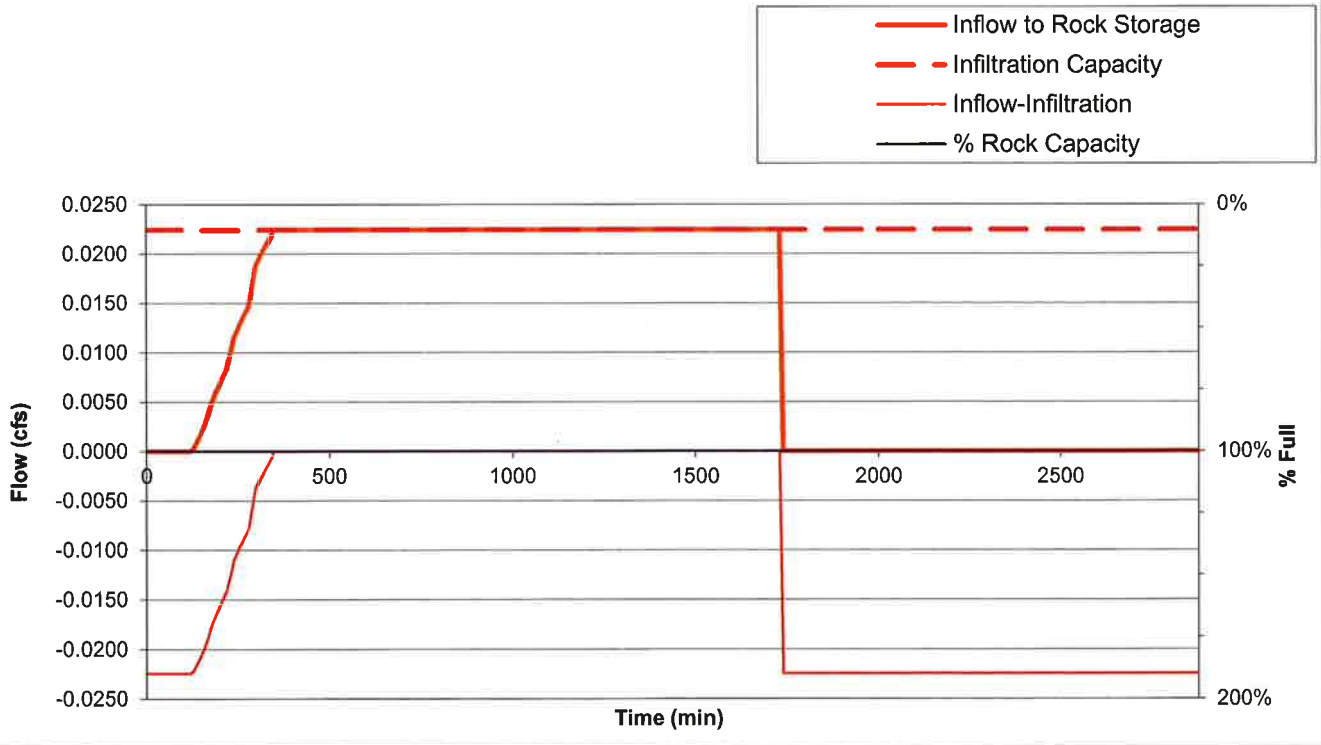
PR Con-A&B

Pollution Reduction Event
Surface Facility Modeling

Project Name: BLOCK 37
Run Time: 2/12/2014 5:52:28 PM
Catchment ID: Swale
Hierarchy: 3
Facility Type: Swale
Facility Configuration: A



Pollution Reduction Event
Below Grade Modeling



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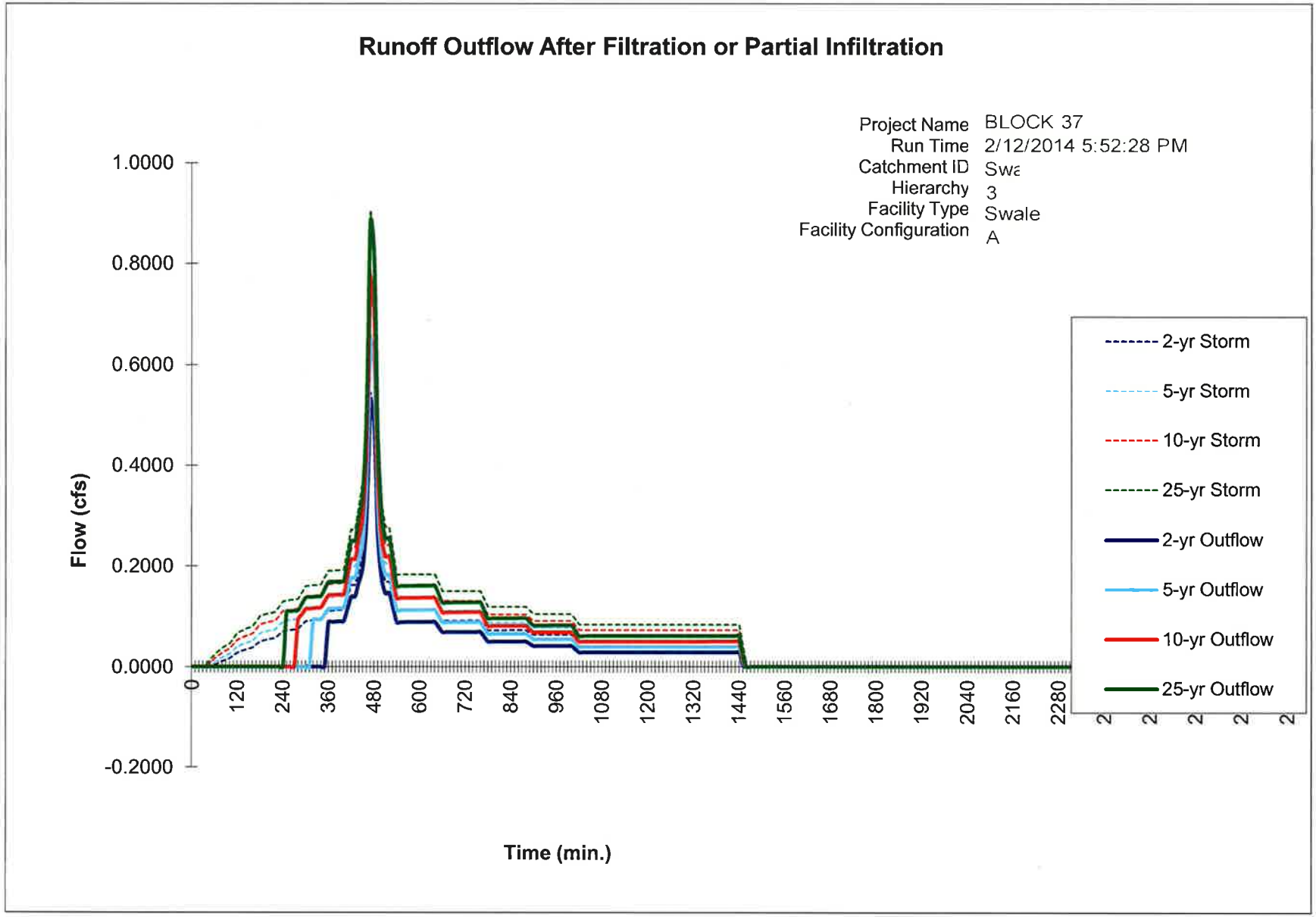
BES - Presumptive Approach Calculator - Ver 1.2

Output Chart



Presumptive Approach Calculator ver. 1.2

Catchment Data

Catchment ID: Swale B

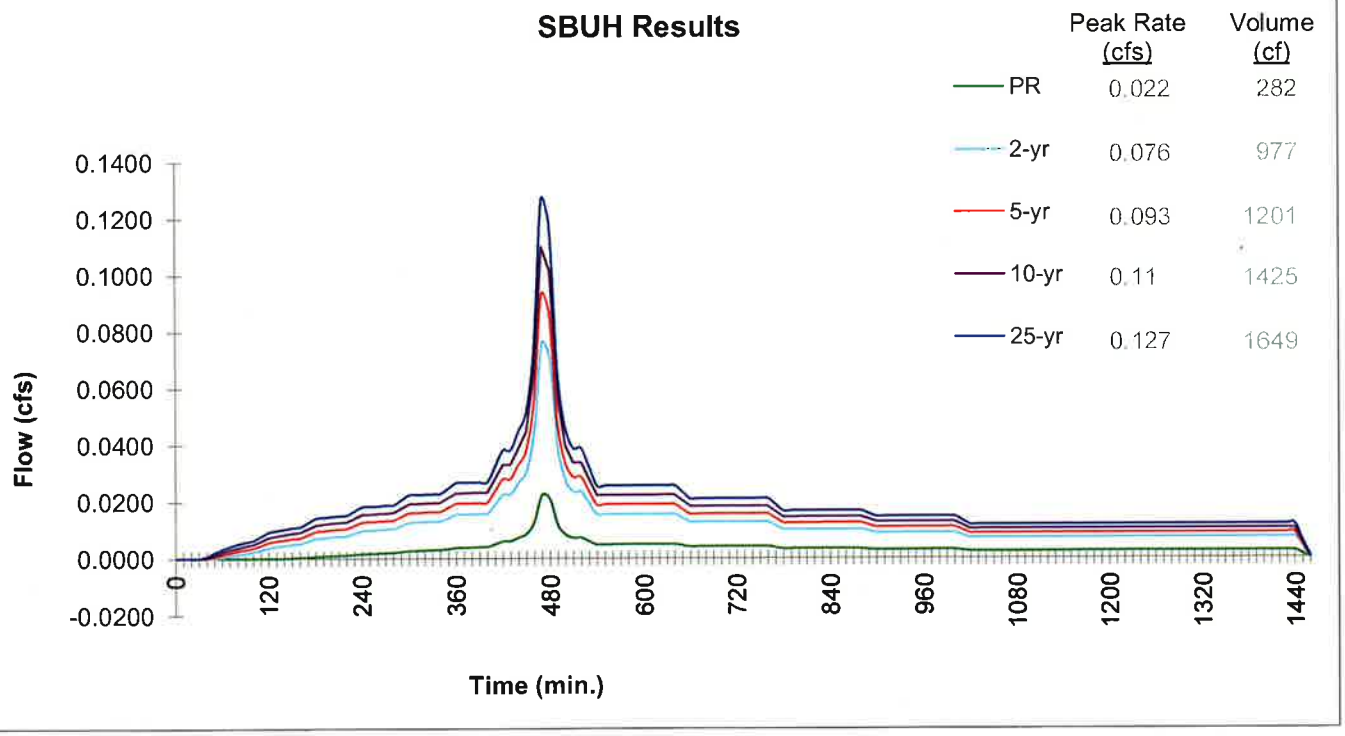
Project Name: BLOCK 37
Project Address: SW River Parkway and SW Gaines
Portland Oregon
Designer: JLB
Company: HHPR

Date: 02/12/14
Permit Number: 0
Run Time 2/12/2014 5:53:45 PM

Drainage Catchment Information		
Catchment ID	Swale B	
	Catchment Area	
Impervious Area	5,400	SF
Impervious Area	0.12	ac
Impervious Area Curve Number, CN_{imp}	98	
Time of Concentration, Tc, minutes	5	min.
Site Soils & Infiltration Testing Data		
Infiltration Testing Procedure:	Open Pit Falling Head	
Native Soil Field Tested Infiltration Rate (I_{test}):	2	in/hr
Bottom of Facility Meets Required Separation From High Groundwater Per BES SWMM Section 1.4:	Yes	
Correction Factor Component		
CF_{test} (ranges from 1 to 3)	2	
Design Infiltration Rates		
I_{dsgn} for Native (I_{test} / CF_{test}):	1.00	in/hr
I_{dsgn} for Imported Growing Medium:	2.00	in/hr

Execute SBUH

SBUH Results



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Presumptive Approach Calculator ver. 1.2

Catchment ID: Swale B

Run Time 2/12/2014 5:53:45 PM

Project Name: BLOCK 37 **Catchment ID:** Swale B **Date:** 2/12/2014

imported file Swale b 02122014.xls - 2/12/2014 5:53:47 PM

Instructions:

1. Identify which Stormwater Hierarchy Category the facility.
2. Select Facility Type.
3. Identify facility shape of surface facility to more accurately estimate surface volume, except for Swales and sloped planters that use the PAC Sloped Facility Worksheet to enter data.
4. Select type of facility configuration.
5. Complete data entry for all highlighted cells.

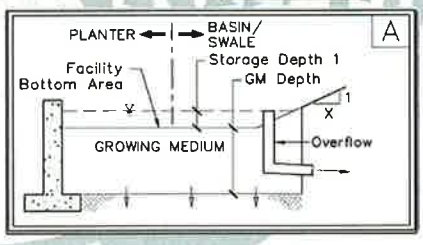
Catchment facility will meet Hierarchy Category: 3

Goal Summary:

Hierarchy Category	SWMM Requirement	RESULTS box below needs to display...	
		Pollution Reduction as a	10-yr (aka disposal) as a
3	Off-site flow to drainageway, river, or storm-only pipe system.	PASS	N/A

Facility Type = Swale

Facility Configuration: A



Refer to Sloped Facility Worksheet and enter Variable Parameters

Calculation Guide
Max. Rock Stor. Bottom Area
Per Swale Dims

DATA FOR ABOVE GRADE STORAGE COMPONENT

Infiltration Area = 141 sf
Surface Capacity Volume = 99.0 cf

BELOW GRADE STORAGE

Rock Storage Bottom Area = 141 sf
Rock Storage Depth = 0 in

Growing Medium Depth = 18 in
Freeboard Depth = N/A in

Surface Capacity at Depth 1 = 99 cf
Infiltration Area at 75% Depth1 = 3 SF
GM Design Infiltration Rate = 2.00 in/hr
Infiltration Capacity = 0.007 cfs

Rock Storage Capacity = 0 cf

Native Design Infiltration Rate = 1.00 in/hr
Infiltration Capacity = 0.003 cfs

Native Infiltration Rate Used in PA

RESULTS

Pollution Reduction: **PASS** | Overflow Volume: 0 CF | 73% Surf. Cap. Used

Run PAC

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.073	0.090	0.107	0.123

Current data has been imported:

Swale b 02122014.xls 2/12/2014 5:53:47 PM

FACILITY FACTS

Total Facility Area Including Freeboard = 200 SF
Sizing Ratio (Total Facility Area / Catchment Area) = 0.037

Presumptive Approach Calculator Ver 1.2

Instructions:

1. Refer to facility graphics on the Graphics tab, then fill in all relevant facility parameters in the Data Entry table below. Data entry cells vary based on Facility Configuration selected on Facility Design Data tab.
2. Delete all facility parameters that may have been entered by the previous iteration that are no longer applicable.

Run Time 2/12/2014 5:53:45 PM

Project Name: BLOCK 37 **Date:** 2/12/2014 **Catchment ID:** Swale B

Data Entry

Parameters | **Rock Storage Parameters** | **Error Messages**

Facility Segment	Length of facility segment (ft) $L_{segment}$	Downstream Check Dam Length (ft) L_{dam}	Longitudinal Facility Slope (ft/ft) S	Bottom Width (ft) W_{bottom}	Side Slope Right X_{right}:1	Side Slope Left X_{left}:1	Downstream Depth (inches) D_{ds}	Landscape Width (ft) $W_{landscape}$	Rock Storage Width (ft) W_{rock}	Rock Storage Depth (inches) D_{rock}	Rock Void Ratio v
1	10	0	0.0475	4	3	3	12	10			
2	10	0.16	0.0475	4	3	3	12	10			
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
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15											
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17											
18											
19											
20											

Project Name: Depth 2= Depth 3=

Worksheet Calculations

Parameters | **Rock Storage Parameters**

Facility Segment	Adjusted Length of facility segment (ft) L_{adjust}	Adjusted Length if D_{up} = 0 (ft) $L_{adjust2}$	Upstream Depth (inches) D_{up}	Downstream Top Width (ft) $W_{top\text{-}ds}$	Upstream Top Width (ft) $W_{top\text{-}up}$	Downstream Cross-sectional Area (sf) A_{ds}	Upstream Cross-sectional Area (sf) A_{up}	**Surface Capacity Volume (cf) $V_{surface}$**	75% of Max. Downstream Depth (inches) $D_{ds75\%}$	75% of Max Upstream Depth (inches) $D_{up75\%}$	75% of Max Adjusted Length if $D_{up75\%}$ = 0 (ft) $L_{adjust3}$	75% of Max Downstream Top Width (ft) $W_{top\text{-}ds75\%}$	75% of Max Upstream Top Width (ft) $W_{top\text{-}up75\%}$	**Infiltration Area @ 75% Full (sf) $A_{75\%}$**	Rock Storage Length (ft) L_{rock}	**Rock Storage Bottom Area (sf) A_{rock}**	**Rock Storage Capacity Volume (cf) V_{rock}**
1	10.00	N/A	6.30	10.00	7.15	7.00	2.93	50	9.00	3.30	N/A	8.50	5.65	71	10	71	0
2	9.92	N/A	6.35	10.00	7.17	7.00	2.95	49	9.00	3.35	N/A	8.50	5.67	70	10	70	0
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
								99	**$V_{surface}$ @ Depth1**					**141**		**141**	**0**

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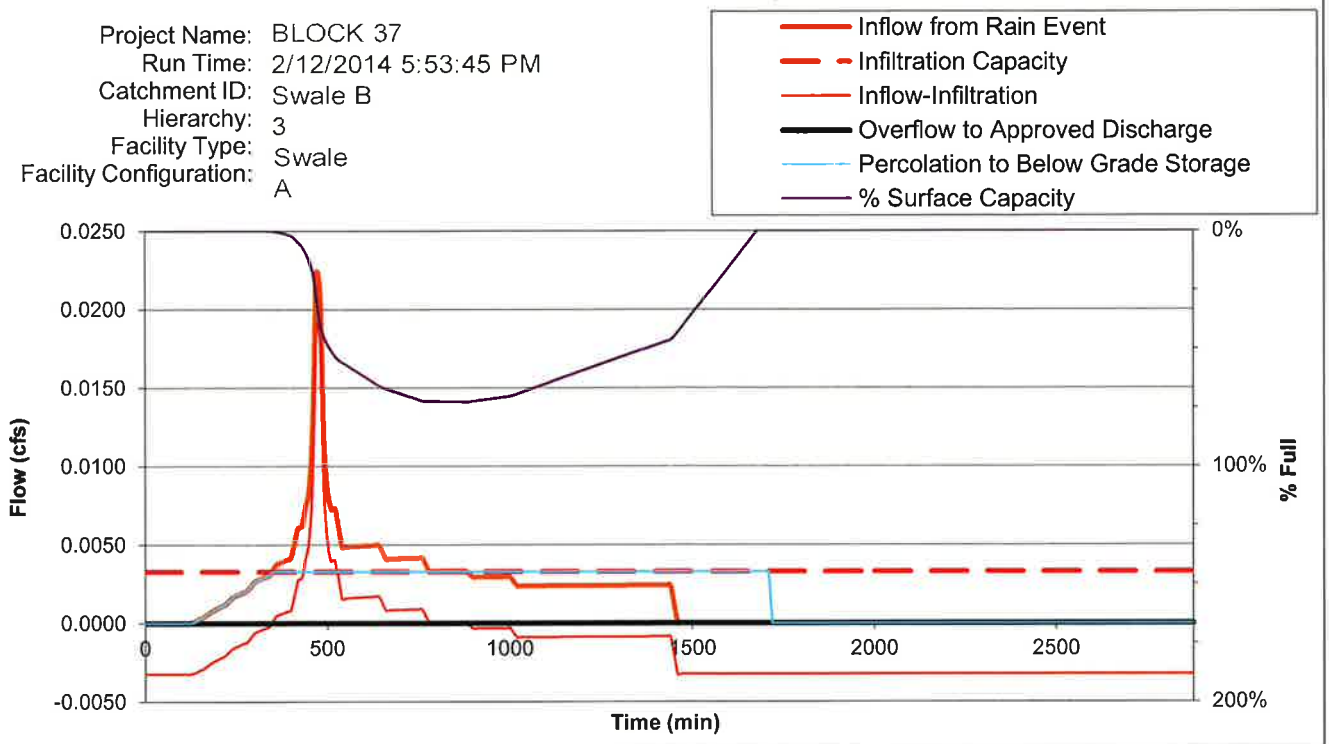
BES - Presumptive Approach Calculator - Ver 1.2

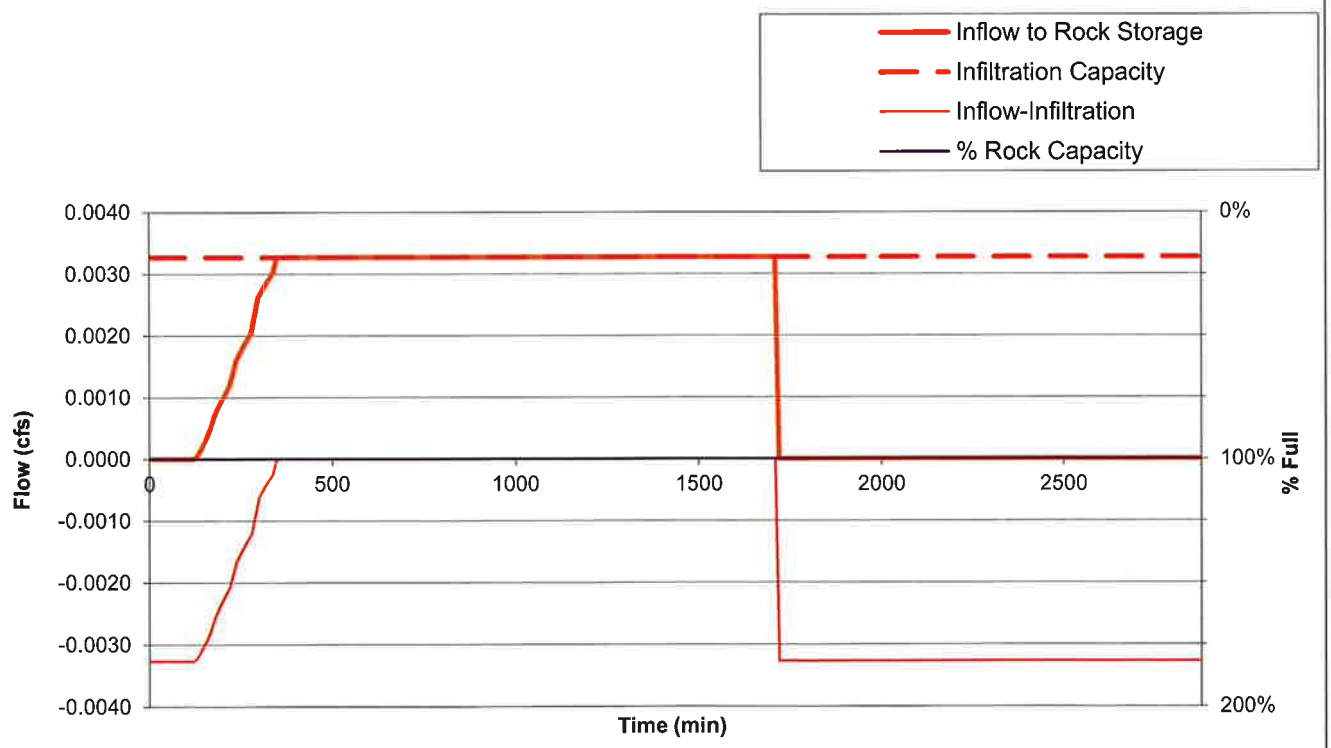
PR Con-A&B

Pollution Reduction Event
Surface Facility Modeling

Project Name: BLOCK 37
Run Time: 2/12/2014 5:53:45 PM
Catchment ID: Swale B
Hierarchy: 3
Facility Type: Swale
Facility Configuration: A



Pollution Reduction Event
Below Grade Modeling



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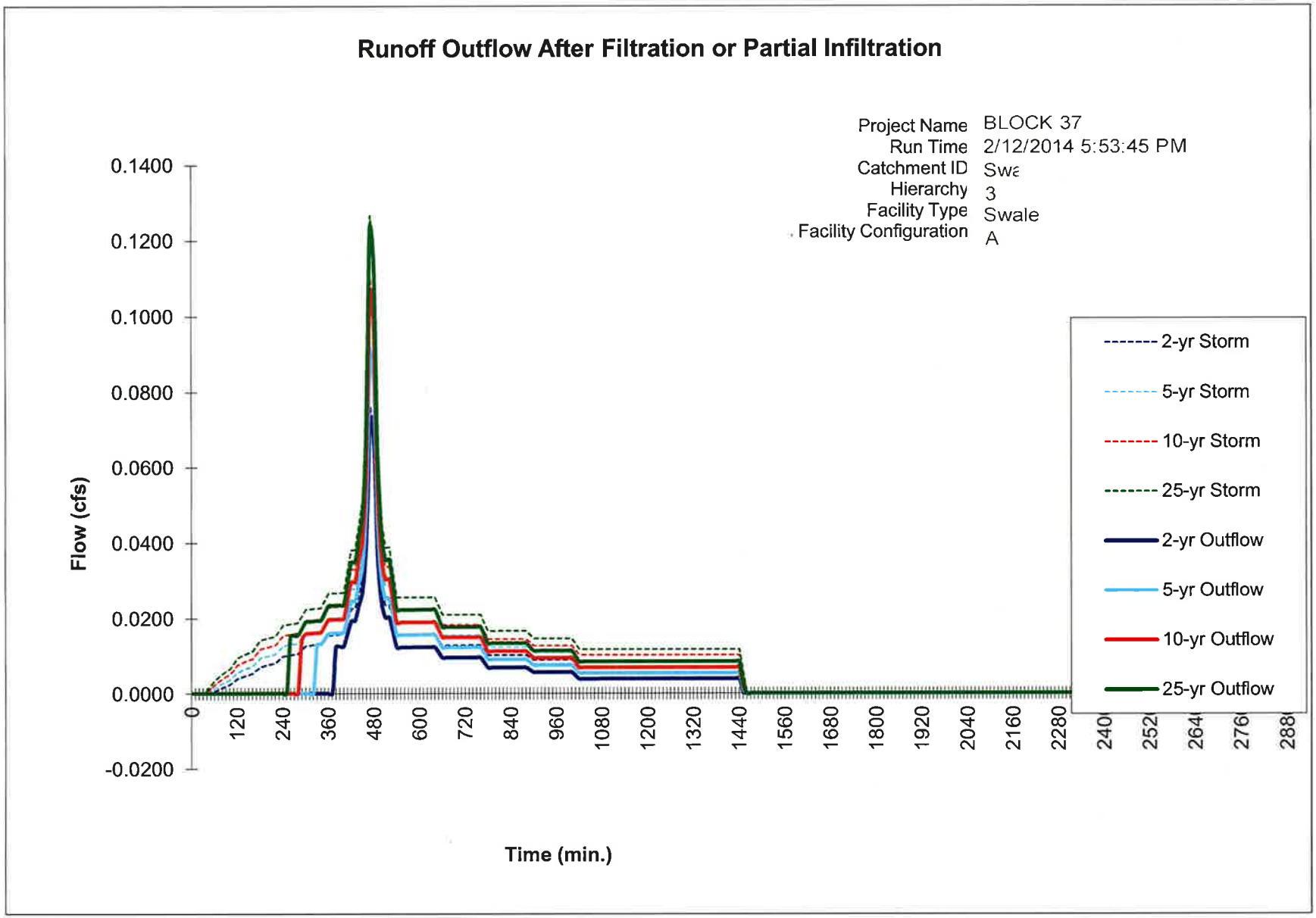
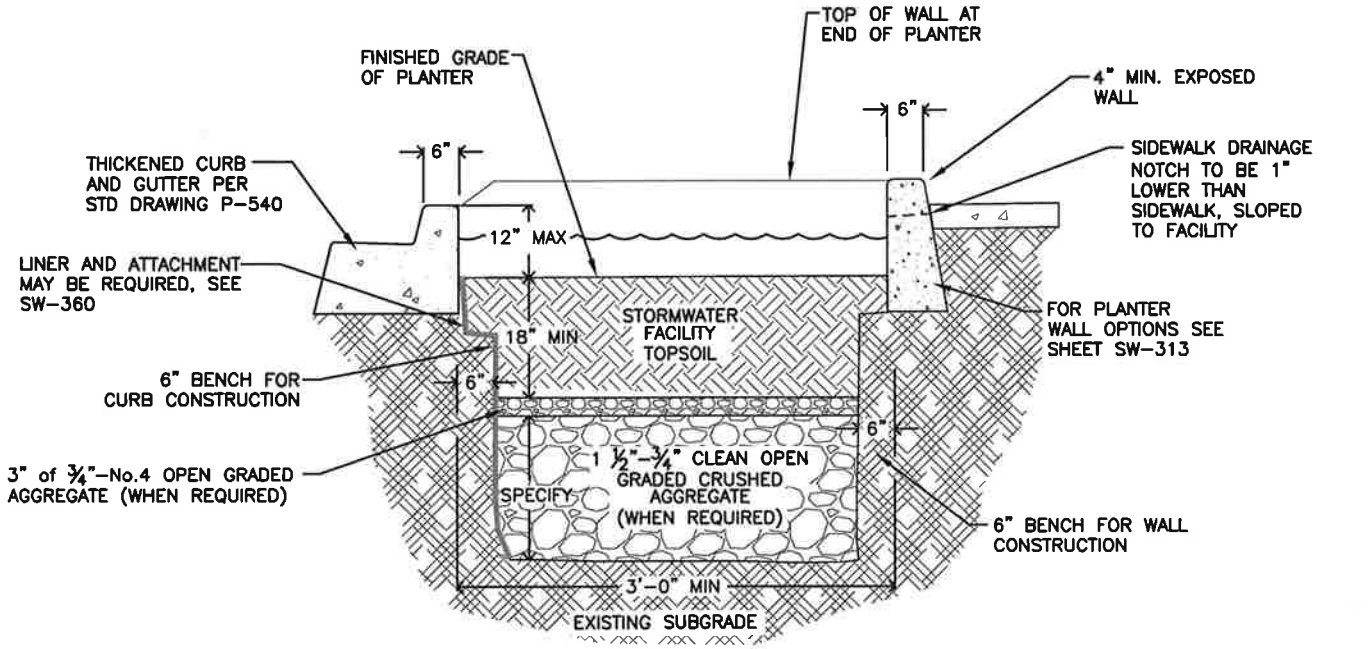
BES - Presumptive Approach Calculator - Ver 1.2

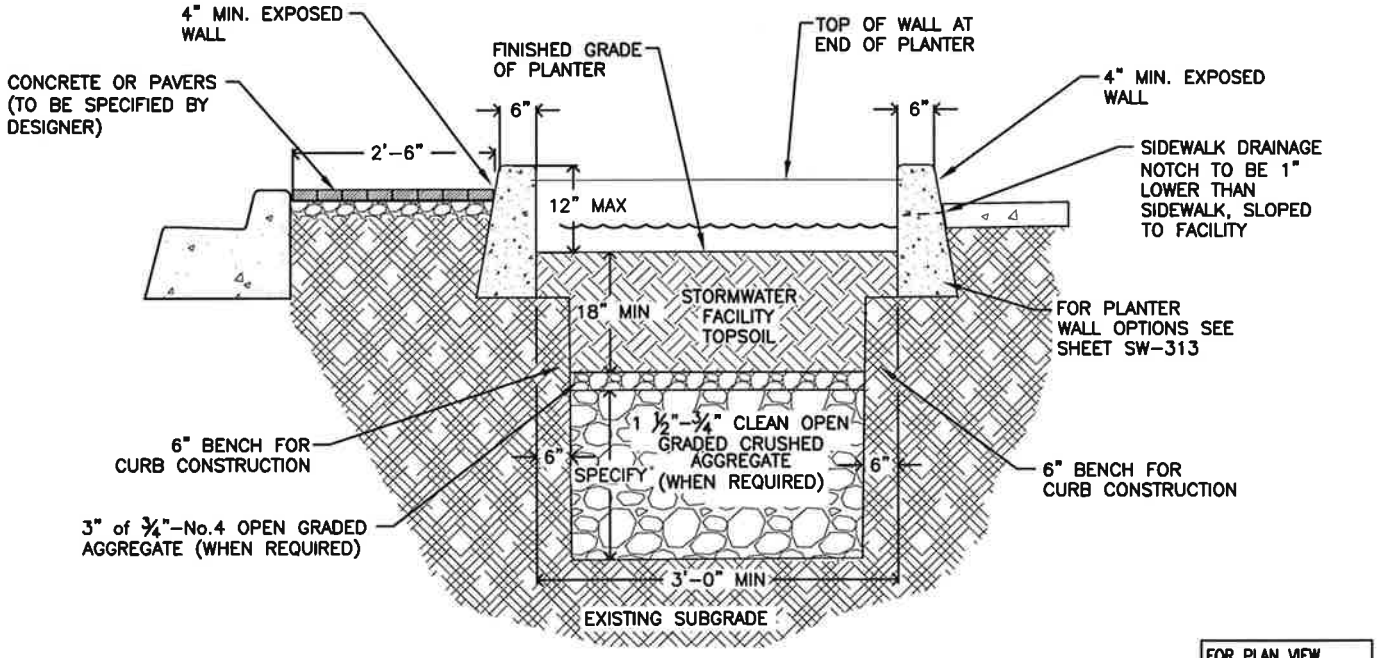
Output Chart





SECTION A-A
PLANTER WITHOUT PARKING

FOR PLAN VIEW REFER TO SW-310



SECTION B-B
PLANTER WITH PARKING

FOR PLAN VIEW REFER TO SW-311

DESIGNER INFORMATION

See SW-335 and SW-336 for Channel and Grate.

CONSTRUCTION NOTE

Scarify the native soil following the initial excavation and before installing topsoil or rock.

- DRAWING NOT TO SCALE -

STORMWATER MANAGEMENT MANUAL TYPICAL DETAILS

NUMBER

SW-312

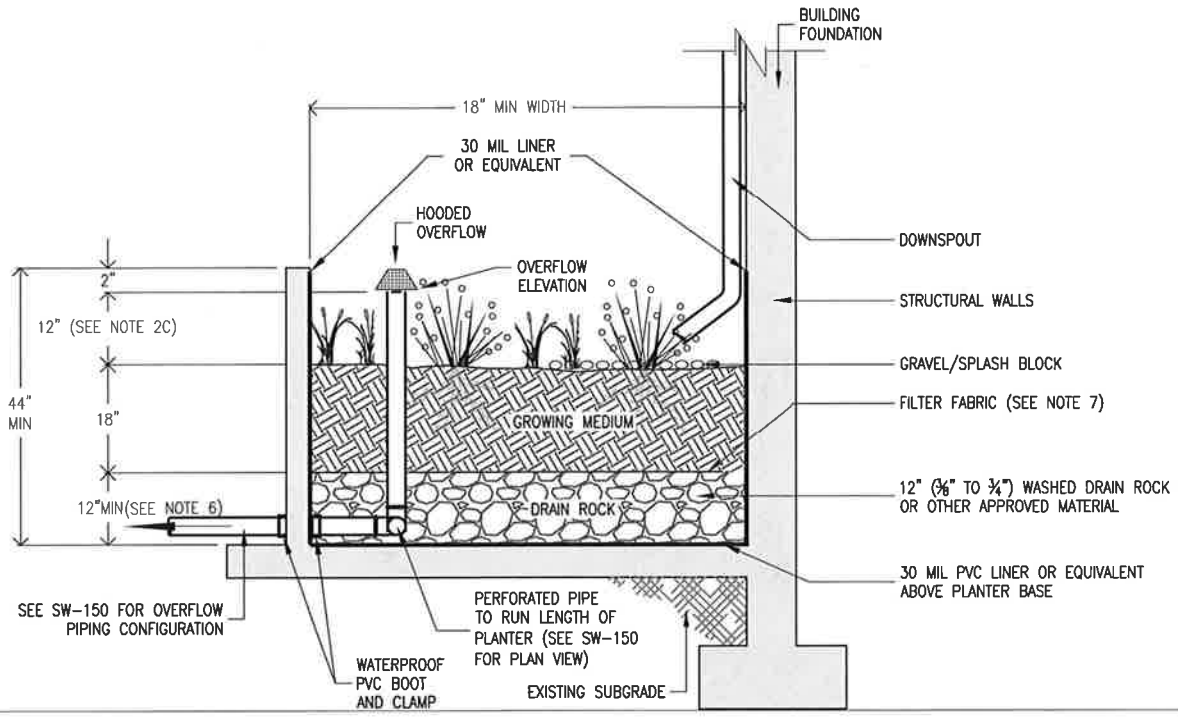
- 2011 GREEN STREETS -

Sections Views
Planters

Bureau of Environmental Services

City of Portland

SET REVISED: 12-08-2011



1. Provide protection from all vehicle traffic, equipment staging, and foot traffic in proposed infiltration areas prior to, during, and after construction.

2. Dimensions:
   a. Width of flow-through planter: 18" minimum.
   b. Width of infiltration planter: 30" minimum.
   c. Depth of planter (from top of growing medium to overflow elevation). Simplified: 12"; Presumptive: 6"- 18".
   d. Slope of planter: 0.5% or less.

3. Setbacks (from centerline of facility):
   a. Infiltration planters must be 10' from foundations and 5' from property lines.
   b. Flow-through planters must be less than 30" in height above surrounding area if within 5 feet of property line.

4. Overflow:
   a. Overflow required for Simplified Approach.
   b. Inlet elevation must allow for 2" of freeboard, minimum.
   c. Protect from debris and sediment with strainer or grate.

5. Piping: shall be ABS Sch.40, cast iron, or PVS Sch.40. 3" pipe required for up to 1,500 sq ft of impervious area, otherwise 4" min. Piping must have 1% grade and follow the Uniform Plumbing Code.

6. Drain rock:
   a. Size for infiltration planter: 1½" - ¾" washed
   b. Size for flow-through planter: ¾" washed
   c. Depth for Simplified: 12"
   d. Depth for Presumptive: 0-48", see calcs.

7. Separation between drain rock and growing medium: Use filter fabric (see SWMM Exhibit 2-4 Geotextile table) or a gravel lens (¾ - ¼ inch washed, crushed rock 2 to 3 inches deep).

8. Growing medium:
   a. 18" minimum
   b. See Appendix F.3 for specification or use sand/loam/compost 3-way mix.

9. Vegetation: Follow landscape plans otherwise refer to plant list in SWMM Appendix F. Minimum container size is 1 gallon. # of plantings per 100sf of facility area:
   a. Zone A (wet) 115 herbaceous plants, OR
   b. Zone A (wet) 100 herbaceous plants and 4 small shrubs.

10. Planter walls:
   a. Material shall be stone, brick, concrete, wood, or other durable material (no chemically treated wood).
   b. Concrete, brick, or stone walls shall be included on foundation plans.

11. Waterproof liner: Shall be 30 mil PVC or equivalent, for flow-through facilities.

12. Install washed pea gravel or river rock to transition from inlet or splash pad to growing medium.

13. Inspections: Call BDS IVR Inspection Line, (503) 823-7000, for appropriate inspections.

- DRAWING NOT TO SCALE -

STORMWATER MANAGEMENT MANUAL TYPICAL DETAILS

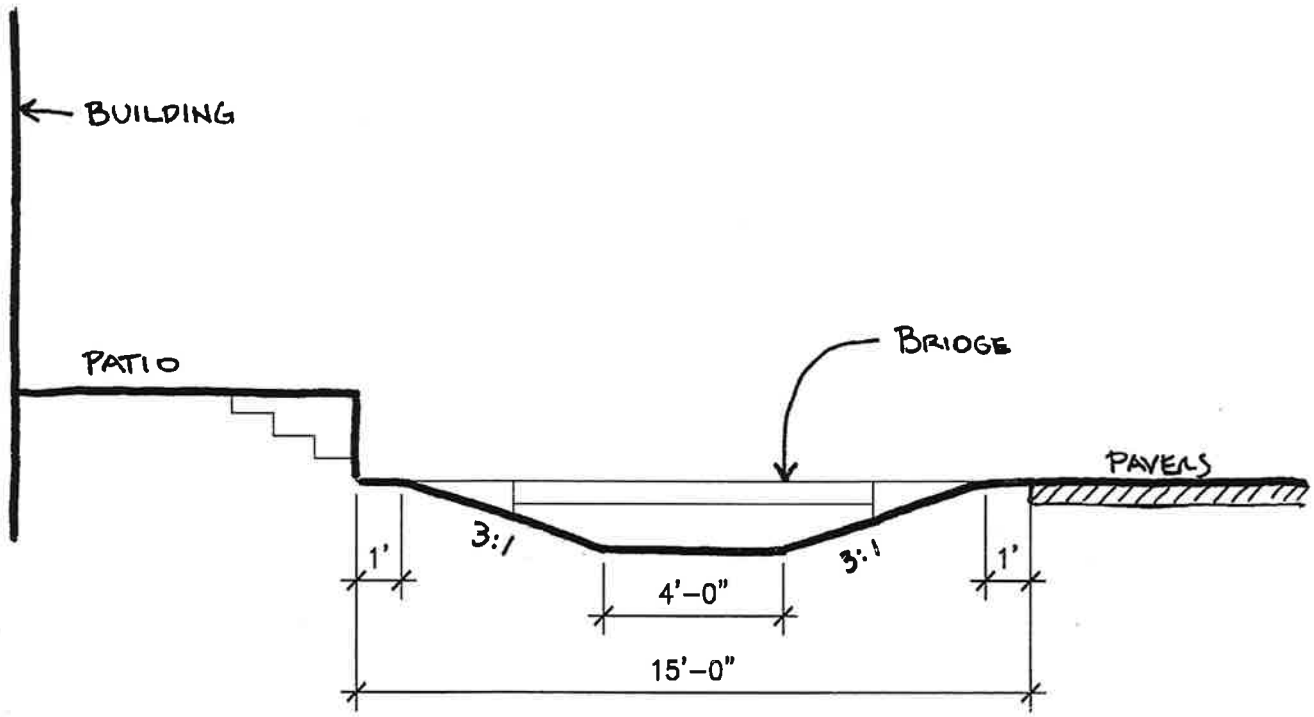
- Simplified / Presumptive Design Approach -

Planter

Bureau of Environmental Services

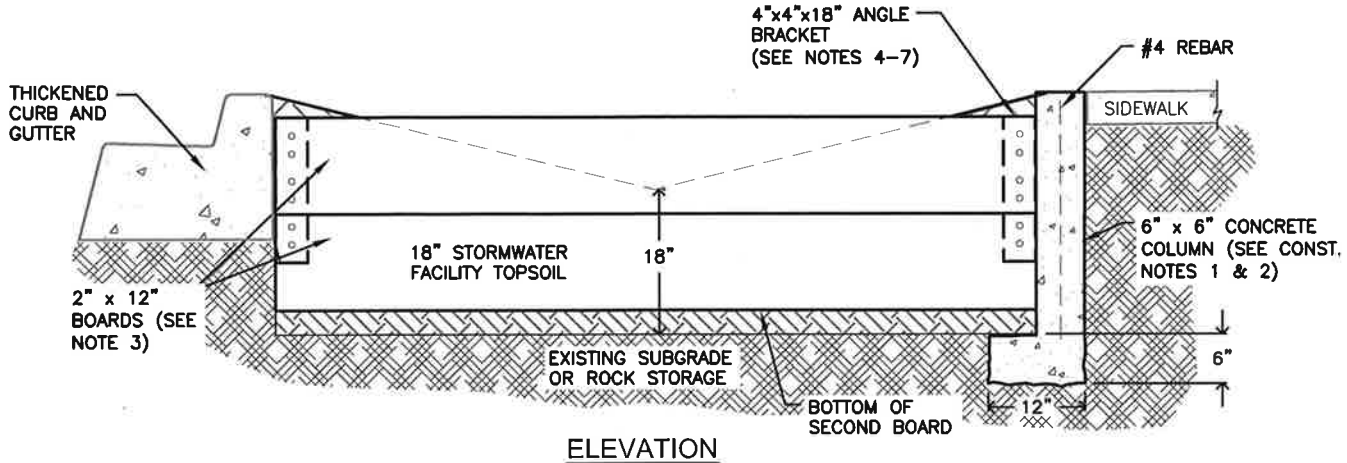
NUMBER

SW-130

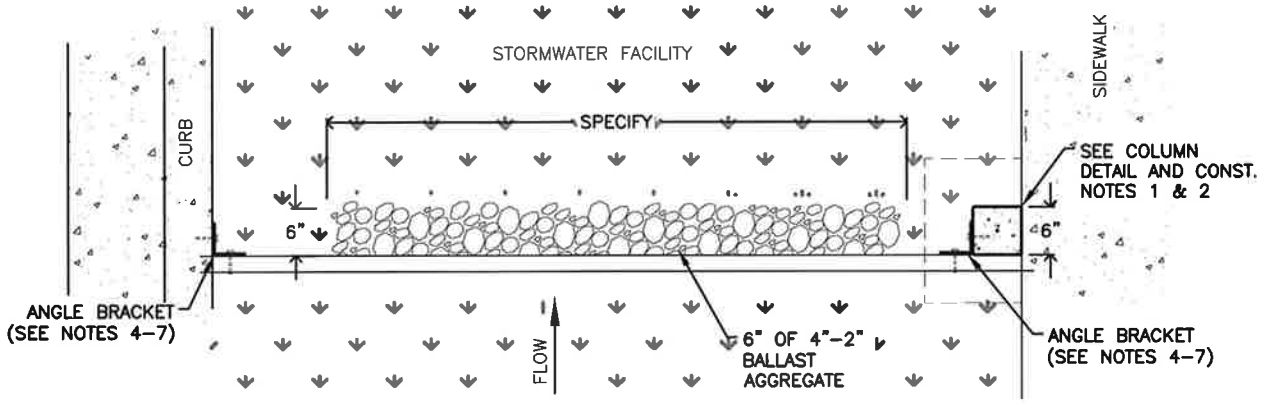


BLOCK 37 - SECTION @ SWALE

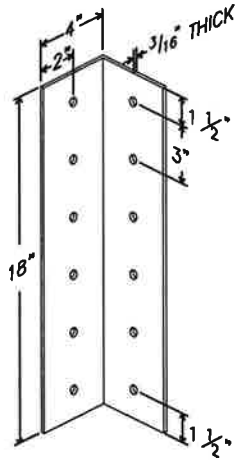
2·10·14
1/4"=1'-0"



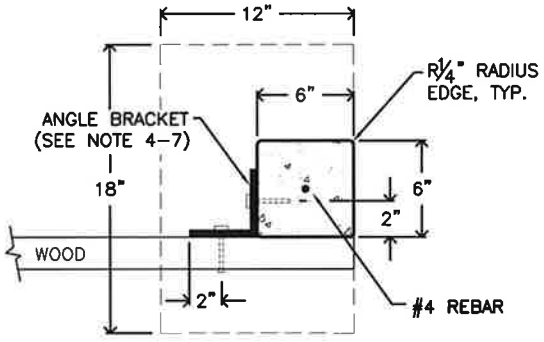
ELEVATION



PLAN



BRACKET DETAIL



COLUMN DETAIL

DESIGNER INFORMATION

1. Provide elevations and stationing and/or dimensioning for check dams.
2. Ensure that check dam elevations do not cause stormwater to overflow to sidewalk.

CONSTRUCTION NOTES

1. Construction grade concrete to be 3000 psi.
2. Base of column is 12" x 18" and 6" thick.
3. Lumber to be a naturally rot-resistant wood (e.g. Cedar, etc.). Manufactured products can be used with approval. No chemically treated wood will be allowed.
4. All fastners to be stainless steel or aluminum.
5. 4" x 4" x 18" angle bracket to be made of min. 3/16" stainless steel, or aluminum.
6. Top of bracket to be no higher than top of check dam.
7. Min. 3 bolts to concrete, min. 2 bolts per board, and 5/16" dia.

- DRAWING NOT TO SCALE -

STORMWATER MANAGEMENT MANUAL TYPICAL DETAILS

NUMBER

SW-341

- 2011 GREEN STREETS -

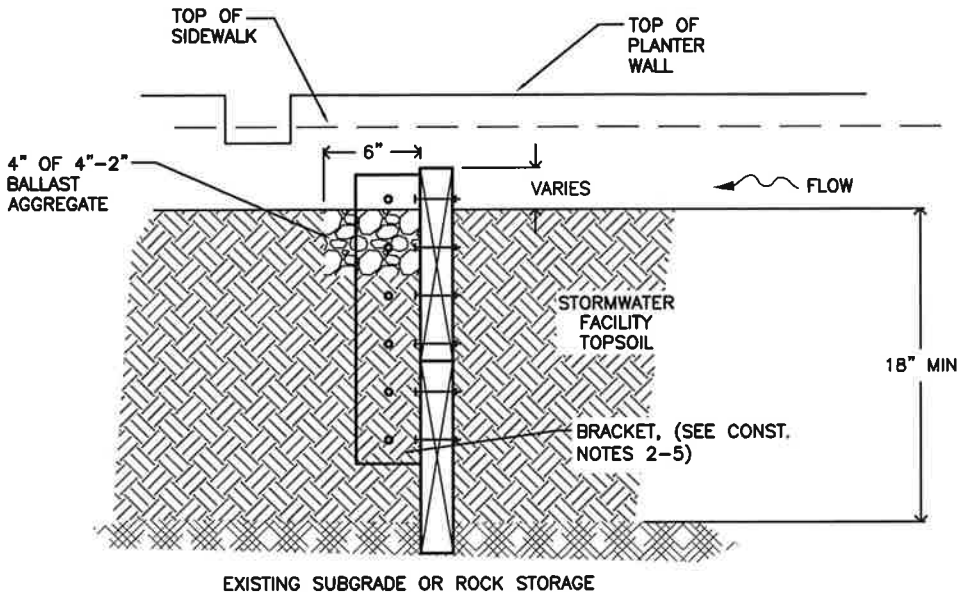
Wood Check Dam for Swales

Check Dams

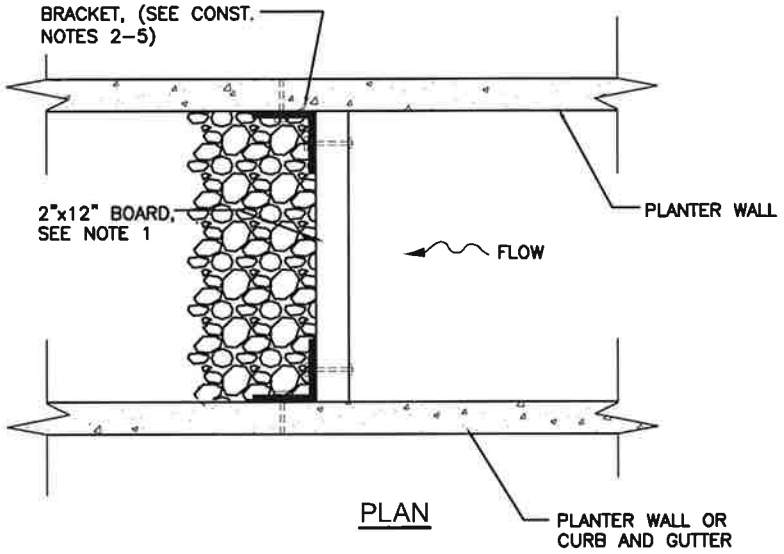
Bureau of Environmental Services

City of Portland

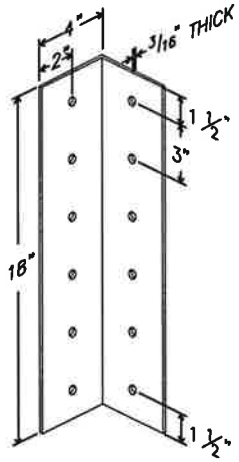
SET REVISED: 12–08–2011



ELEVATION



PLAN



BRACKET DETAIL

DESIGNER INFORMATION

1. For use in planters and curb extension planters.
2. Provide elevations and stationing and/or dimensioning for check dams.
3. Ensure check dam elevations do not cause stormwater to overflow to sidewalk.
4. Cannot be used with "L-shaped" planter wall.

CONSTRUCTION NOTES

1. Lumber to be a naturally rot-resistant wood (e.g. cedar, etc.). Manufactured products may be used with approval. No chemically treated wood will be allowed.
2. All fasteners to be stainless steel or aluminum.
3. 4" x 4" x 18" angle bracket to be made of min. 3/16" stainles steel or aluminum.
4. Top of bracket to be no higher than top of check dam.
5. Minimum 3 bolts to concrete, minimum 2 bolts per board and 5/16" diameter bolts.

- DRAWING NOT TO SCALE -

STORMWATER MANAGEMENT MANUAL TYPICAL DETAILS

NUMBER

SW-342

- 2011 GREEN STREETS -

Wood Check Dam for Planters

Check Dams

Bureau of Environmental Services

City of Portland

SET REVISED: 12-08-2011

GBD

APPENDIX B

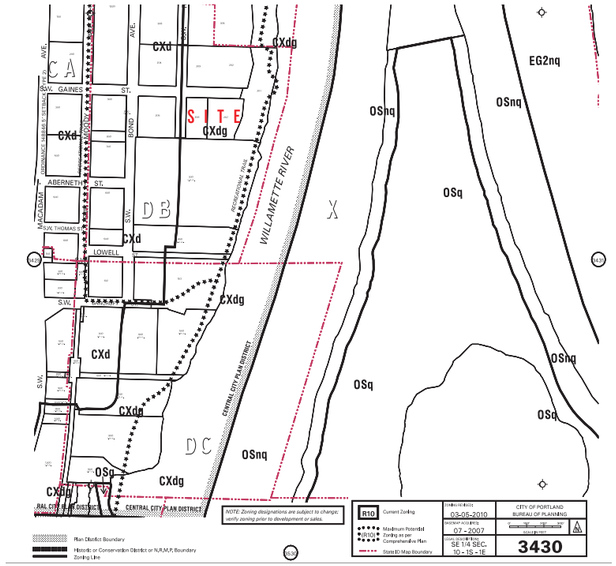
DESIGN PLANS AND ELEVATIONS

Block 37 Apartments

March 11th, 2014
Revised: March 26th, 2014

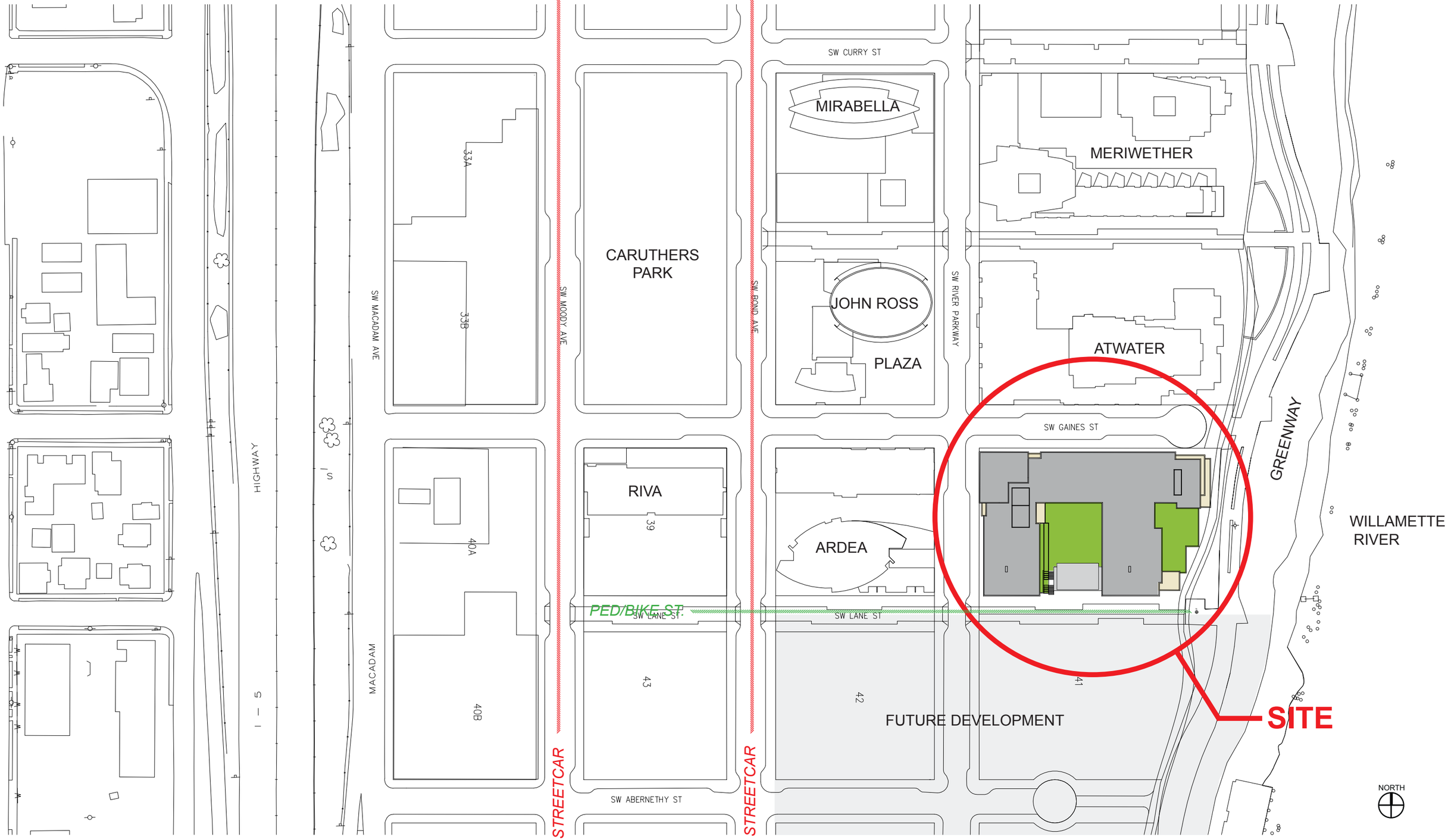
BLOCK 37 APARTMENTS

3700 SW RIVER PARKWAY
PORTLAND, OR 97239



SITE AERIAL PHOTOGRAPH

SITE PHOTOGRAPHY



VICINITY MAP

RENDERING- NEIGHBORHOOD CONTEXT

THE ATWATER REMOVED FROM IMAGE FOR CLARITY

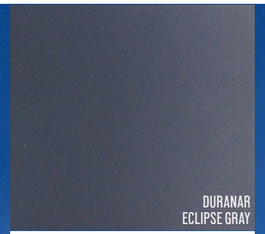
RENDERING (NIGHT) - CORNER OF GAINES AND RIVER PARKWAY

PAINTED VINYL WINDOW

PAINTED METAL PANEL 1

PAINTED STUCCO

PAINTED METAL PANEL 2



PAINTED METAL PANEL 3

BRICK VENEER

STOREFRONT GLAZING

MATERIALS

THE ATWATER REMOVED FROM IMAGE FOR CLARITY

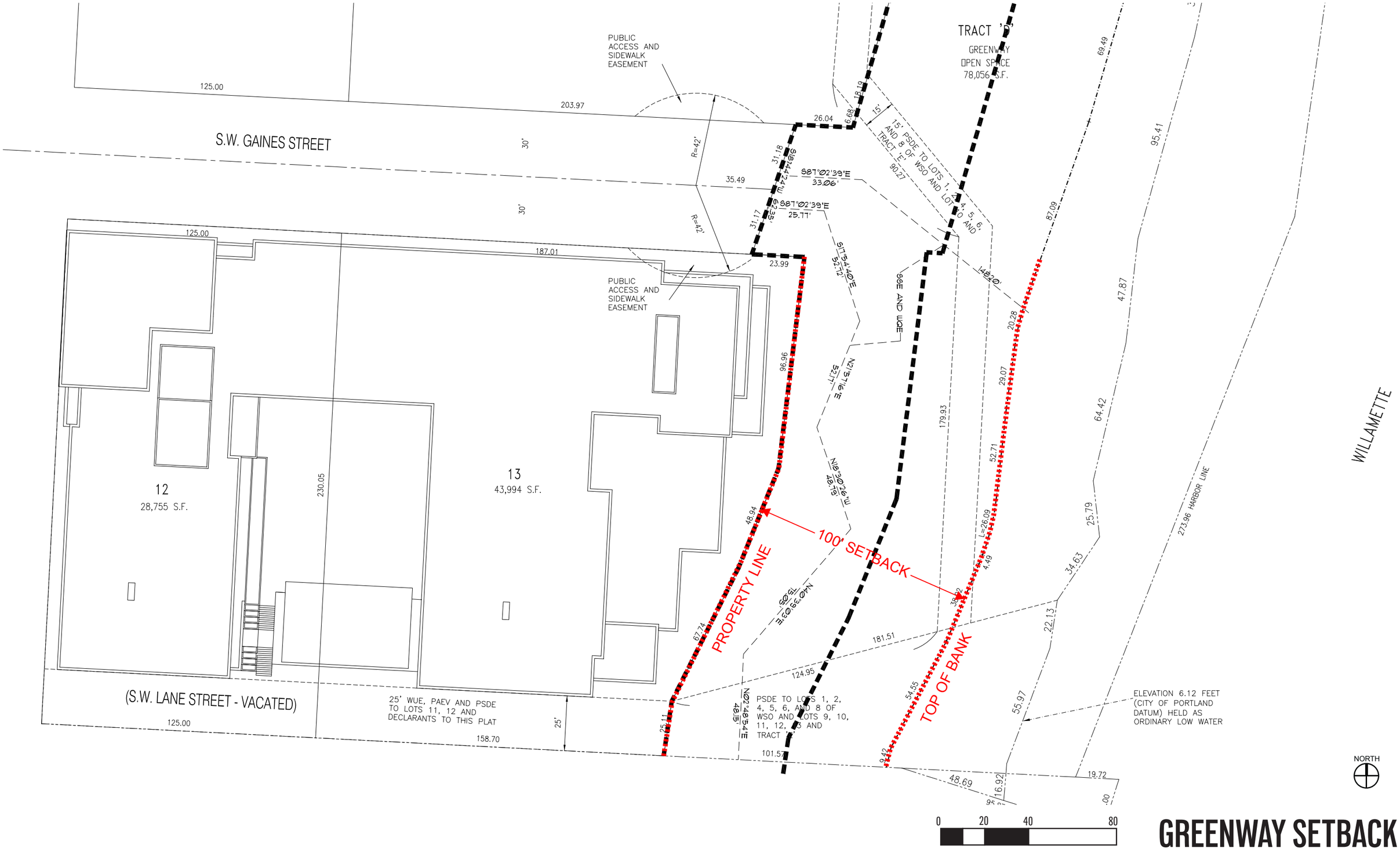
RENDERING - CORNER OF GAINES AND RIVER PARKWAY

RENDERING - GREENWAY

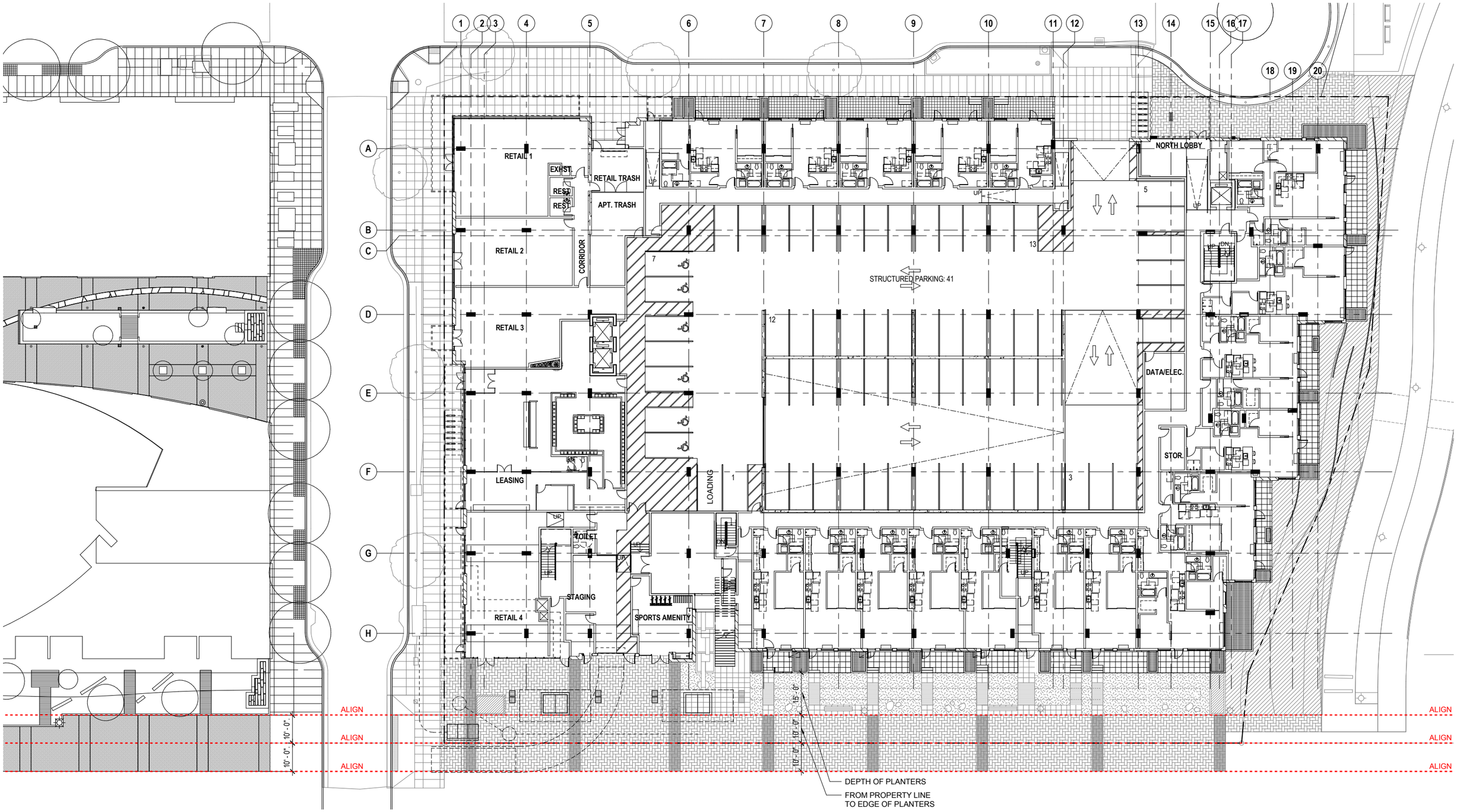
RENDERING -LANE STREET

RENDERING -COURTYARD/ROOF DESIGN

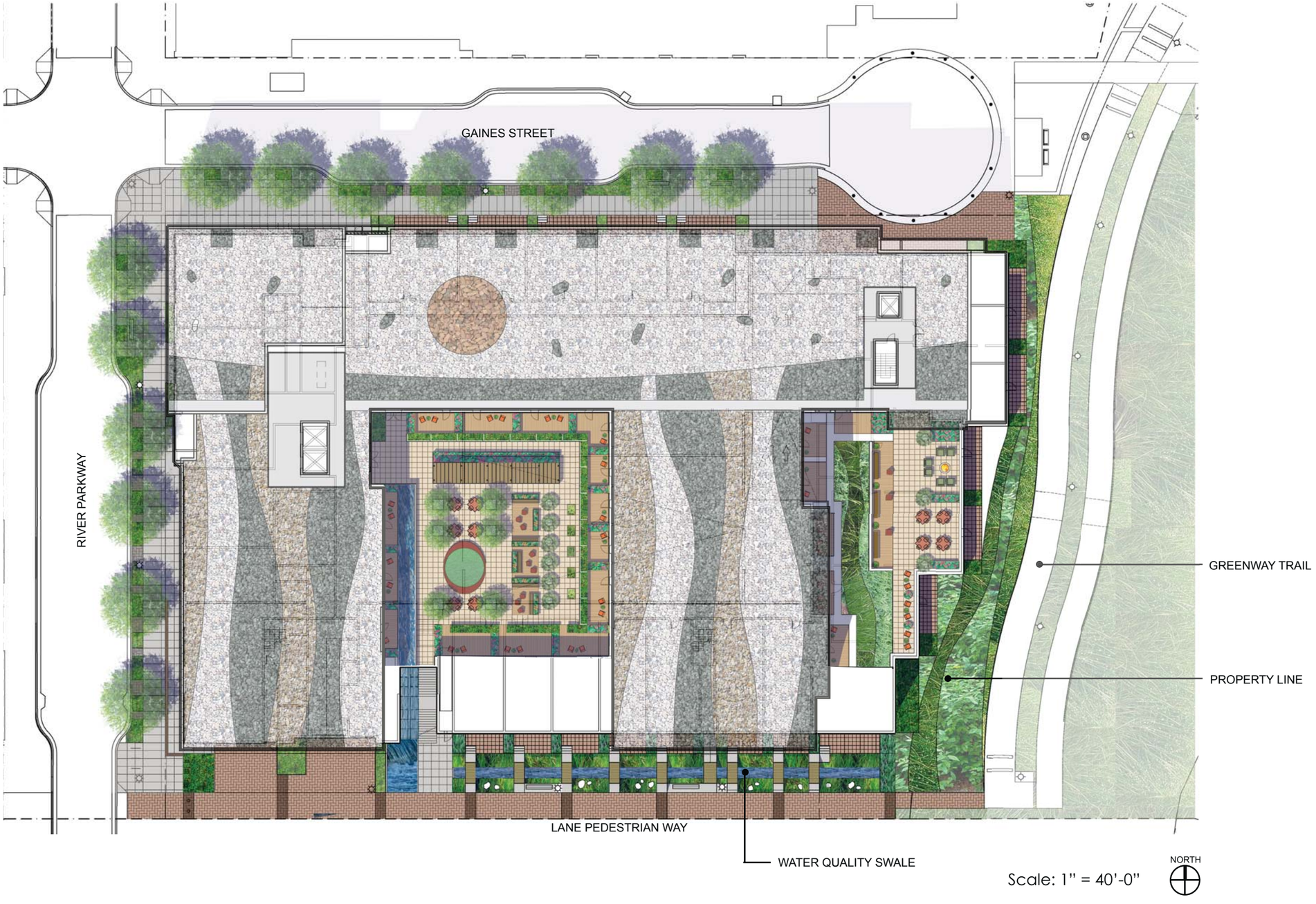
RENDERING -PEDESTRIAN VIEW ON RIVER PARKWAY



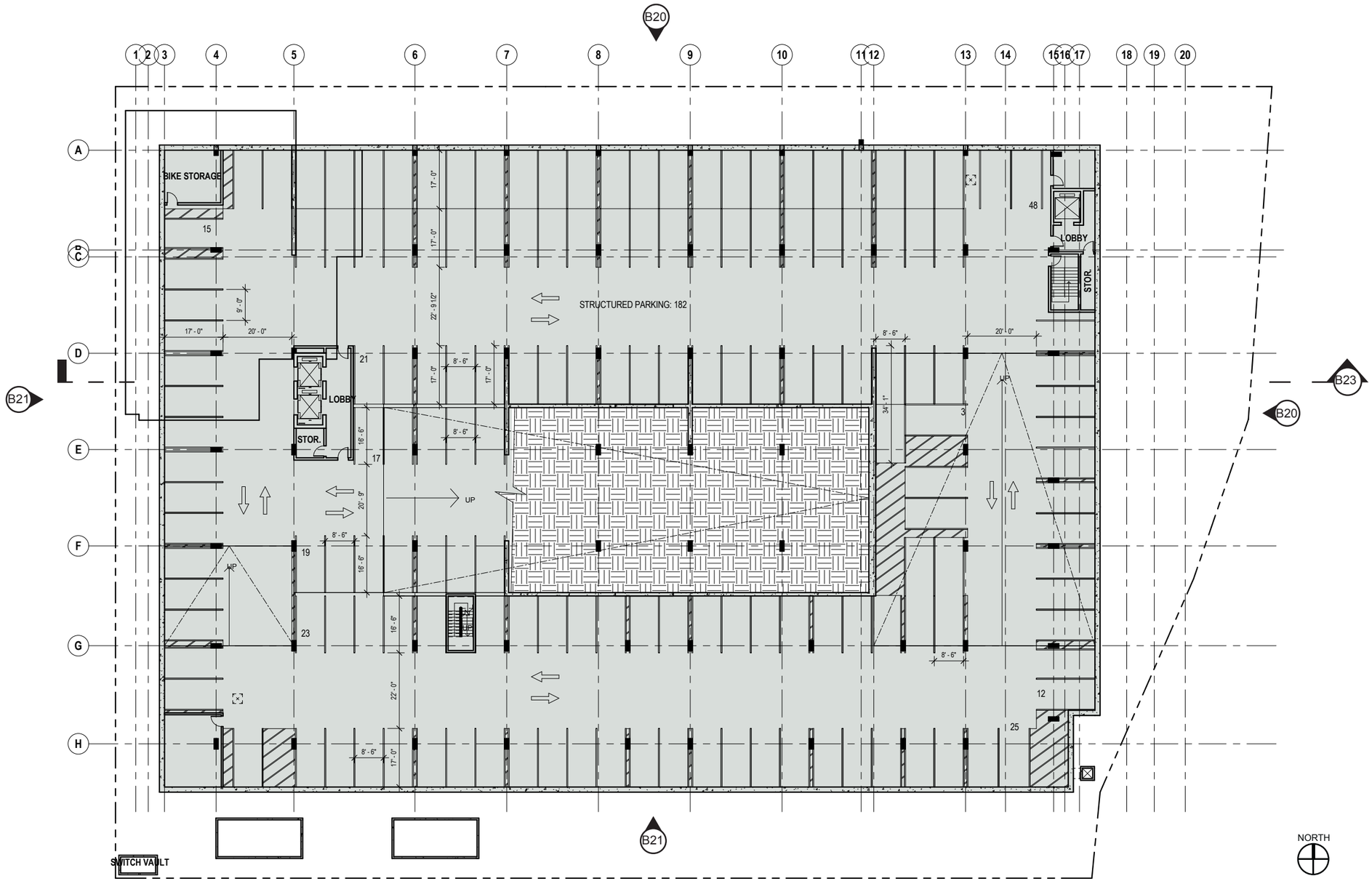
GREENWAY SETBACK


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
A
B
C
D
E
F
G
H
RETAIL 1
EXIST.
RETAIL TRASH
APT. TRASH
RETAIL 2
CORRIDOR
RETAIL 3
LEASING
LOADING
TOILET
STAGING
RETAIL 4
SPORTS AMENITY
NORTH LOBBY
STRUCTURED PARKING: 41
DATA/ELEC.
STOR.
UP
DN
ALIGN
10' - 0"
15' - 0"
DEPTH OF PLANTERS
FROM PROPERTY LINE
TO EDGE OF PLANTERS
0
20
40
80

LANE ST. COMP.


GAINES STREET
RIVER PARKWAY
GREENWAY TRAIL
PROPERTY LINE
LANE PEDESTRIAN WAY
WATER QUALITY SWALE
Scale: 1" = 40'-0"
NORTH

SITE PLAN



UNITS

RETAIL

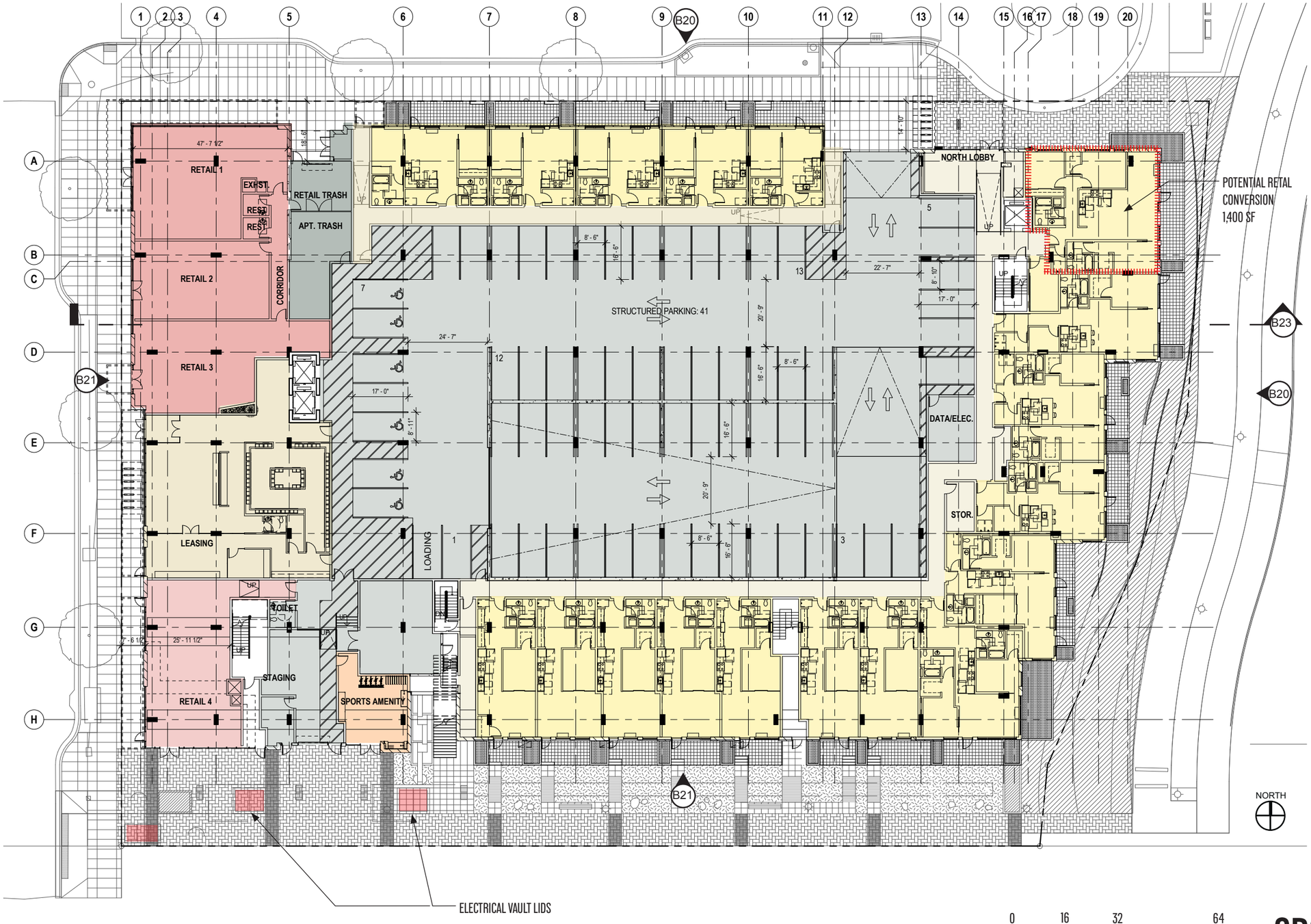
LOBBY

PARKING

AMENITY

0 16 32 64

PARKING PLAN



UNITS

RETAIL

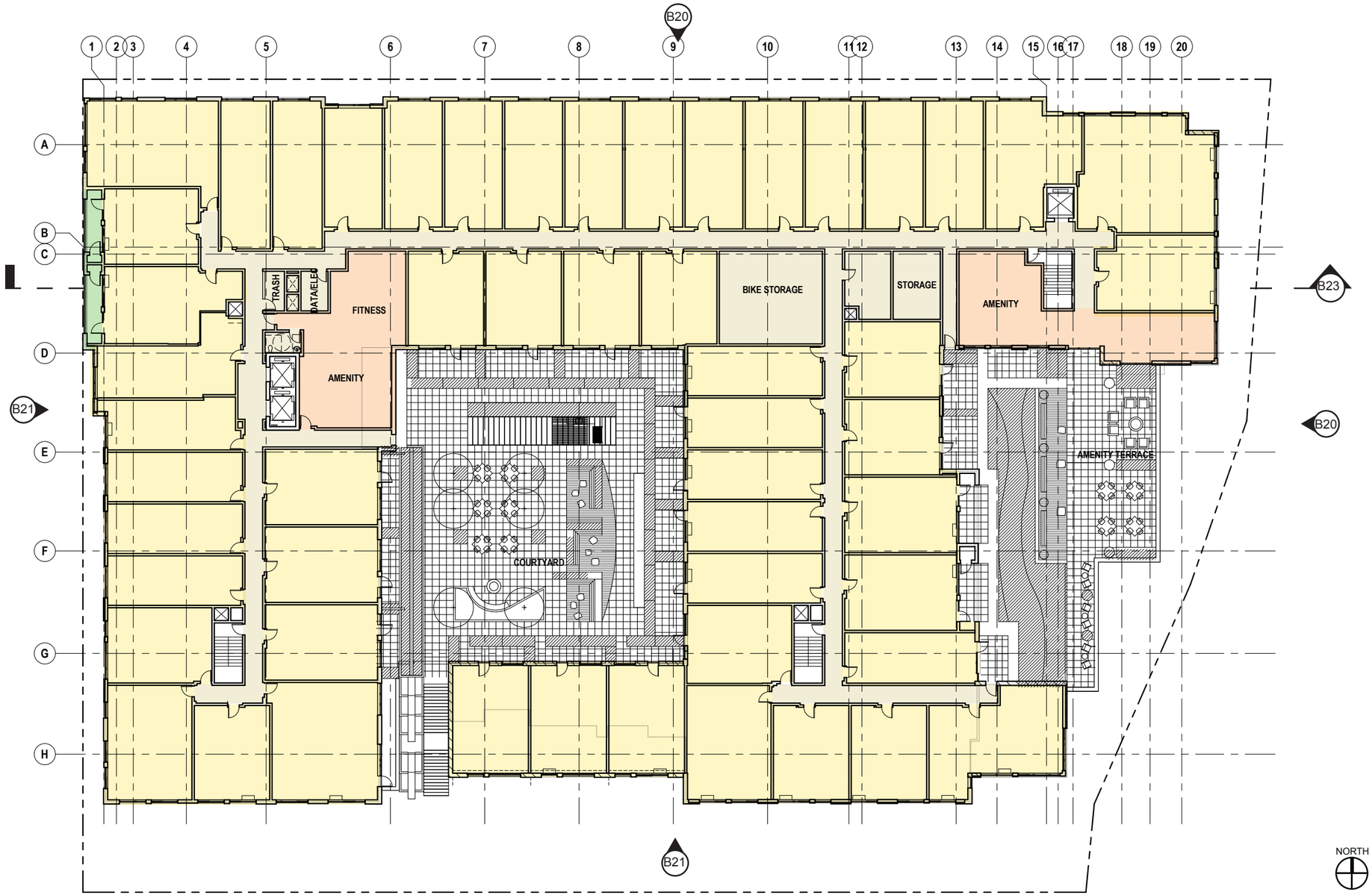
LOBBY

PARKING

AMENITY

0 16 32 64

GROUND FLOOR PLAN



UNITS

RETAIL

LOBBY

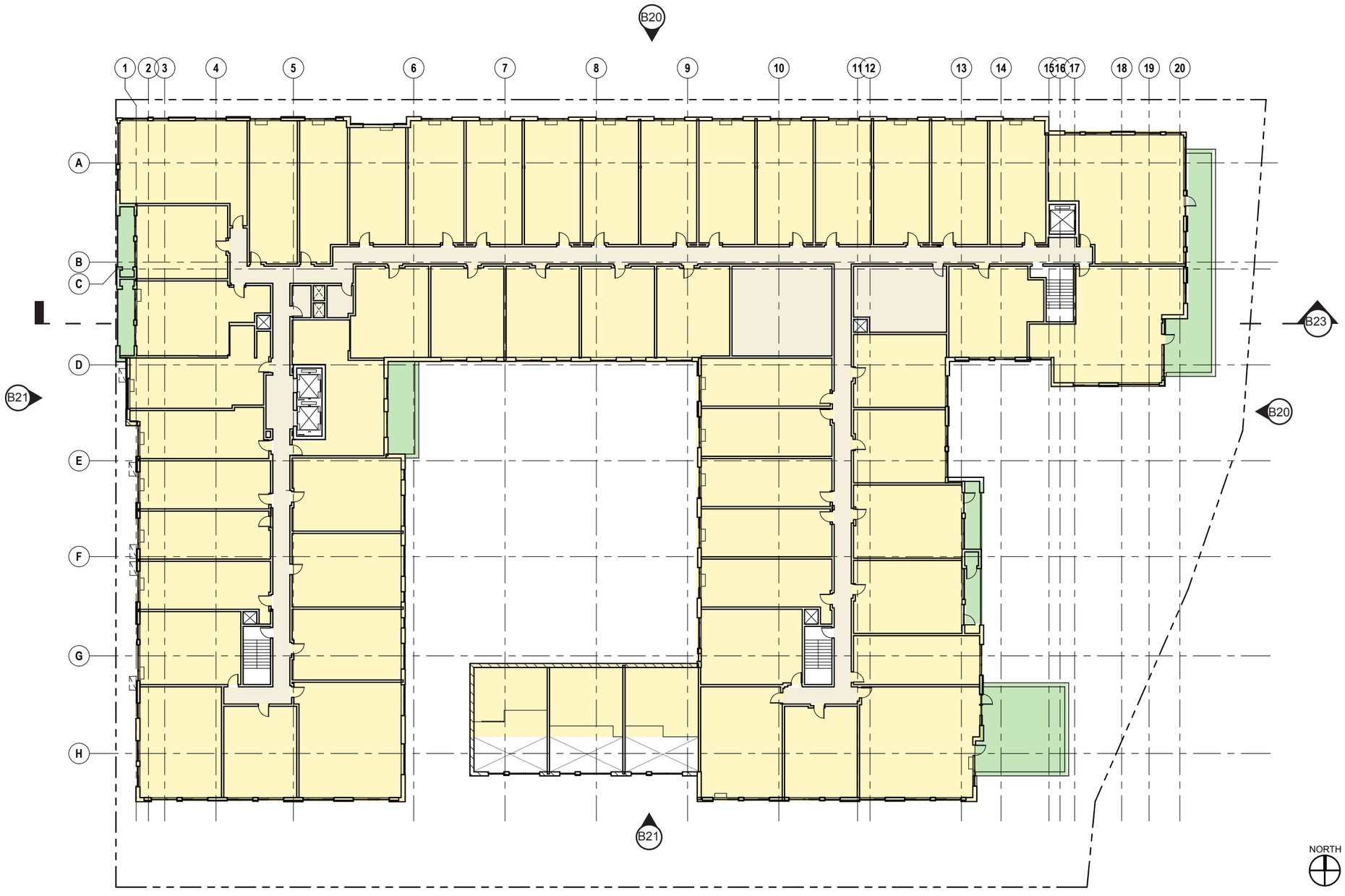
PARKING

AMENITY

BALCONY

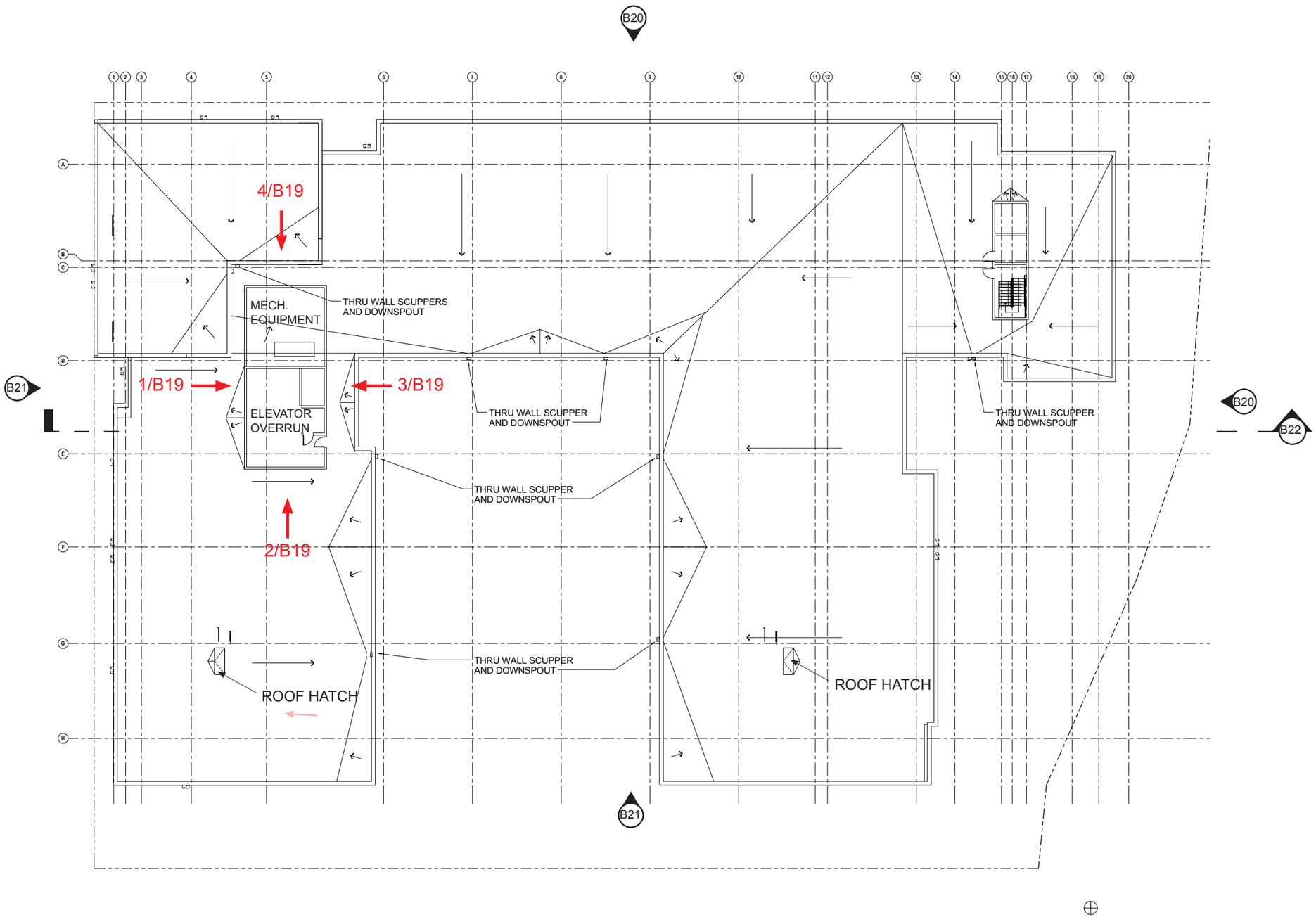
0 16 32 64

SECOND FLOOR PLAN

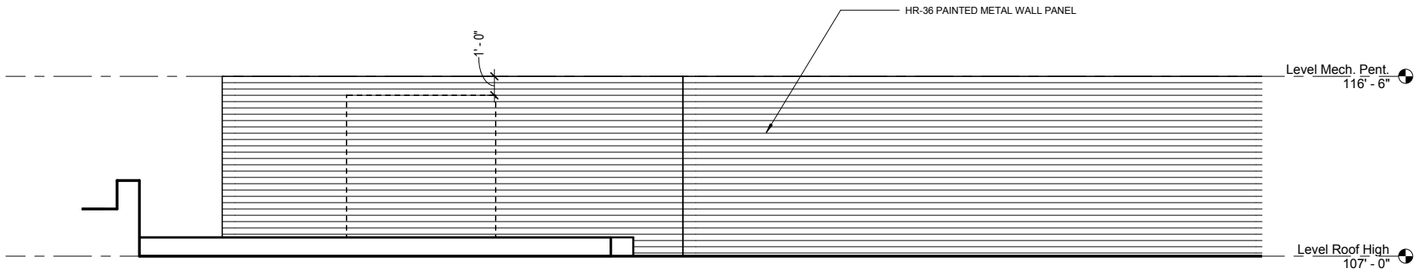


0 16 32 64

TYPICAL FLOOR PLAN

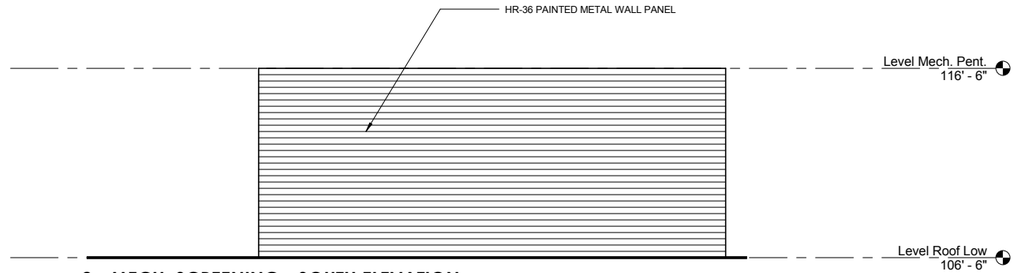

B20
4/B19
MECH.
EQUIPMENT
THRU WALL SCUPPERS
AND DOWNSPOUT
B21
1/B19
3/B19
ELEVATOR
OVERRUN
THRU WALL SCUPPER
AND DOWNSPOUT
THRU WALL SCUPPER
AND DOWNSPOUT
B20
B22
2/B19
THRU WALL SCUPPER
AND DOWNSPOUT
ROOF HATCH
ROOF HATCH
B21

ROOF PLAN



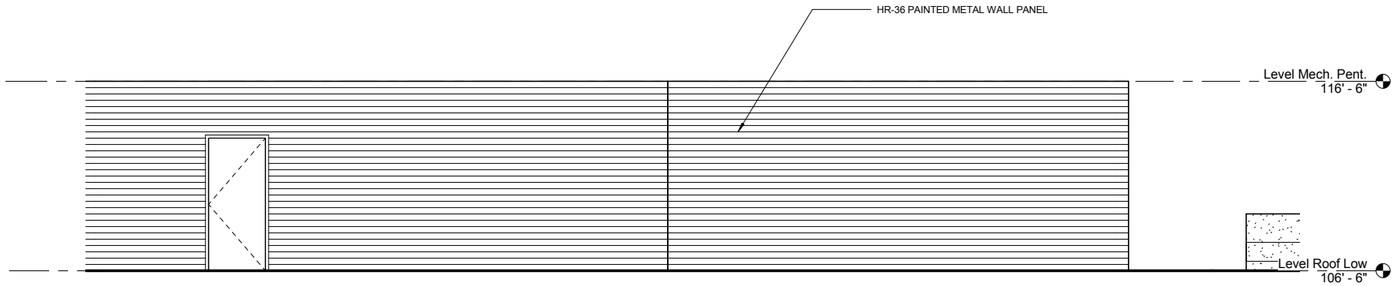
1 MECH. SCREENING - WEST ELEVATION

1/4" = 1'-0"



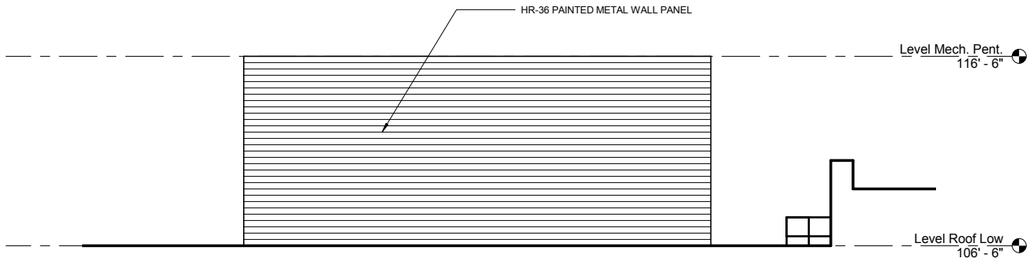
2 MECH. SCREENING - SOUTH ELEVATION

1/4" = 1'-0"



3 MECH. SCREENING - EAST ELEVATION

1/4" = 1'-0"



4 MECH. SCREENING - NORTH ELEVATION

1/4" = 1'-0"

ENLARGED ELEVATIONS - MECHANICAL SCREENING

NORTH ELEVATION

EAST ELEVATION

0 5 10 20 40

BUILDING ELEVATIONS

SOUTH ELEVATION

WEST ELEVATION

0 5 10 20 40

BUILDING ELEVATIONS

ENLARGED PLAN NORTH ELEVATION A

ENLARGED PLAN NORTH ELEVATION B

ENLARGED PLAN NORTH ELEVATION C

0 2 4 8 16

ELEVATIONS - ENLARGED, TYP.

ENLARGED PLAN EAST ELEVATION A

ENLARGED PLAN WEST ELEVATION A

ENLARGED PLAN EAST ELEVATION B

ENLARGED PLAN WEST ELEVATION B

ENLARGED PLAN EAST ELEVATION C

ENLARGED PLAN WEST ELEVATION C

0 2 4 8 16

ELEVATIONS - ENLARGED, TYP.

ENLARGED PLAN SOUTH ELEVATION A

ENLARGED PLAN SOUTH ELEVATION B

ENLARGED PLAN SOUTH ELEVATION C

0 2 4 8 16

ELEVATIONS - ENLARGED, TYP.

UNITS

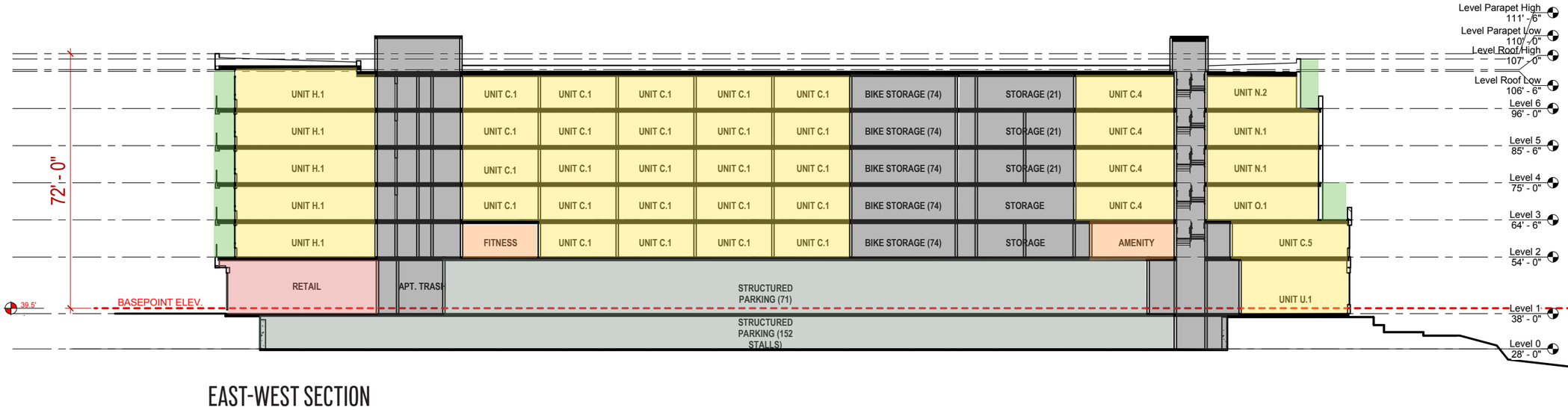
RETAIL

LOBBY

PARKING

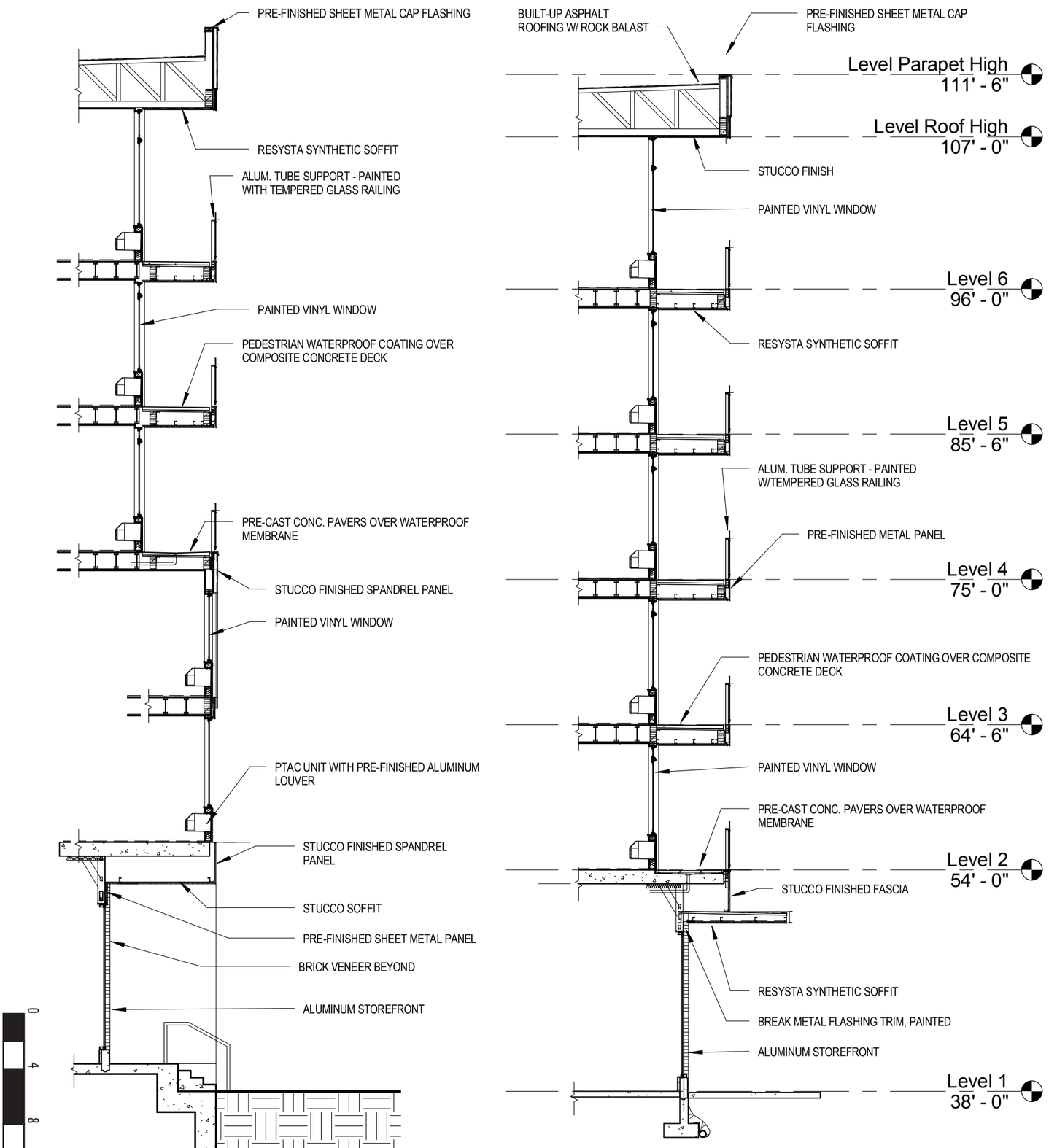
AMENITY

BALCONY

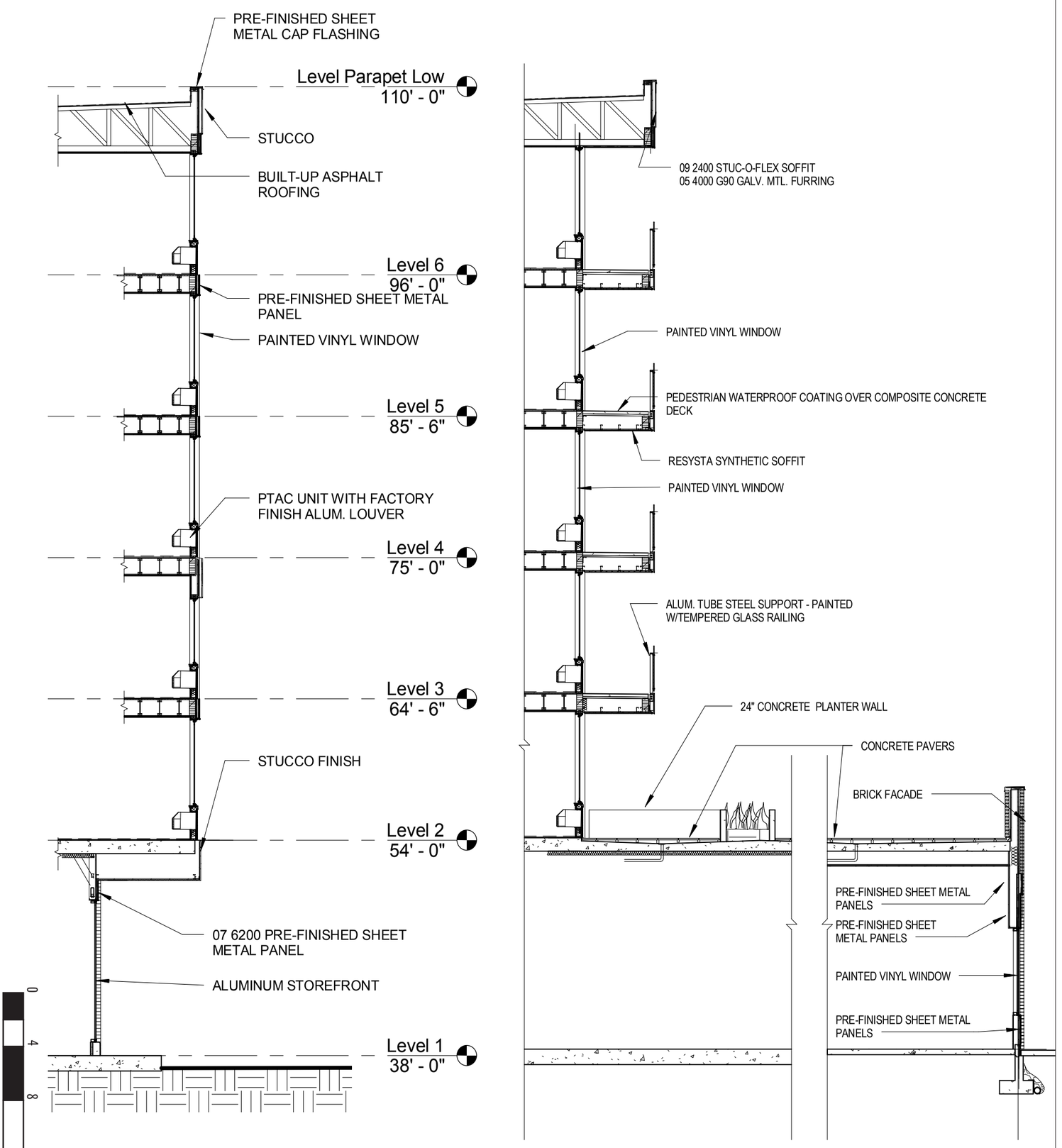


EAST-WEST SECTION

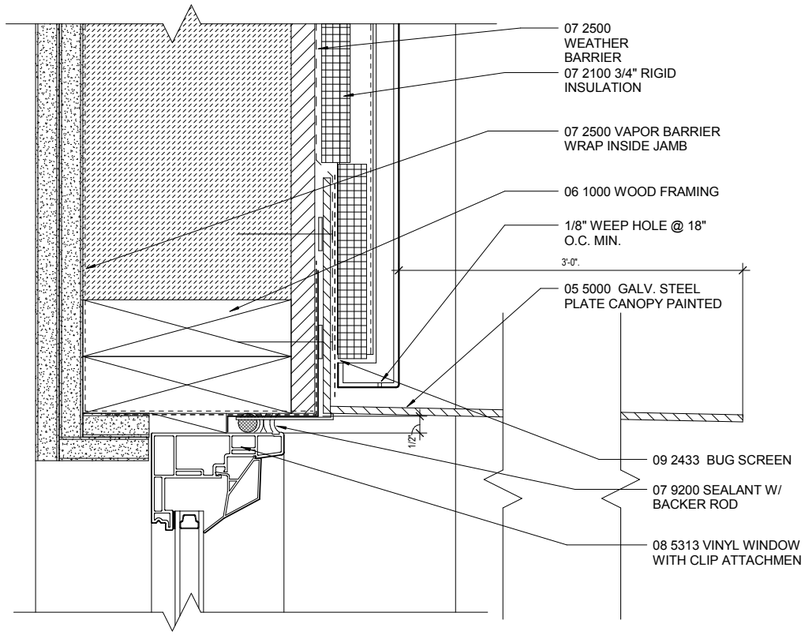
BUILDING SECTIONS



WALL SECTIONS

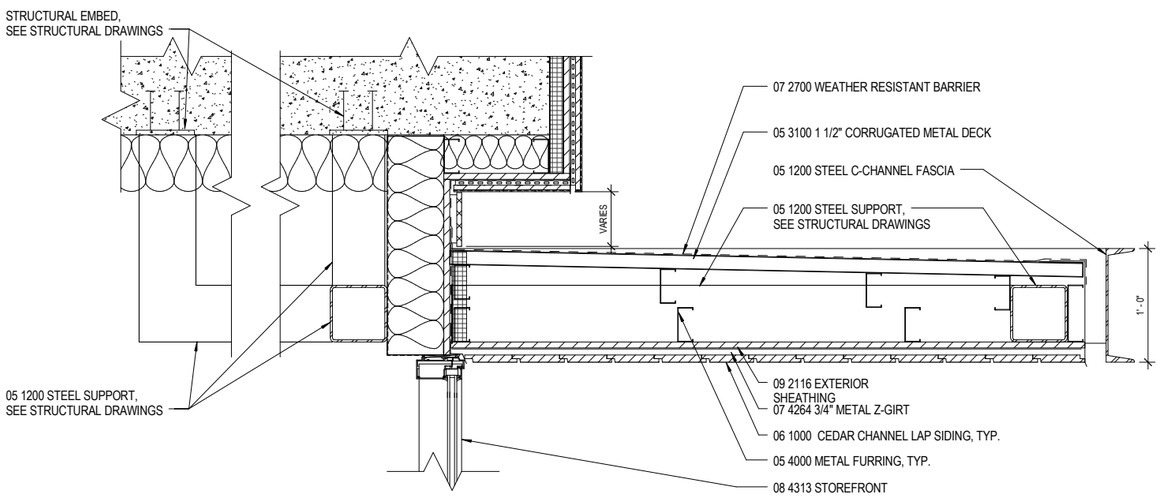


WALL SECTIONS



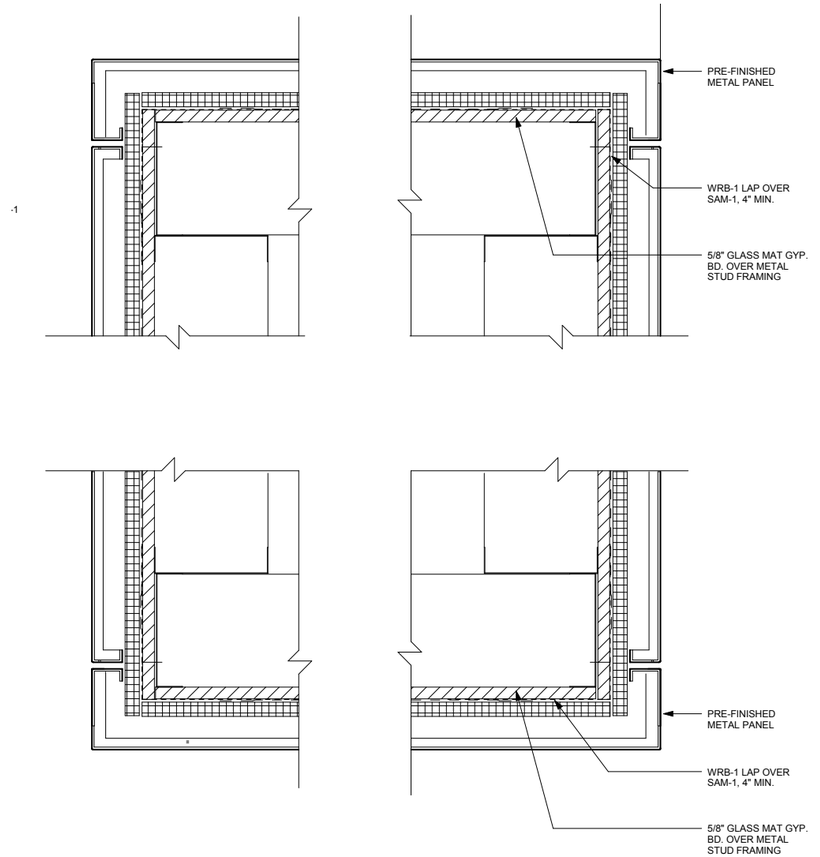
1 WINDOW HEAD AND CANOPY AT TERRACE DOORS

6" = 1'-0"



2 TYP RETAIL CANOPY SECTION

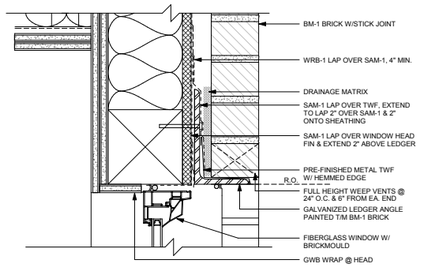
1 1/2" = 1'-0"



3 METAL PANEL COLUMN

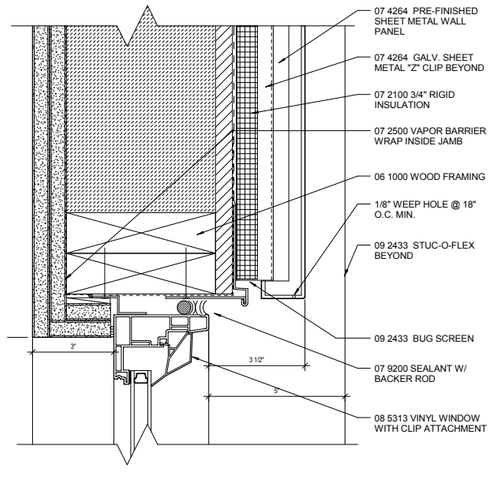
3" = 1'-0"

CANOPY DETAILS



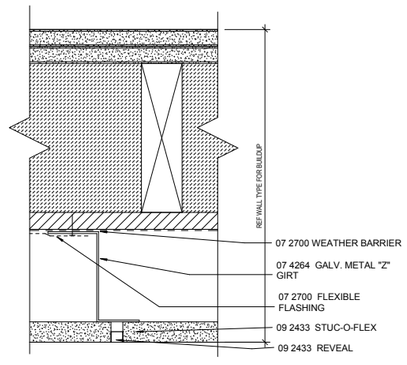
6 HEAD DETAIL - BM-1 BRICK LEVEL 2-4

3" = 1'-0"



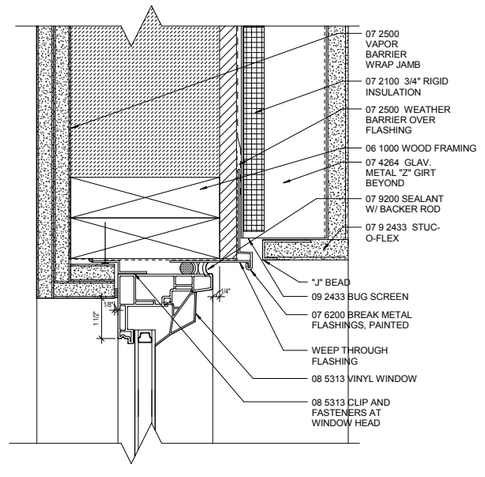
16 TYP. WINDOW HEAD AT METAL PANEL

6" = 1'-0"



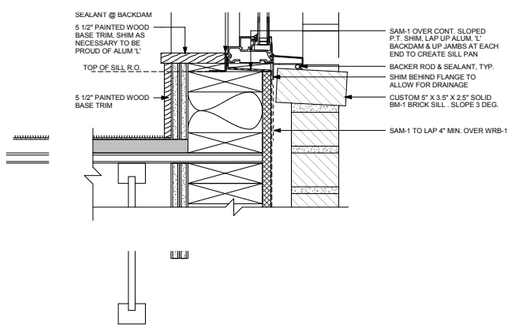
21 STUCCO REVEAL JNT PLAN

6" = 1'-0"



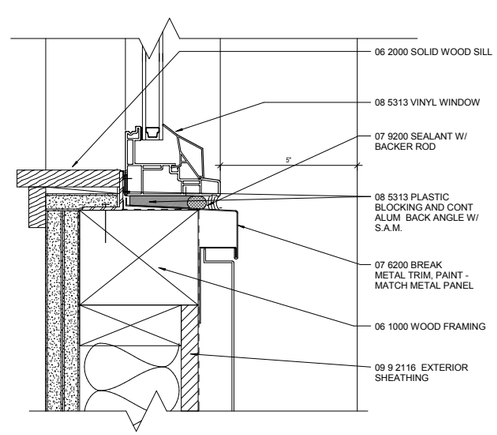
4 TYP. WINDOW HEAD AT STUCCO

6" = 1'-0"



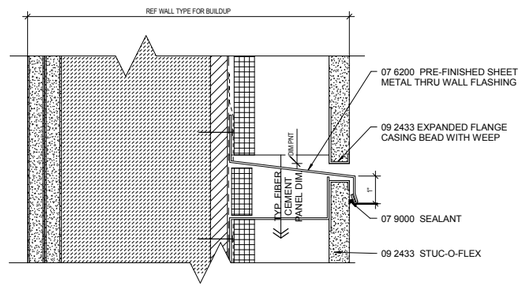
8 SILL DETAIL - BM-1 BRICK LEVEL 2-4

3" = 1'-0"



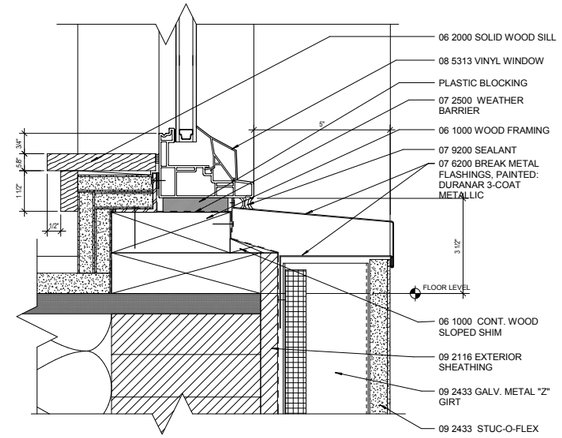
TYP. WINDOW SILL AT METAL PANEL

1" = 1'-0"



22 STUCCO REVEAL JNT - SECTION

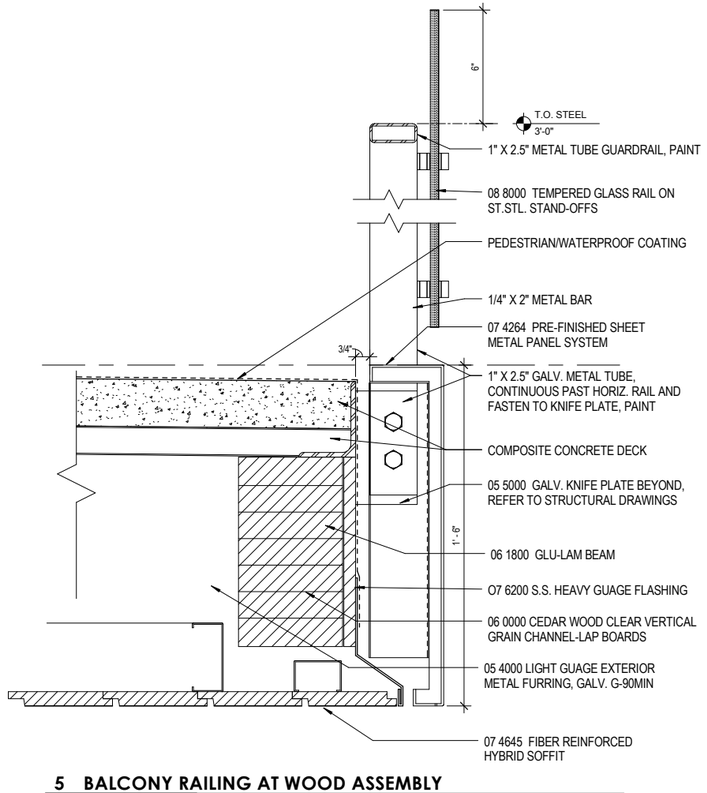
6" = 1'-0"



6 TYP. WINDOW SILL AT STUCCO

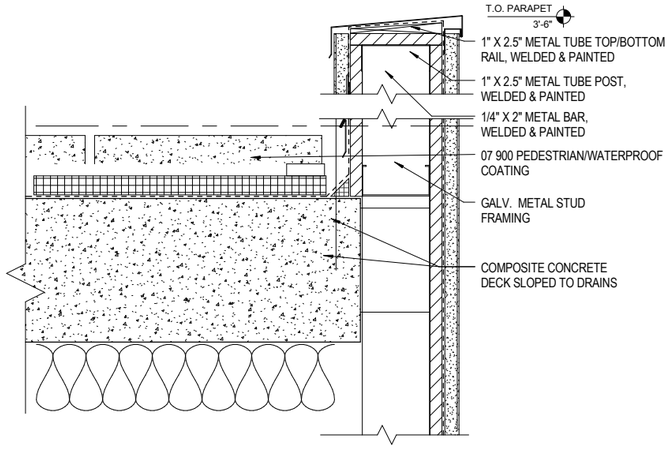
6" = 1'-0"

EXTERIOR DETAILS



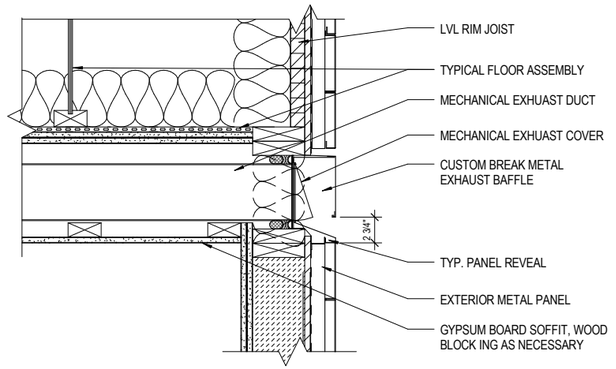
5 BALCONY RAILING AT WOOD ASSEMBLY

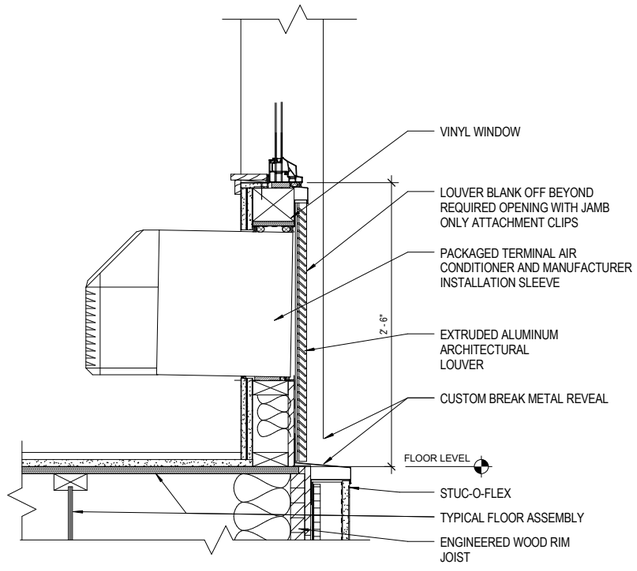
3" = 1'-0"



7 BALCONY PARAPET RAIL AT CONCRETE ASSEMBLY

3" = 1'-0"

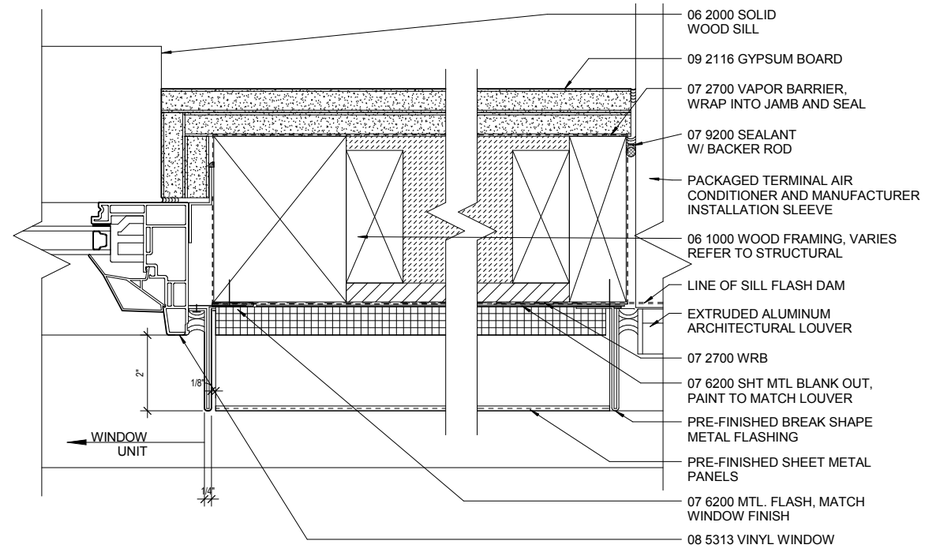




4 TYP. VENT AND EXHAUST SECTION

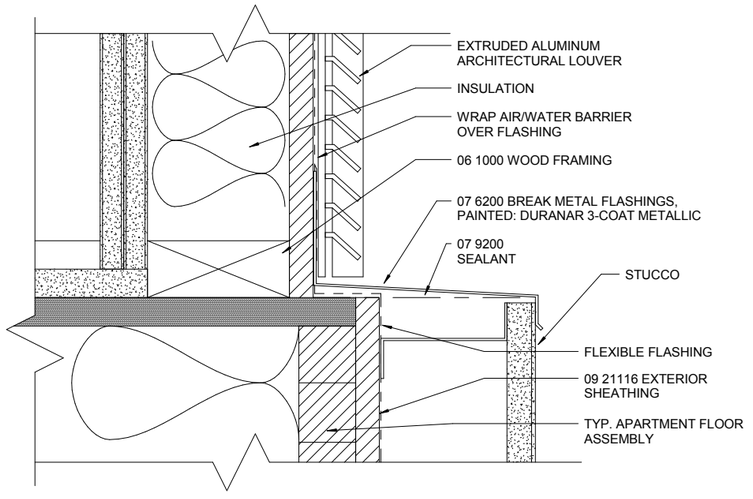
1 1/2" = 1'-0"

EXTERIOR DETAILS



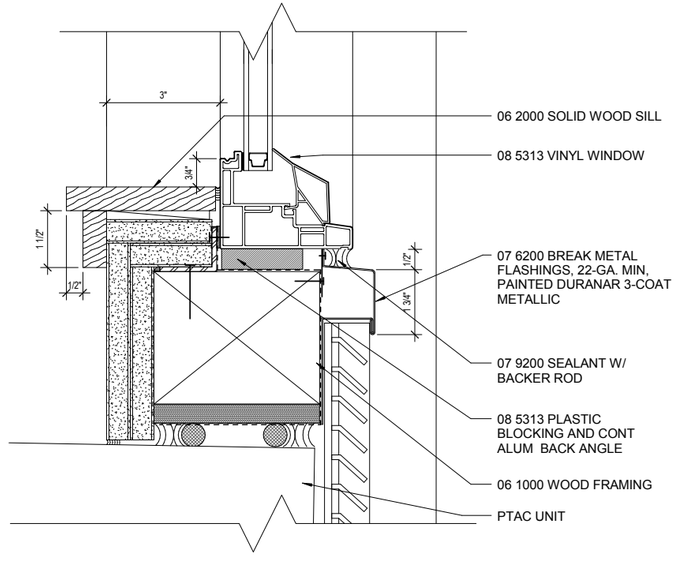
1 LOUVER AND WINDOW MULLION

6" = 1'-0"



3 TYP. LOUVER SILL

6" = 1'-0"



2 TYP. WINDOW SILL AT LOUVER

6" = 1'-0"

EXTERIOR LOUVER DETAILS

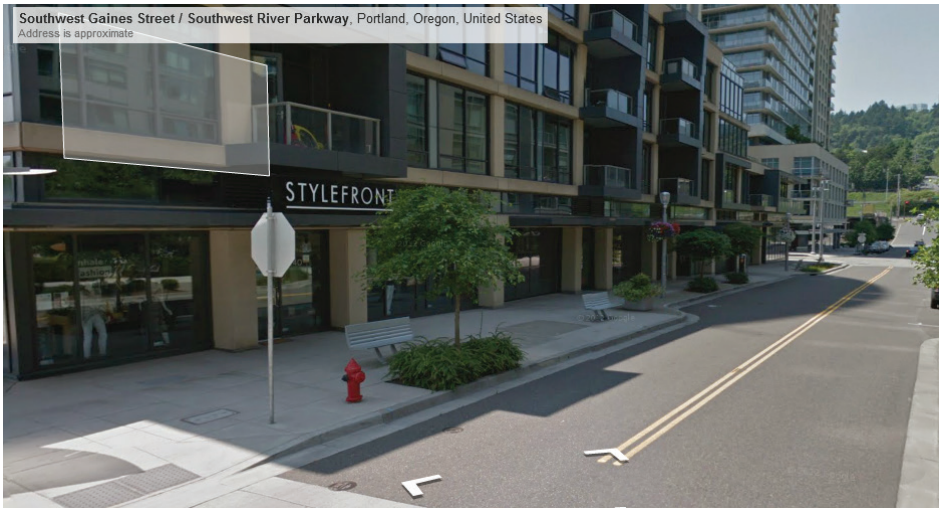
GBD

APPENDIX A

MATERIALS AND PHOTOS

Block 37 Apartments
March 27, 2014

GBD Architects Incorporated 1120 NW Couch St., Suite 300 Portland, OR 97209 Tel. (503) 224-9656 www.gbdarchitects.com



CONTEXT PHOTOS

CONTEXT PHOTOS


« Photos


ıon, United States


way, Portland, Oregon, United States

SITE PHOTOS

FACADE MATERIALS

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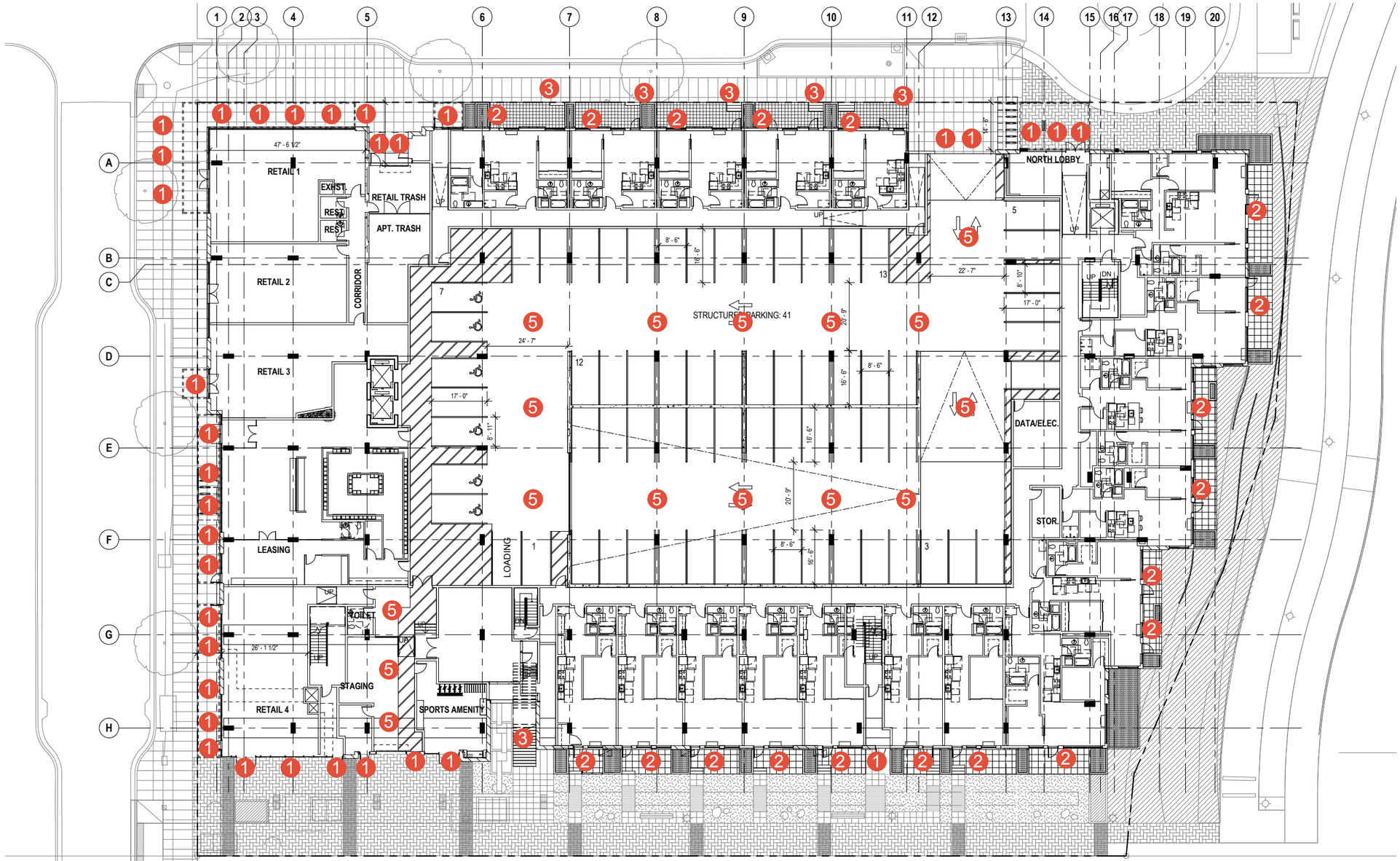


1 Exterior Downlight

2 Entry Light

3 Step Light

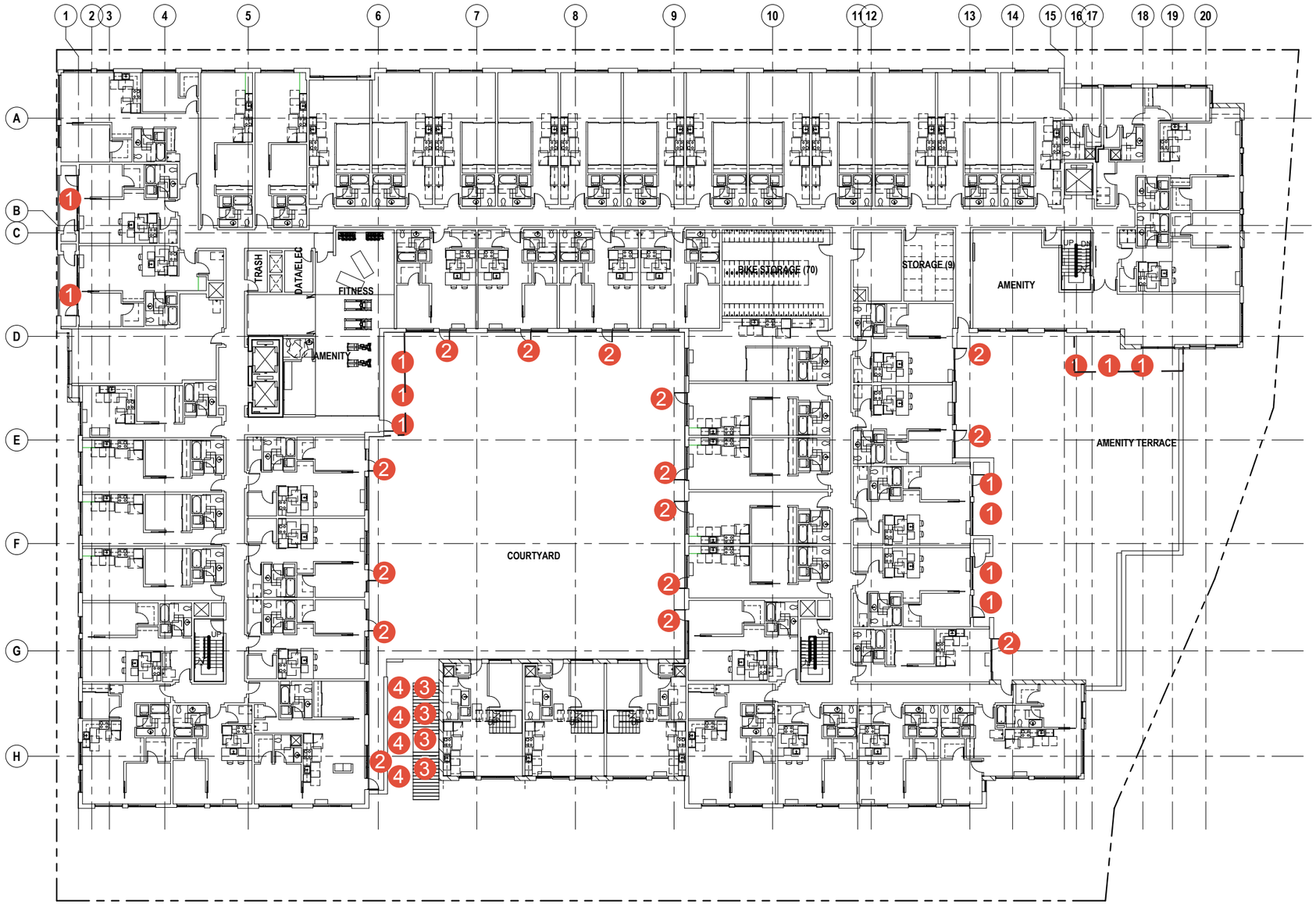
4 Fountain Light

5 Garage Light

6 Low Wall Light

GROUND FLOOR

LIGHTING PLAN



1 Exterior Downlight

2 Entry Light

3 Step Light

4 Fountain Light

5 Garage Light

6 Low Wall Light

SECOND FLOOR

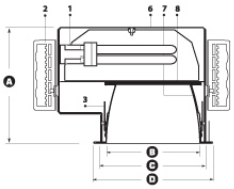
LIGHTING PLAN

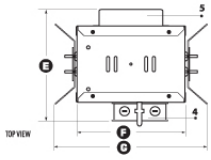
HH4SQPL

4" Architectural Square CFL Downlight

Catalog Number:	
Project Name:	Type:
Note:	MAXILUME ARCHITECTURAL LIGHTING

Architectural





A. Height = 5-3/4"
B. Trim Aperture = 4-1/2"
C. Cut-out = 5-1/8"
D. Trim Outside Diameter = 5-3/4"
E. Width = 9"
F. Length = 7-1/8"
G. Max. Length = 10"

DESCRIPTION

1. LAMP HOLDER - Lamp holder effectively provides heat dissipation and ventilation. Unitized optics guarantees proper trim to housing installation. Tool-less installation adjustability from either outside the housing or inside the housing.

2. MOUNTING BRACKET - Constructed from 16-gauge steel. Can be installed with ¾" or 1-½" lathing channel, ½" EMT, or with optional C-channel mounting bars (Part# BP31) ordered separately. Housing can be adjusted from the inside of the ceiling.

3. RETAINING SPRINGS - Precision tooled springs secure trim to mounting frame, for effortless and tool-less installation.

4. JUNCTION BOX - UL and ETL listed for through-branch circuit wiring and has four ½" KO's, one ¾" KO and four Romex knockouts with pry-out slots and strain clamps. Junction Box is accessible from below, no tools required.

5. BALLAST - Ballast is accessible from below, no tools required. Ballast supplied is manufactured by Philips Advance, Universal Technologies or Lutron Electronics.

6. MOUNTING FRAME
- Die-formed construction for maximum heat dissipation and rust protection.

OPTICS

7. REFLECTOR - Self-flanged .050" aluminum reflector with low iridescent finish. Reflector provides 45-degree lamp-to-reflector image cutoff.

8. LENS - Choice of either tempered clear, tempered prismatic or tempered frosted lens fastened with two torsion springs for easy re-lamping. ETL/UL listed for wet or damp location.

LISTING

ETL/UL listed for through-branch circuit wiring and damp locations. Wet location only with lens trims.

SAME DAY SHIPPING · PROUDLY ASSEMBLED in AMERICA · c UL us LISTED · c ETL us Intertek

Energy Star Qualified Models:
- HH4SQPL-1X13-S-120
- HH4SQPL-1X18-S-120
- HH4SQPL-1X26-S-120

LAMP BASE GUIDE (Sockets will accept all designated lamp bases listed.)

13W	18W	26W	32W	42W	57W	70W
G24q-1 GX24q-1	G24q-2 GX24q-2	**G24q-3** **GX24q-3** GX24q-4	**GX24q-3** GX24q-4	GX24q-4	GX24q-5	GX24q-6

HH4SQPL - ITEM SELECTOR: (Please check the boxes below for the option desired)

WATTAGE	BALLAST	VOLTAGE	EMERGENCY OPTIONS	TRIM TYPE & DESCRIPTION	REFLECTOR
☑ 1X13	☐ (E) Electronic	☐ MVOLT (120/277)	☐ EMG 750 (750 Lumens) [6]	☐ 4601	☐ CL
☐ 1X18	☑ (S) Energy Star [2]	☑ 120	☐ EMG 1300 (1300 Lumens) [6]	☐ 4604	☐ SCH **
☐ 1X26		☐ 277	☐ INTG 750 (750 Lumens) [7]	☐ 4607	☐ SHZ **
☐ 1X32			☐ INTG 1300 (1300 Lumens) [7]	☐ 4614	☐ WT
			☐ EMG-D-750 (750 Lumens) [8]	☐ 4615	☐ W
			☐ ESD-130 (1300 Lumens) [13]		☐ MB
			☐ ICE-1300 (1300 Lumens) [10]		
	DIMMING		**OTHER OPTIONS**		
	☐ Mark 7 [3]		☐ FUSE [11]		
	☐ Mark 10 [4]		☐ RIF [12]		
	☐ Lut-E (EC3D) [5]		☐ BP31 (24" C-Channel Bar Hangers)		

*1- **(M) Magnetic** = Available in 9W, 13W, 18W & 26W fixtures only • 2 - **(S) Energy Star** = Available on selected fixtures only, please see list above • 3 - **MARK 7** = Not available in 9W, 13W, 57W, 70W • 4 - **MARK 10** = Not available in 9W, 13W, 57W, 70W, must specify voltage • 5 - **LUT-E (EC3D)** = Not available in 9W, 13W, 57W, 70W • 6 - **EMG** = Emergency battery pack w/ remote test switch • 7 - **INTG** = Emergency battery pack w/ integral (reflector) test switch • 8 - **EMG-D** = Emergency battery pack w/ remote test switch for damp location • 9 - **INTG-D** = Emergency battery pack w/ integral(reflector) test switch for damp location • 10 - **ICE** = Emergency battery pack w/ remote test switch operating between -18ºC and 55ºC • 11 - **FUSE** = Single slow-blow fuse • 12 - **RIF** = Radio interference filter • 13 - **ESD** = Emergency self-diagnostic*

Specifications:

HH4SQPL 1X13 - S - 120 - _____ - _____ - _____ - _____ - _____

WATT · BALLAST · VOLTAGE · EMERGENCY · OPTIONS · TRIM TYPE · REFLECTOR · RING

REFLECTOR		RING
CL	Clear	WH Self-Flange White
SHZ	Satin Haze (Low Iridescent)	Standard on all trims
WT	Wheat	
MB	Black	
W	White	

**For custom baffle, reflector, trim ring, glass color and lens options, please consult factory.*

Sample of Catalog Number: **HH4SQPL-1X32-E-MVOLT-EMG750-4601-CL-WH**

MAXILUME ARCHITECTURAL LIGHTING — A division of **Elite Lighting**

Submittal form is available @ **www.maxilume.com**
Tel: 323-888-1973 • Fax: 323-888-1977

Specifications and Dimensions subject to change without notice.

MAX-SPECS 2011-03-08

1 EXTERIOR DOWNLIGHT

F+P Wall LED

F-P WALL LED

PRODUCT SPECIFICATION

Product description

Weblink: 2720

Design: Foster & Partners

Light Concept: The fixture emits a symmetrical downlight. The opal cone ensures an even and diffuse light, free from obtrusive glare. The light emitted through the cone helps reducing the contrasts. The polished edges of the cylinder glow and hence clarify the shape of the fixture.

Finish: White, natural painted aluminum or graphite grey, powder coated.

Material: Housing: Die cast aluminum. Enclosure: Extruded clear acrylic with polished edges.

Mounting: Surface: Mounted directly to finished surface over a recessed 4" octagonal junction box.

Weight: Max. 2 lbs.

Label: cULus, Wet location. IBEW.

Product code	Light source	Voltage	Finish
F+P-W	7W LED / 3000K 7W LED / 4000K	120V	GRAPH NAT PAINT ALU WHT

a. Provided with one 120V integral electronic driver.
b. All LED wattages are system power.

I. The comparable EU version has the following classification: Ingress Protection Code: IP44.
II. LED technology is rapidly changing. Specifications are based on present technology. For most up to date specifications see www.louispoulsen.com.

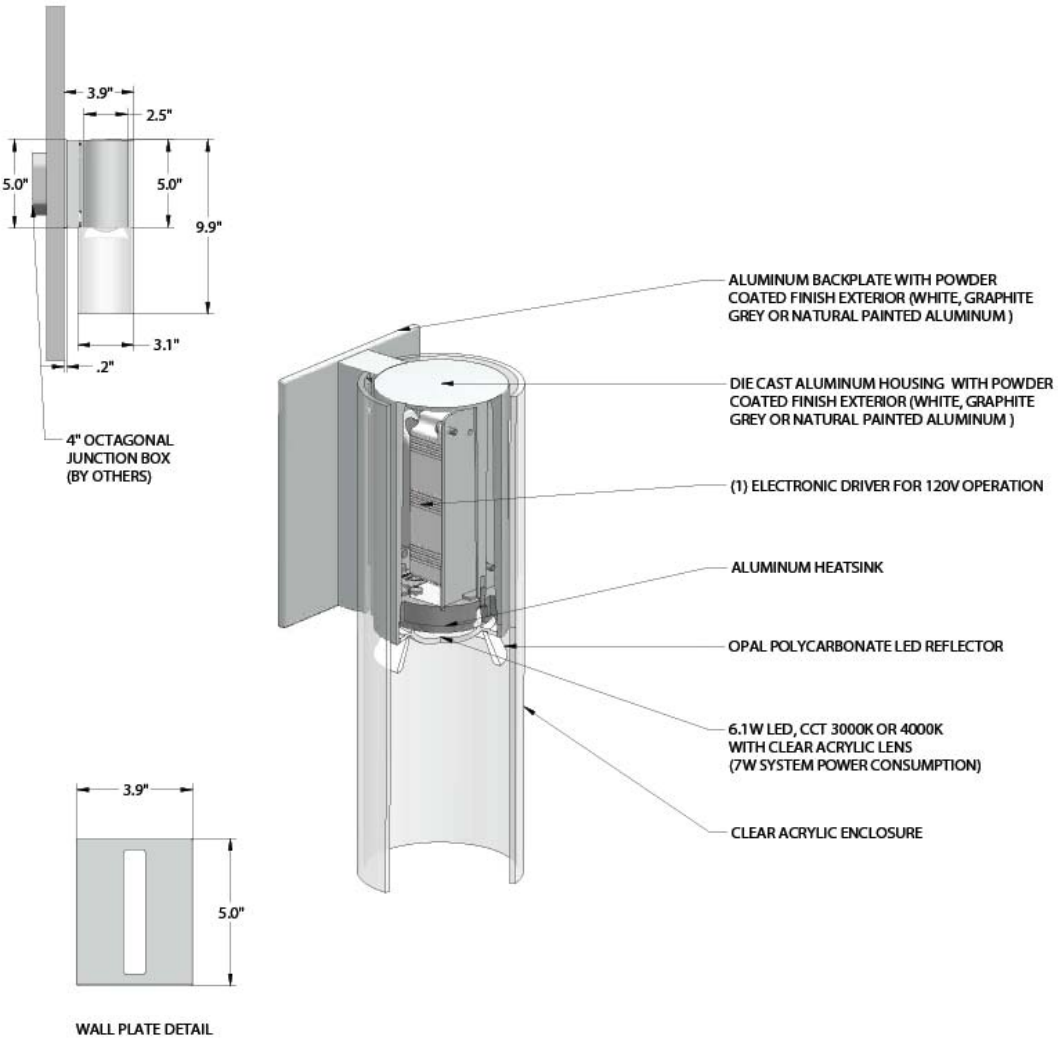
F+P Wall LED

F-P WALL LED

PRODUCT SPECIFICATION

Material description

NOTES:
LED TECHNOLOGY IS RAPIDLY CHANGING. LEDS ARE MADEN LOTS AND SORTED INTO BINS BASED ON WAVELENGHTS RANGES THAT ACHIEVE COLORS. PRODUCTS ORDERED AT DIFFERENT TIMES MAY NOT HAVE THE SAME COLOR APPEARANCE



2 ENTRY LIGHT, OPTION 1

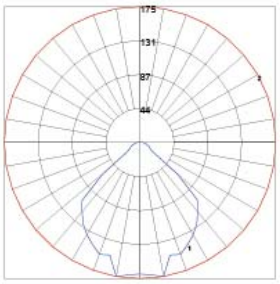
F+P Wall LED

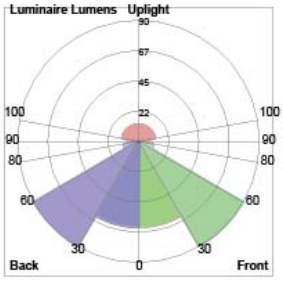
F-P WALL LED

PRODUCT SPECIFICATION

Light measurements

Photometric Report: F&P WALL LED L7713A.IES
Report No.: L7713A
Poulsen Report No.: F&P WALL LED L7713A
Luminaire: F&P WALL
Lamp: 7W LED
Description: All data shown are per 352 lumens. This report can be used for calculation on all versions listed below. Use only actual lumen data calculating.





Candlepower Distribution

Vertical Angle	Candela
0	168.7
5	170.6
10	174.5
25	144.7
40	115.8
55	19.2
70	11.4
85	4.9
90	3.8
120	2.8
150	1.5
180	0.4

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	63.7	18.1	18.1
FM - Front-Medium (30-60)	90.0	25.6	25.6
FH - Front-High (60-80)	11.3	3.2	3.2
FVH - Front-Very High (80-90)	2.8	0.8	0.8
BL - Back-Low (0-30)	63.7	18.1	18.1
BM - Back-Medium (30-60)	90.0	25.6	25.6
BH - Back-High (60-80)	11.3	3.2	3.2
BVH - Back-Very High (80-90)	2.8	0.8	0.8
UL - Uplight-Low (90-100)	3.9	1.1	1.1
UH - Uplight-High (100-180)	12.5	3.5	3.5
Total	352.0	100.0	100.0
BUG Rating	B0-U2-G0		

v2 Lighting Group™

Project

Job :

Type :

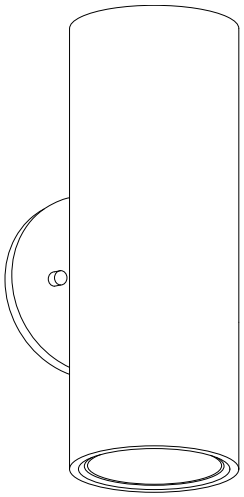
Part # :

CORE 300 LX sconce up + down

Specifications

Source	Two Xicato XSM modules - 400, 700, 1000, or 1300 lumens each
C.C.T.	2700K, 3000K, 3500K or 4000K
Color Consistency	CCT +/- 50K, Duv +/- .001, 1x2 step MacAdam (1 x 2 SDCM) along BBL
CRI (Ra)	≥80 or ≥ 95
CRI Consistency	+3/-0 points
LED Driver	Remote mount
Power	14 to 40 watts max, depending on LED module combination / driver
Reflector	High efficiency 20°, 20°, 40° or 60° - field replaceable without tools
Material	CNC machined aluminum with stainless steel hardware
Finish	Powder coat - TGIC polyester for exterior and interior use
Weight	5 lb. [2.3 kg]
Location	Listed for Wet Locations, IP66
Approvals	ETL listed. Conforms to UL Standards 2108, 8750 and CSA C22.2#250.0
L70 Life	> 50,000 hours at 70% lumen maintenance based on IESNA LM-80-08
Warranty	Lifetime Limited Warranty - see warranty for details
IES Files	LM-79-08 IES files available at www.v2LightingGroup.com
Modifications	Any modification or customization is possible - consult factory

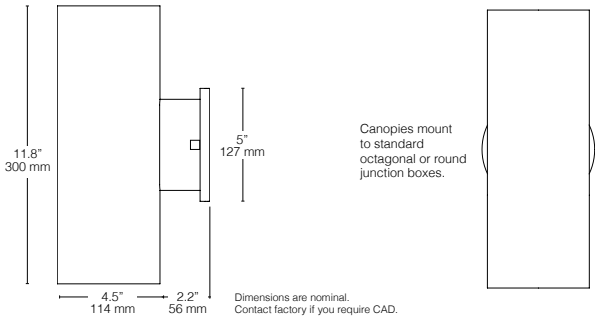
LED · INDOOR OUTDOOR · WET LOCATION · DIMMABLE · RoHS · MADE IN U. S. A. · ETL Intertek 4001580



Ordering Logic

Model	Dimming	UP Direction: Output	UP: CRI	UP: C.C.T.	UP: Reflector	DOWN Direction: Output	DOWN: CRI	DOWN: C.C.T.	DOWN: Reflector	LX	Shell Color
VC3S										LX	
VC3S	N = None P = Phase V = 0-10V	04 = 400 lm 07 = 700 lm 10 = 1000 lm 13 = 1300 lm	80 = Ra≥80 95 = Ra≥95	27 = 2700K 30 = 3000K 35 = 3500K 40 = 4000K	2H = 20° high efficiency 20 = 20° 40 = 40° 60 = 60° BF = Baffle	04 = 400 lm 07 = 700 lm 10 = 1000 lm 13 = 1300 lm	80 = Ra≥80 95 = Ra≥95	27 = 2700K 30 = 3000K 35 = 3500K 40 = 4000K	2H = 20° high efficiency 20 = 20° 40 = 40° 60 = 60° BF = Baffle		GW = Gloss White Powder Coat TW = Matte White Powder Coat GB = Gloss Black Powder Coat TB = Black Texture Powder Coat GM = Silver Grey Metallic Powder Coat BM = Bronze Metallic Powder Coat ZZ = Custom Powder Coat
	see page 2		see page 2		see page 3		see page 2		see page 3		see page 4

Dimensions



www.v2LightingGroup.com

2 ENTRY LIGHT, OPTION 2

Lighting Group

Project

Job :

Type :

Part # :

CORE 300 LX sconce up + down

LED Options

Use the chart below to select an LED.
Use the resulting 6-number order code in the Output, CRI and CCT boxes in the “Ordering Logic” section on Page 1.

LED Specifications			Order Codes				Dimming Options		
Lumens	CRI	Wattage*	2700 K	3000 K	3500 K	4000 K	non-dim	phase / triac	0-10V
400	≥80	5.7	04 80 27	04 80 30	n/a	04 80 40	✔	✔	✔
700		9.7	07 80 27	07 80 30	n/a	07 80 40	✔	✔	✔
1000		13.0	10 80 27	10 80 30	10 80 35	10 80 40	✔	✔	✔
1300		17.8	13 80 27	13 80 30	13 80 35	13 80 40	✔	✔	✔
700	≥95	13.4	07 95 27	07 95 30	n/a	07 95 40	✔	✔	✔

*add 14% for total fixture wattage including LED Driver

Higher lumen options are available in CORE 400 series.

Recessed wall luminaires with directed light

Housing: Constructed of die-cast and aluminum with integral wiring compartment. Mounting tabs provided.

Enclosure: One piece die-cast aluminum faceplate. Clear tempered glass; .125" thick, machined flush to faceplate surface. Faceplate is secured by two (2) flush, socket head, stainless steel captive screws threaded into stainless steel inserts in the housing casting. Continuous high temperature, molded silicone rubber gasket for weather tight operation.

Electrical: 11.2 W LED luminaire, 14.5 total system watts, -30°C start temperature. Integral 120V-277 V electronic LED driver, 0 -10 V dimming.The LED and driver are mounted on a removable plate for easy replacement. Standard LED color temperature is 3000K (available in 4000K; add suffix K4).
Note: Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

Finish: Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

UL listed, suitable for wet locations and for installation within 3 feet of ground. IC rated. Protection class: IP65.

Luminaire Lumens: 342
Tested in accordance with LM-79-08

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:

		Lamp	A	B	C
2384 LED	ADA	11.2 W LED	12½	2¾	2½

BEGA-US 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 www.bega-us.com

346 STEP/FOUNTAIN/LOW WALL LIGHT

Specialized Lighting Solutions, Inc.

LINDA TRANSPARENT DIRECT-INDIRECT DISTRIBUTION

LINDA TRANSPARENT: For use in car-parks or environments where indirect ceiling and diffused direct lighting is required to supply uniform illumination.

MECHANICAL CHARACTERISTICS:

- **Transparent** housing in self-extinguishing injection molded UV stabilized Polycarbonate.
- **Gasket :**Molded one piece injected long life sealing foam gasket provides.
- **IP65** watertight seal.
- **Diffuser: Transparent** Self-extinguishing injection molded poly-carbonate, UV stabilized, with smooth external surface and differ-entiated prismatic internal surface.
- **Gear-tray reflector unit:** reduced width for a greater indirect distribution, in hot galvanized steel, pained in white polyester, fixed to the housing by means of snap-lock devices in steel. Hinged opening for simple maintenance and installation.
- **Snug fit snap-lock clips**, in ***stainless steel***, for diffuser's mounting, vandal-proof opening.

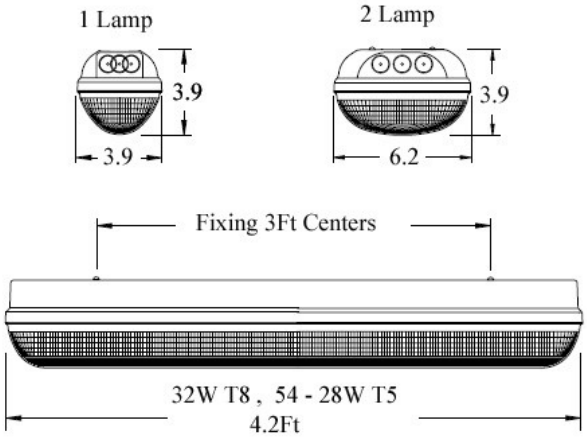
Installation:
Linda offers **quick** and **safe** installation with various types of fixings. The Luminaries are supplied with two types of mounting devices:

Ceiling:
Provided with Pair of metal brack-ets supplied for quick installation.

Suspended:
Hook or chain mounting. Provided with a Pair of steel springs sup-plied for quick install

Features:

- **REFLECTORS**
  A selection of optional easy to install reflectors for a variety of applications. (See pages 3-4).



ORDERING DETAILS: (DESCRIPTION)	ORDERING NUMBER	OPTIONS
3F LINDA TRANSPARENT 1x32 T8	**SLS-LTR-1x32W-T8-xx**	**EBP-Emergency Battery Pack (Consult Factory)**
3F LINDA TRANSPARENT 2x32 T8	**SLS-LTR-2x32W-T8-xx**	**Reflector Options:**
3F LINDA TRANSPARENT 1x28 T5	**SLS-LTR-1x28W-T5-xx**	**(16MRA, 16RTA, 16NBH, 16FGP, 16REC, 16TLS,**
3F LINDA TRANSPARENT 2x28 T5	**SLS-LTR-2x28W-T5-xx**	**16QST, 16THO, 16UCL, 16GDM, 16ZOQ, 16NQE)**
3F LINDA TRANSPARENT 1x54 T5	**SLS-LTR-1x54W-T5-xx**	
3F LINDA TRANSPARENT 2x54 T5	**SLS-LTR-2x54W-T5-xx**	

www.slsnw.com
640 NW Silverado Drive, Beaverton OR 97006 Tel: 503-530-8908 Fax: 503-531-0711

Specialized Lighting Solutions, Inc.

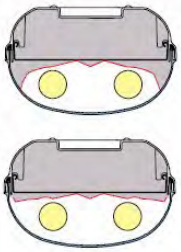
LINDA TRANSPARENT DIRECT-INDIRECT DISTRIBUTION

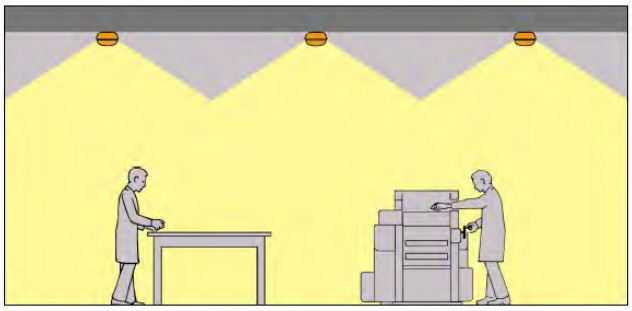
Reflector Accessories

By using **Parabolic Asymmetric Reflector** in high-reflectance aluminum for T8 lamps and for T5 lamps, the luminaries' luminous efficiency is increased thus optimizing illumination **in the usable working area** and allowing a consequent saving in energy and operating costs.

Wide reflectors

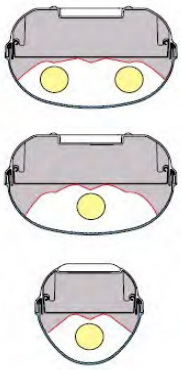
Application in rooms with **height range from 9 to 18 feet.**

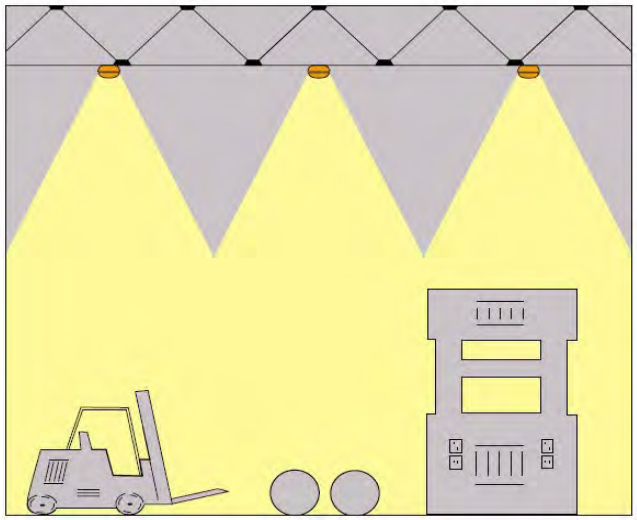




Concentrated reflectors

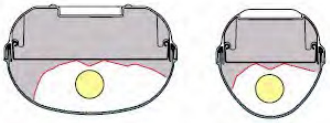
Application in rooms with height **exceeding 12 feet** or where **higher quality illumination** is required.

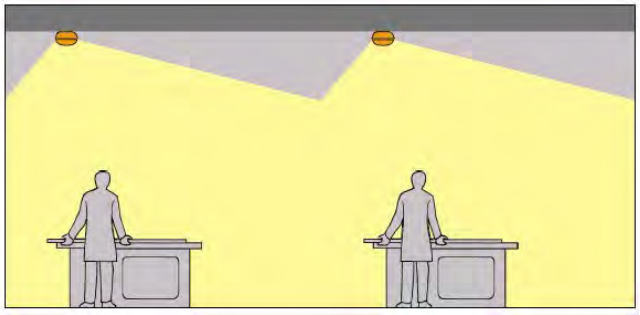




Asymmetric reflectors

Application in rooms where there is a need for **precise focusing of the luminous flow** on the working area.



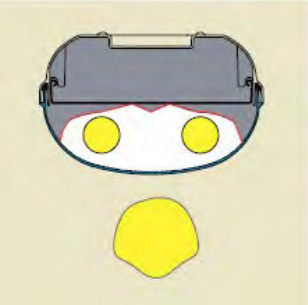


www.slsnw.com
640 NW Silverado Drive, Beaverton OR 97006 Tel: 503-530-8908 Fax: 503-531-0711

5 GARAGE LIGHT

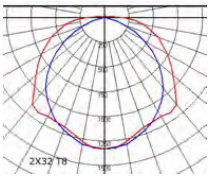
Specialized Lighting Solutions, Inc.

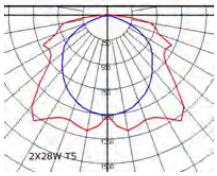
LINDA TRANSPARENT DIRECT-INDIRECT DISTRIBUTION



Parabolic flow reflector wide direct distribution, for luminaires 6 inches wide.

Luminaire	Reflector Code
2x32 T8	16 MRA
2x28 T5HE	16 RTA
2X54 T5HO	16 RTA

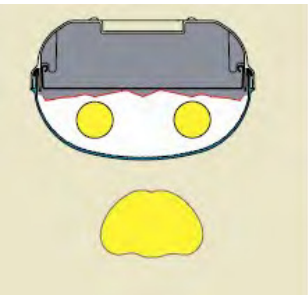




IES File No.

5020166 - 3F Linda 2x32+16MRA

5020666 - 3F Linda 2x28 T5 HF+16RTA



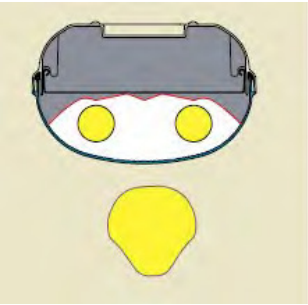
Parabolic flow reflector super-wide direct distribution, for luminaires 6 inches wide.

Luminaire	Reflector Code
2x32 T8	16 NBH
2x28 T5HE	16 FGP
2X54 T5HO	16 FGP

IES File No.

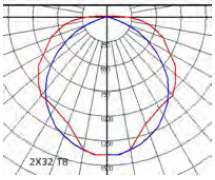
- 3F Linda 2x32+16NBH

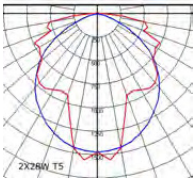
- 3F Linda 2x28 T5 HF+16FGP



Parabolic flow reflector concentrated direct distribution, for luminaires 6 inches wide.

Luminaire	Reflector Code
2x32 T8	16 REC
2x28 T5HE	16 TLS
2X54 T5HO	16 TLS

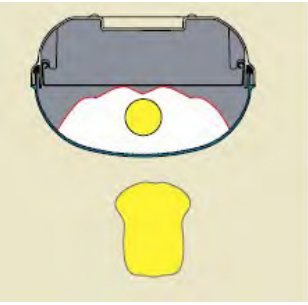




IES File No.

5010165 - 3F Linda 2x32+16REC

5020667 - 3F Linda 2x28 T5 HF+16TLS



Parabolic flow reflector concentrated direct distribution, for luminaires 6 inches wide.

Luminaire	Reflector Code
1x32 T8	16 QST
1X54 T5HO	16 QST

IES File No.

- 3F Linda 1x32+16QST

www.slsnw.com
640 NW Silverado Drive, Beaverton OR 97006 Tel: 503-530-8908 Fax: 503-531-0711

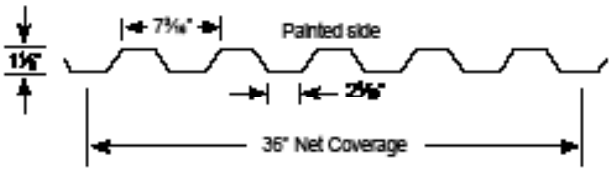
Reversed HR-36® Wall

AEP SPAN

Reversed HR-36 is an economical, structural, exposed-fastener wall panel suitable for general usage.

Reversed HR-36 Wall (typical wall applications)

Reversed HR-36 is ideal for architectural, commercial, industrial and agricultural wall applications. Can be installed as a vertical or horizontal wall.



Properties									Standard Finishes	
Gauge	Base Steel Thickness (in)	Yield (ksi)	Tensile (ksi)	Wt. (lbs/ft²)	I+ (in⁴/ft)	S+ (in³/ft)	I- (in⁴/ft)	S- (in³/ft)	Metallic Coating	Paint System
29	0.0139	80	82	0.75	0.0554	0.0406	0.0579	0.0483	AZ50	ColorGuard™ *xt*
26	0.0173	80	82	0.95	0.0707	0.0538	0.0736	0.0642	AZ50	Cool Dura Tech® *nt*
24	0.0232	50	65	1.25	0.1127	0.1121	0.1131	0.1239	AZ50	Cool Dura Tech® 5000 (polyvinylidene fluoride) or Dura Tech *mx* (metallic polyvinylidene)
22	0.0294	50	65	1.57	0.1467	0.1544	0.1467	0.1686	AZ50	
20	0.0354	40	55	1.92	0.1867	0.2076	0.1844	0.2263	G90	
18	0.0459	40	55	2.46	0.2500	0.2947	0.2456	0.3107	G90	

NOTES: The moments of inertia, I+ and I-, presented for determining deflection are: $(2I_{Effective} + I_{Gross})/3$

standard features

- Custom manufactured sheet lengths from 5'-0" to 45'-0."
- Available in 26ga, 26ga, 24ga and 22ga in standard finishes – refer to AEP Span Color Charts for full range of color options and paint systems.
- 20ga available in Bare Zincalume® plus.
- Zincalume coated substrate, per ASTM A-792, is standard and backed by a corrosion warranty on painted or unpainted panels.
- Meets IBC requirements for wall and roof panels in accordance to Chapters 14 & 15.
- All colors meet a minimum SRI of 29 and one color, Regal White has a SRI of 85.

optional features

- Short cut sheets from 5'-0" to 1'-0". Additional fees and lead times may apply.
- 20ga available in standard colors subject to a minimum order size of 4,500 square feet and longer lead times.
- 18ga available in bare G-90 galvanized and standard colors subject to a minimum order size of 4,500 square feet and longer lead times.
- Custom colors, thick film primer and/or clear coat paint finishes available. Subject to 4,500 square feet minimum order.*
- Perforation options available for an additional charge. Minimum order size 1,500 sq feet. Select from standard perforation patterns with open areas of 7.8%, 13.8%, 23.4%, 30.6% or 41.4%.*
- Stucco embossed available on 20ga, 26ga, 24ga and 22ga. Subject to min. order size of 1,500 square feet.

* Inquire with AEP Span representative regarding premium Vintage® and Dura Tech® Dimensional Prints availability.

Tacoma, WA & Fontana, CA Phone: 800-733-4955 Fax: 253-272-0791 www.aepspan.com

MECHANICAL EQUIPMENT SCREEN

DAVIS DOOR SERVICE, INC.

Phone: (206) 324-9101
Toll-Free: (800) 561-6765
Fax: (206) 324-9104
E-mail: info@davisdoor.com

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Commercial Only

Check out our new slideshow presentation of our vertical lift gates!

Davis Door Service is an extended family of professional men and women dedicated to providing quality, **commercial** overhead and **commercial** pedestrian door sales, installation, maintenance, and repair. Since 1959, we have provided the Pacific Northwest with responsive service and quality products at a fair price and honest value ... satisfaction guaranteed.

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GARAGE DOOR


DERO
ULTRA SPACE SAVER
• Maximum bike parking capacity
• User-friendly, vertical storage
• U-lock compatible with nearly any bike
The Dero Ultra Space Saver is extremely user-friendly and allows easy access to bikes. It provides convenient and ample space for u-lock security on nearly any bike, including bikes with fenders and fork shocks. Thanks to design enhancements, the double-sided Dero Ultra Space Saver parks more than double the capacity of a standard bike rack.
The Dero Ultra Space Saver is an easy to install, modular system. It can be made to fit in nearly any space. Options include wall-mount, floor-mount, and double-sided. Call Dero for a FREE custom room layout.
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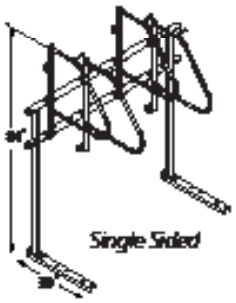
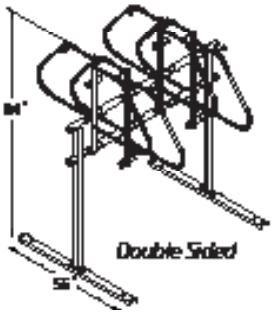
Printed on recycled paper

BIKE RACK

ULTRA SPACE SAVER

Specifications and Space Use





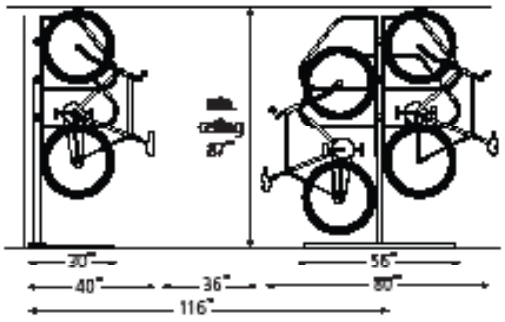
Optional tire-catches for rear wheels

Product
Dero Ultra Space Saver
As manufactured by Dero Bike Racks

Capacity
Modular construction
1 Bike per arm

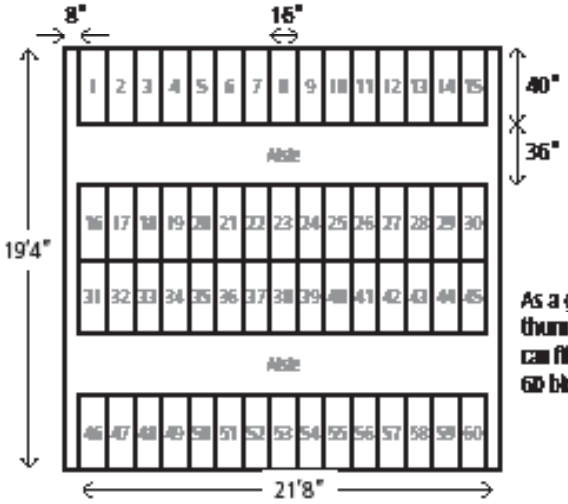
Materials
Hanger is 1" diameter tube with ½" steel rod and retaining disk at each end.
Upright is 2" square tube.
Feet are AISI C3 x 4.1 galvanized steel channel.
Crossbeams are 1.25" sched. 40 galvanized pipe (1.660" OD)
Spacers are 2.375" OD plastic tubes with .218" wall thickness.

Finishes
Black powder coat
Cross bars: hot dipped galvanized
Hanger rods: rubber coated
Spacers: plastic



Installation Methods
Floor mounted Ultra Space Savers have steel channel feet (30" for single sided and 56" for double sided units) which must be anchored to the floor. A wall mounted unit which contains special brackets is also available.

Space Use and Setbacks
See diagram at left



As a general rule of thumb, this space can fit approximately 60 bicycles.

Estimating Your Bike Capacity

Estimating the maximum number of bikes you can park using an Ultra Space Saver in a typical rectangular space is usually fairly straight forward.

The Ultra Space Saver parks one bike every 16" with a typical bike extending out 40" from the wall. Leave a 36" aisle between rows. Add an 8" buffer on each end of a run to allow enough space for handlebars.

If you have a large space, you may be able to fit in double rows of Ultra Space Savers.

Let us Help! As a free service, Dero will provide a complete CAD layout of your space. Just send us the dimensions of your room, being sure to note the location of doors, columns, etc. and let us maximize your bike storage capacity.

DERO BIKE RACKS

www.dero.com 1-800-891-6745

BIKE RACK

PUBLIC RIGHT-OF-WAY PERFORMANCE CRITERIA AND STANDARDS

ELEMENTS	CRITERIA AND STANDARDS	
Public Art	Include artists in projects at the onset utilizing the City's 2 percent for art program. Consult with the Regional Arts and Culture Council (RACC) to integrate works of art into the public right-of-way. Potential sites or projects might include portal and gateway design, pedestrian streets, special intersections and accessways, special streetscape features and design near neighborhood parks,street furnishings, traffic circles, bollards, street signs, inlays, stormwater features, and manhole covers.	
Street Furniture	The intent is to have consistency of standards throughout the entire district for all street furniture. Maintenance of these furniture amenities (benches, thrash receptacles, banners, bollards, etc.) would be required of the adjacent property owner.	
	Benches	Landscape Forms "Austin" series or approved equal. Subject to revocable permit review.
	Tras h Receptacles	Landscape Forms "Austin" series or approved equal. Subject to revocable permit review.
	Street Name Signs	Street name signs are to be specific to the South Waterfront District in color and shape. The sign panel is to be a truncated ellipse (curved at top and bottom, straight on each end) no more than 7'-0" in length, either flag mounted or mounted to the mast arm at a location nearest the vertical pole. The background is to be charcoal grey, the text is to be white. Text sizes and layouts are to follow the City of Portland standards.
	Banners	As approved by Signals/Street Lighting Division of the City of Portland's Bureau of Transportation System Management.
	Bollards	Standard Precast Bollard: Architectural Area Lighting (AAL) #CB18R-36 with cutoff grill, flat top and metal halide lamp.
	Paint Color	Black, Wasser Code: W21.79 or approved equal • Traffic signal poles • Street light poles • Streetcar strain poles • Bus shelters • Benches • Bollards (if painted)
Constructability anad Maintenance	Align paving patterns that allow ease of access and minimize sawcuts necessary for utilities, maintenance and repairs.	

SITE FURNISHINGS

SITE FURNISHINGS

Sense of Place

We believe in the power of design and its ability to elevate public spaces. Landscape Forms provides great design, integrated product collections, and leading edge technology for creating a sense of place in outdoor environments.

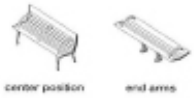
Austin™ Specifications

Seat

Austin benches are available in backed or backless, and in a selection of interior and exterior woods, as well as aluminum extruded boards. Unique cantilever style or freestanding/surface mount supports are cast iron.

Arm Options

Optional arms may be added to both ends, as well as the center position. Arms are available for either backed or backless benches. All arms are cast aluminum and attached to the seat boards.



Mounting Options

Austin benches with freestanding/surface mount supports ship with glides which may be removed for surface mounting. All cantilever supports must be surface mounted into concrete.

Austin may be specified with FSC Certified woods; call for pricing and lead times. Powdercoat finish on metal parts contains no heavy metals, is HAPS-free and has extremely low VOCs. Bench materials are 100% recyclable.

Landscape Forms is proud to specify FSC and Green-e certified paper. This paper meets the Forest Stewardship Council's standards for responsible forest management and is made using certified renewable energy.

Finishes

Interior woods are finished with Landscape Forms' exclusive LF-80 wood finish, a clear, catalyzed acrylic catalyzed acrylic lacquer. Special stain may be specified for an upcharge.

Exterior woods are unfinished and will weather to a soft pewter gray, requiring no future maintenance.

Metal is finished with Landscape Forms' proprietary Pangard II® polyester powercoat, a hard yet flexible finish that resists rusting, chipping, peering and fading. Call for standard color chart. A wide array of optional colors may be specified for an upcharge.

To Specify

Select the Austin bench in backed or backless option. Specify surface mount cantilever or freestanding/surface mount support. Specify wood type and/or powdercoat color. Specify number of arms. Benches may be specified in FSC certified woods. Visit landscapeforms.com; click Design Tools, Materials/Colors link for standard offerings, including FSC wood options.

www.landscapeforms.com
Download product photos, brochures, color charts, SketchUp components, technical information, CAD details, CSI specifications, assembly instructions.

Austin is designed by Robert Chipman, ASLA.
Specifications are subject to change without notice.
Austin is manufactured in U.S.A.
Austin design is protected by U.S. Patent Nos.
D481,210, D481,211, D482,885, D483,980.
Austin meets BIFMA performance and safety standards.
Location photography: Lady Bird Johnson Wildflower Center, Austin, TX
Landscape Forms supports the LAF at the Second Century level.
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431 Lawndale Avenue, Kalamazoo, MI 49048
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SITE FURNISHINGS

SITE FURNISHINGS

If you like the Austin bench, you'll love this litter.

Landscape architect Bob Chipman hit all the right notes in his design of a receptacle that's an ideal companion to its namesake bench and a handsome stand-alone solution for a variety of outdoor settings. Shared Austin themes are reflected in the tapered conical body and ribbing of the litter that echo the tapered supports of the bench, and in the "bird's mouth" lid that mirrors the relation between the bench seat and back. The ribbing frames the unit's side door, adding visual interest and providing functional support for the door hinges. A domed stationary lid shields contents from view and helps keep out rain and snow.

Metal is the world's most recycled material and is fully recyclable. Consult our website for recycled content by this product. Powdercoat finish on metal parts contains no heavy metals, is HAPS-free and has extremely low VOCs.

Our Purpose Is To Enrich Outdoor Spaces

We believe in the power of design and its ability to elevate experience and help create a sense of place in public environments. Our high quality products and outstanding customer service have earned us a reputation as one of the world's premier designers and manufacturers of outdoor commercial furnishings.

Austin Litter Receptacle Specifications

Top and side opening litters are available with or without lock. With a 34 gallon capacity, litter can be freestanding or surface mount. Fabricated with carbon steel body panels, cast aluminum top, and cast iron base. Litter is finished with exclusive Pangard II® powdercoat finish. Black polyethylene liner comes standard with litter. Shipped with freestanding glides that remain in place for surface mounting. Litter ships fully assembled.

Finishes

All metal is finished with Landscape Forms' proprietary Pangard II® polyester powdercoat, a hard yet flexible finish that resists rusting, chipping, peeling, and fading. Call for standard color chart.

To Specify
Select top or side-opening litter. Specify with or without lock. Select powdercoat color.

www.landscapeforms.com
Download product photos, brochures, color charts, SketchUp components, technical information, CAD details, CSI specifications, assembly instructions.

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SITE FURNISHINGS

FairWeather Site Furnishings - Commercial Bike Racks / Guards Page 1 of 1

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Model BR-3 Bike Rack

This inverted U shaped BR-3 bike rack works well where space is limited. Made from 2" schedule 40 pipe our U-style bicycle rack is durable and easy to use.

cut sheet

Did you know?
Leader is a green company.

Options

• Metal Colors
• Mounting Styles
  ◦ Surface
  ◦ Permanent embed
• Base cover
• Corrosion resistant undercoat (strongly recommended)
• Hot dip galvanizing

Features
• 2" schedule 40 pipe. • Height: 34"

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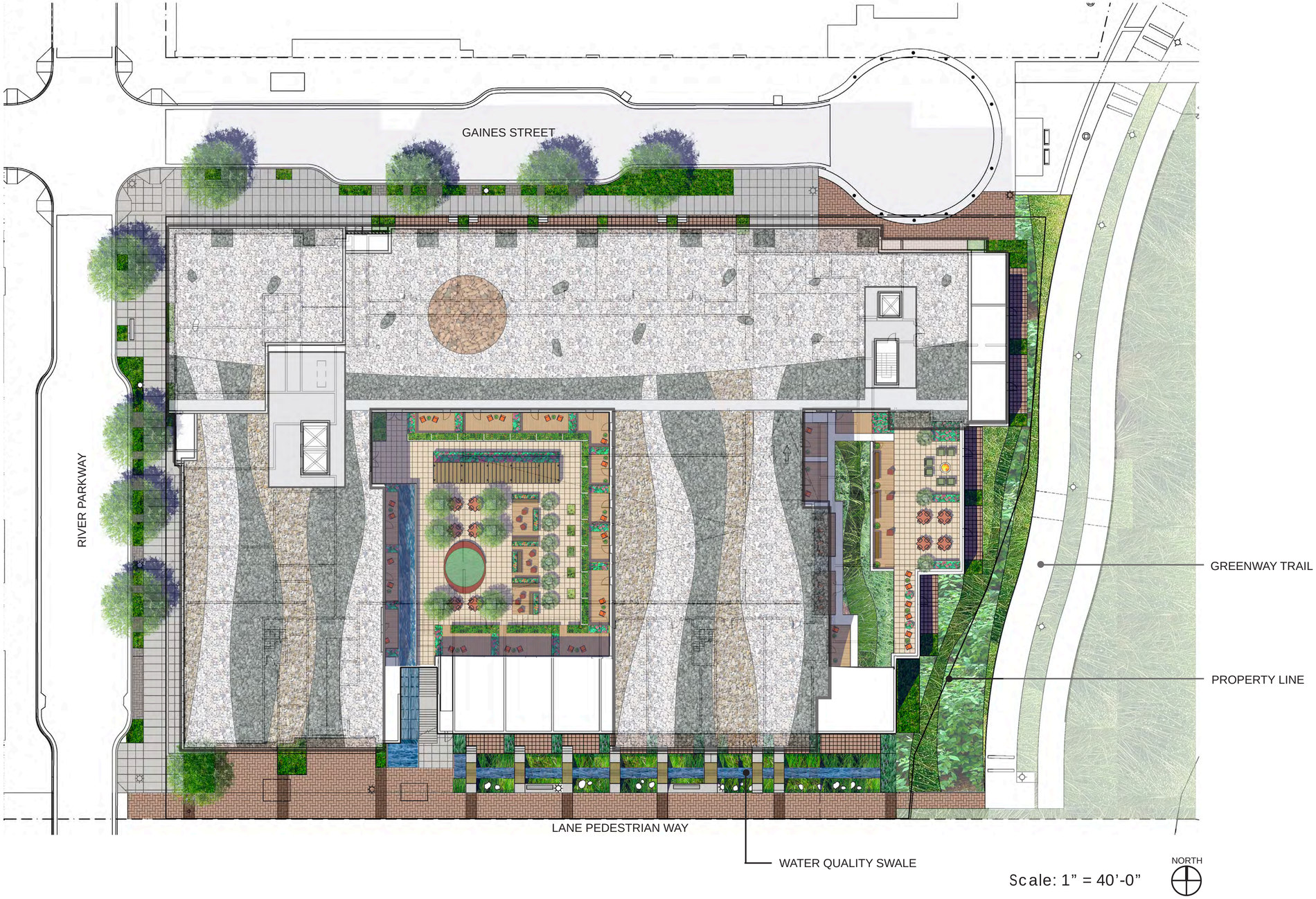
Current LEAD TIME 6 to 8 Weeks as of March 24th, 2014
Ask about our Quick Ship Products

FairWeather Clearance and Foundry Quick Ship Products

Most FairWeather benches are ADA compliant.

http://www.fairweathersf.com/bike_racks/index.php?model=BR-3 3/24/2014



OVERALL SITE PLAN

MATERIALS

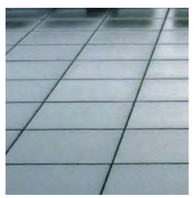
A. Street Light

B. Bike Rack (16 Total)

C. Bench

D. Sand Set Pavers

E. Bench on Precast Wall



F. 18”x18” Pedastal Paver

Scale: 1” = 40’-0”

NORTH

PLANT LIST

Street Trees

Zelkova

Black Tupelo

ROW Planting

Lavender

Boxleaf Hebe

Dwarf Maiden Grass

Creeping Raspberry

RIVER PARKWAY AND GAINES STREET

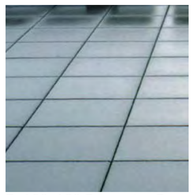
MATERIALS


A. Bollard & Pavers

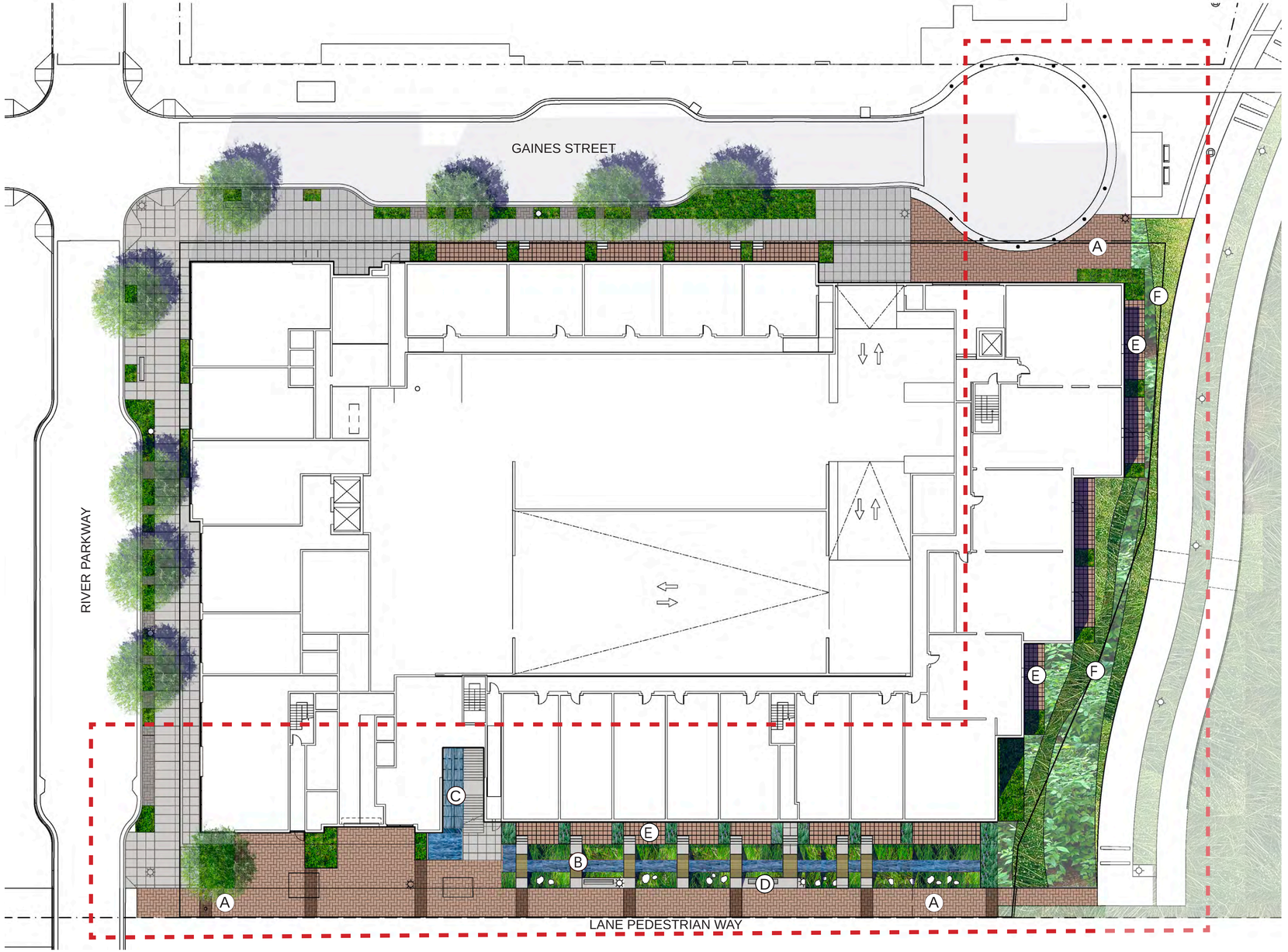

B. Storm Swale Bridge


C. Water Steps


D. Bench


E. 18"x18" Pedastal Paver


F. Cor ten Wall



Scale: 1" = 40'-0"

NORTH

PLANT LIST

STORMWATER PLANTER

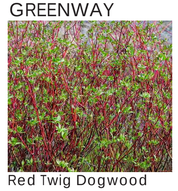

Kelsey Dogwood


Juncus


Carex


Variegated Sedge

GREENWAY


Red Twig Dogwood


Oregon Grape


Birchleaf Spirea


Thimbleberry

PATIO PLANTERS


Nandina


Boxleaf Hebe


Blue Fescue

LANE ACCESS AND WILLAMETTE GREENWAY

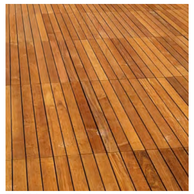
MATERIALS

A. Metal Planter

B. Wood Trellis

C. Fire Pit

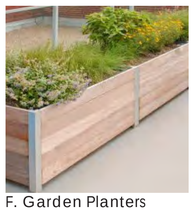
D. Basalt Seats



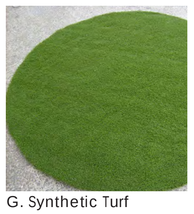
E. Wood Decking

Scale: 1” = 20’-0”

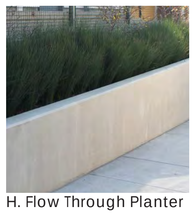
NORTH



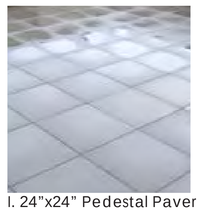
F. Garden Planters



G. Synthetic Turf

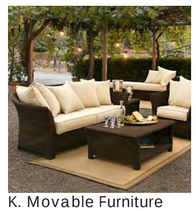


H. Flow Through Planter



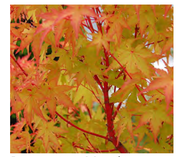
I. 24”x24” Pedestal Paver

J. Outdoor Kitchen



K. Movable Furniture

PLANT LIST



Japanese Maple

Italian Cypress

Boxleaf Hebe

Nandina

Lavender

Dwarf Fountain Grass

Blue Fescue

LEVEL 2 TERRACES

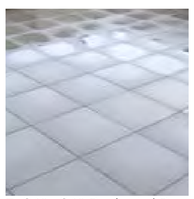
MATERIALS

A. Type A
Decorative Rock

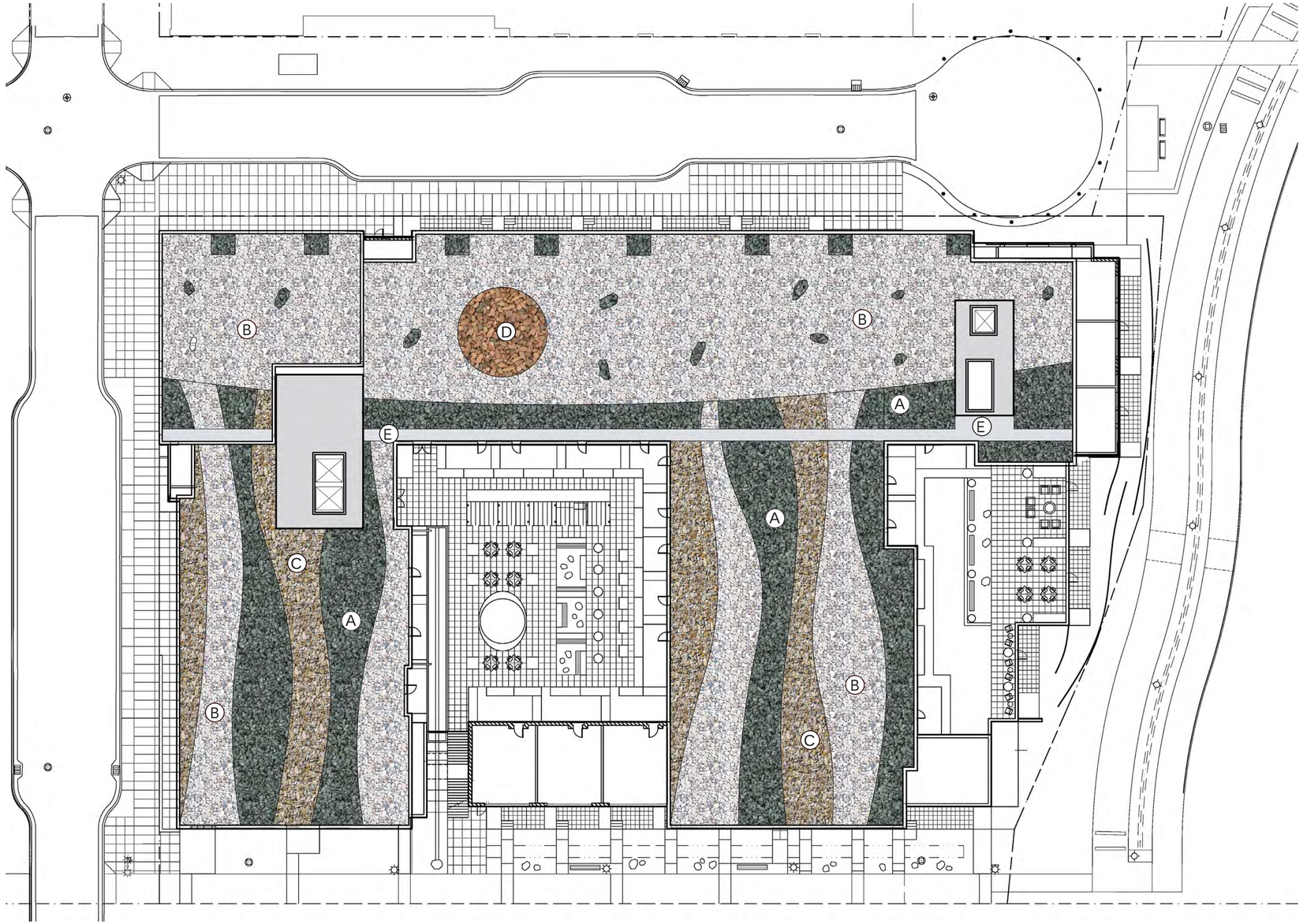
B. Type B
Decorative Rock

C. Type C
Decorative Rock

D. Overlapping Flagstone

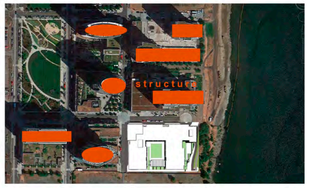


E. 24”x 24” Pedestal Paver



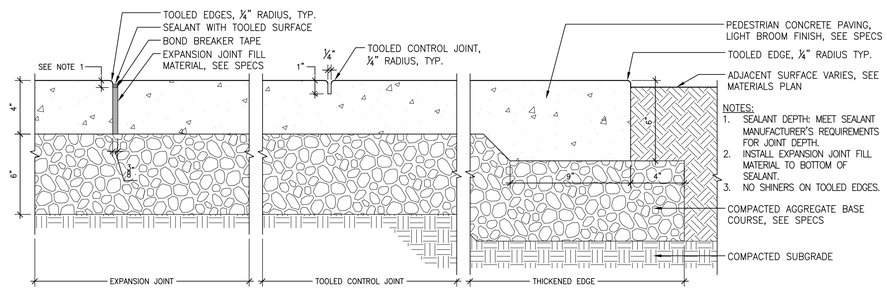
Scale: 1” = 40’-0”

NORTH

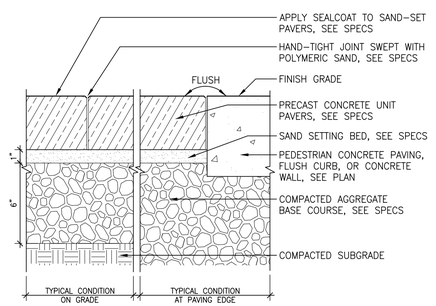


The rock design for the roof utilizes simple shapes that address the strong east/west building forms and the north/ south flow of the river.

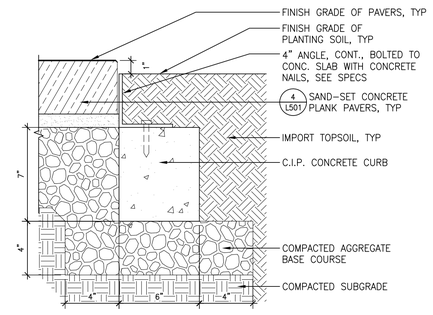
ROOF PLAN



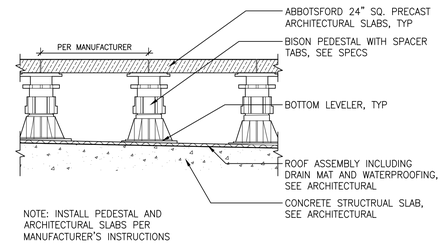
1 PEDESTRIAN CONCRETE PAVING — Section
SCALE: 3" = 1'-0"



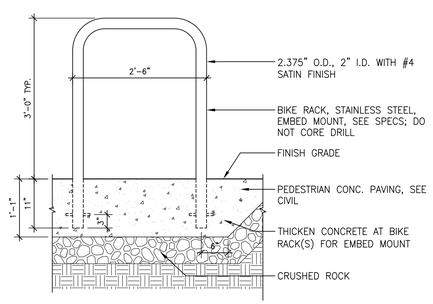
2 PRECAST CONCRETE UNIT PAVER — Section
SCALE: 3" = 1'-0"



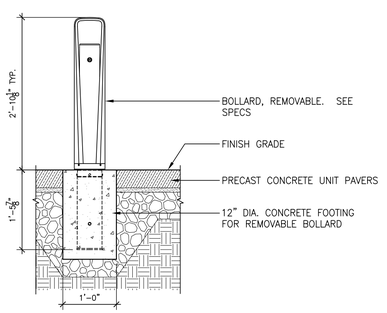
3 CONCRETE UNIT PAVER AT EDGE RESTRAINT — Section
SCALE: 3" = 1'-0"



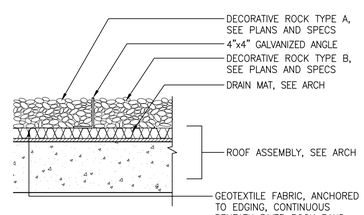
4 PEDESTAL PAVERS — Section
SCALE: 1 1/2" = 1'-0"



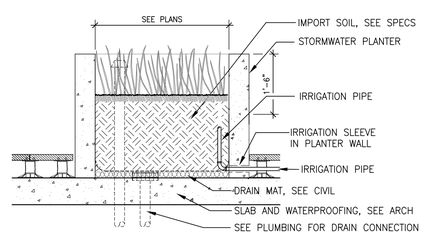
5 BIKE RACK — Section
SCALE: 1" = 1'-0"



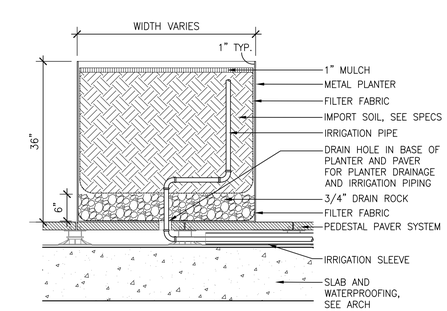
6 REMOVABLE BOLLARD — Section
SCALE: 1" = 1'-0"



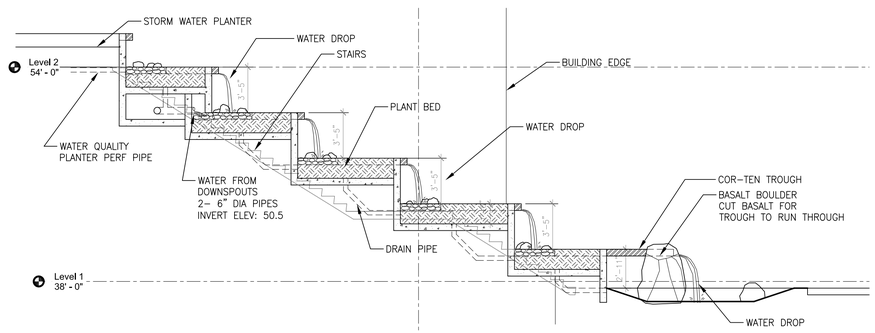
7 DECORATIVE ROCK — Section
SCALE: 1/8"=1'-0"



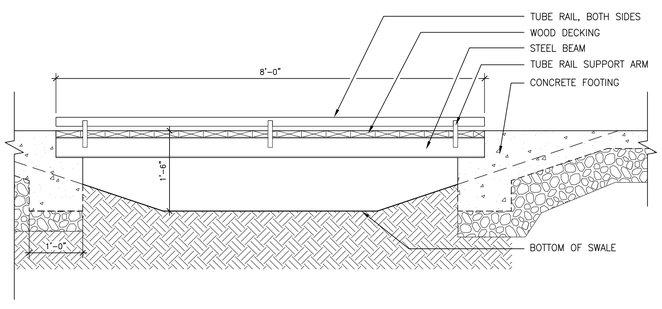
8 STORMWATER PLANTER — Section
SCALE: 3/4" = 1'-0"



9 STEEL PLANTER — Section
SCALE: 1"=1'-0"

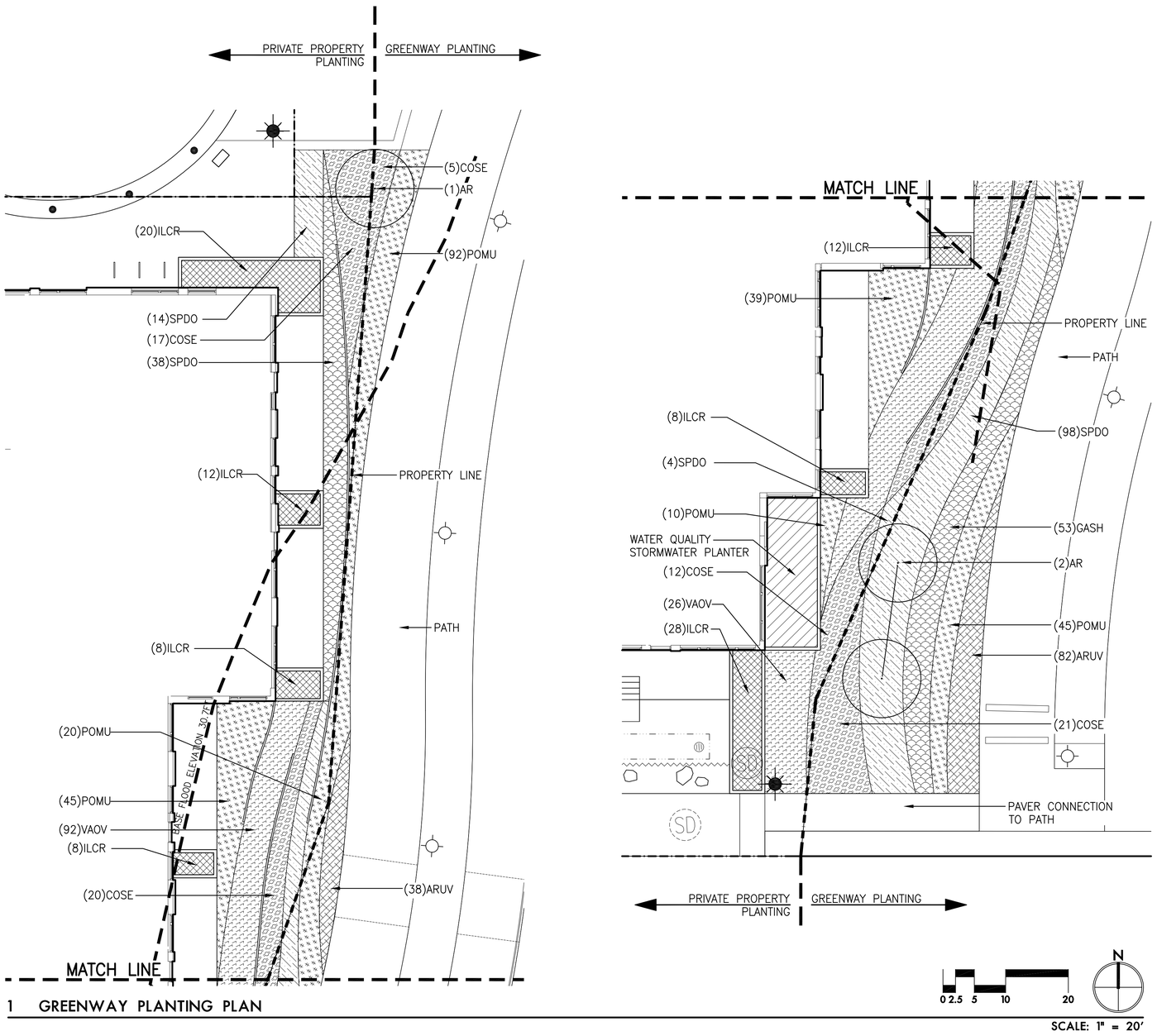


10 WATER STAIRS — Section
SCALE: 1/4" = 1'-0"



11 BRIDGE DETAIL — Section
SCALE: 1" = 1'-0"

SECTIONS / DETAILS



1 GREENWAY PLANTING PLAN

SCALE: 1" = 20'

PLANT SCHEDULE - GREENWAY (SUBAREA 3)

	SYMBOL	ABBR.	BOTANICAL NAME	COMMON NAME	SIZE/COND	SPACING
	TREES					
		AR	Alnus rubra	Red Alder	2" CAL/ B&B	AS SHOWN
	SHRUBS, GRASSES AND GROUNDCOVERS					
*		ARUV	Arctostaphylos uva ursi	Kinnikinnick	#1/CONT	18" O.C. Δ
*		COSE	Cornus sericea	Red-osier Dogwood	#1/CONT	3' O.C. Δ
*		GASH	Gaultheria shallon	Salal	#1/CONT	30" O.C. Δ
*		POMU	Polystichum munitum	Sword Fern	#1/CONT	2' O.C. Δ
*		SPDO	Spirea douglasii	Douglas Spirea	#1/CONT	30" O.C. Δ

* Denotes plant is on approved Table 510-3 (Planning and Zoning Code Title 33)

PLANT SCHEDULE - PRIVATE PROPERTY

	SYMBOL	ABBR.	BOTANICAL NAME	COMMON NAME	SIZE/COND	SPACING
	SHRUBS, GRASSES AND GROUNDCOVERS					
*		COSE	Cornus sericea	Red-osier Dogwood	#1/CONT	3' O.C. Δ
*		GASH	Gaultheria shallon	Salal	#1/CONT	30" O.C. Δ
		ILCR	Ilex crenata 'Helleri'	Japanese Holly	#1/CONT	2' O.C. Δ
*		POMU	Polystichum munitum	Sword Fern	#1/CONT	2' O.C. Δ
*		SPDO	Spirea douglasii	Douglas Spirea	#1/CONT	30" O.C. Δ
		VAOV	Vaccinium ovatum	Evergreen Huckleberry	#1/CONT	30" O.C. Δ

* Denotes plant is on approved Table 510-3 (Planning and Zoning Code Title 33)

GREENWAY NOTES

1. TOTAL GREENWAY AREA (SUBAREA 3): 2,214 SF
2. REQUIRED PLANTING:
   - 2.1. 1 TREE PER 1000 SF = 2.2 TREES (3 PROVIDED)
   - 2.2. 60% PLANTED IN SHRUBS = 1,130 SF (1,930 SF PROVIDED)
3. ALL PLANT MATERIAL PLANTED IN THE GREENWAY IS FROM TABLE 510-3. (ONLY 50% REQUIRED).
4. ALL PLANTING WILL BE PLANTED AT A SUFFICIENT SIZE AND NUMBER TO MEET THE COVERAGE STANDARDS WITHIN FIVE YEARS.

WILLAMETTE GREENWAY PLANTING PLAN