

Part 2 Due Diligence Study

Executive Summary

This report summarizes the work of BRIC Architecture and consultants in evaluating existing conditions of the Beaverton High School site. Particular focus was on the condition of the Merle Davies building and the Commons building for future use. In addition, the condition of the Main High School building was reviewed primarily from the lens of possible phased demolition. The site was reviewed from a civil, landscape, and utility perspective with a focus on understanding significant site constraints that should be taken into account as a site master plan is developed. We also looked at the existing site structures for general condition and suitability for future use.

The project team included BRIC Architecture, KPFF Consulting Engineers (civil and structural), Walker Macy (landscape), Interface Engineering (MEP and technology), Halliday Associates (food service), and Peter Meijer Associates (historical). Site visits occurred between August 11 and August 17.

The report includes high level recommendations, a summary of findings, and detailed consultant reports.

Based on our due diligence study, we make the following recommendations for potential use of this site for the replacement of Beaverton High School. More detailed recommendations can be found in the individual consultant reports.

Summary of Recommendations

- The Commons Building is in good condition and suitable for inclusion in the overall master plan of this project. Consideration should be given to replacing the existing mechanical units and it is likely that a roof replacement may be due in the general timeframe of construction of this project.
- The Merle Davies building has been well maintained and is in overall good condition. MEP systems, roof, and interior finishes are relatively current and functioning well. In 2002 the building was determined eligible for listing on the National Register of Historic Places. The building is also listed as a local landmark by the City of Beaverton. Neither of these preclude demolition (partial or full), however the future of this building as part of the overall site master plan will be addressed in the design process.
- The existing main high school building has been added onto over many years and has a complex relationship of building systems. Phased demolition is possible but may require temporary remodel of certain systems to keep portions of the building operable while other portions are removed.
- Athletic buildings are in good shape and should be considered for re-use in the new master plan for the site.
- Existing public utilities appear to be adequate to serve this project. Relocation of some on site public water lines may need to be considered as part of the master plan.
- All trees around the Merle Davies building are classified by the City of Beaverton as historic and preservation requirements will need to be considered when assessing impacts in these areas.
- Adequate parking exists on site for a 2,200 student high school. Existing parking lots will need to be upgraded to current stormwater standards if reused in the master plan.
- The re-development of the new high school will play an integral role within the downtown design project boundary, which lies east of the project site. Connections and relationships between the school property and adjacent uses now and in the future should be considered in support of that plan.

Architectural

COMMONS

Recommendations

Re-roof of the Commons building should be considered as part of the master plan of this project. In addition, the sky bridge pedestrian connection to the main building will likely be removed as part of the master plan which will require infill at that portion of the building.

Summary

The Commons building is in good condition. Interior finishes are durable and well taken care of and should last for many years to come. The exterior of the building appears to be exterior cement plaster which does not show significant cracking or deterioration. The roof of the building will be over 20 years old at the time of construction and will be reaching the end of its useful life.

MERLE DAVIES

Recommendations

If Merle Davies is to be re-used as part of the master plan the only architectural recommendations would be to remodel parts of the building if new uses are proposed for this building.

Summary

A more detailed summary of the building can be found in the Historical report. However, it appears that the building has received significant interior remodel in recent years (most recently in 2009/2010) and is in overall good condition. Exterior and interior finishes are in good condition and the building received a new roof in 2010, which should have a life span of another 10 – 15 years if well maintained.

SITE BUILDINGS

Recommendations

We recommend demolition of the West Annex building on the west side of Erickson. Some athletic buildings could use minor remodel / upgrades and can be reviewed for upgrades after a preliminary master plan is developed.

Summary

The majority of athletic buildings appear to be in adequate shape. In particular the football concessions building is fairly recent construction and is in good condition. The West Annex building on the west side of Erickson is old and would require upgrade to interior and exterior finishes if it were to be used as part of the master plan. However, it does not appear to have enough value to be part of a future master plan for BHS.



Civil

RECOMMENDATIONS

The following items are key issues to consider in the master plan process:

Parking: The cafeteria project received city approval in 2002 for 432 spaces. This included the 10% parking reduction for the transit plaza, and was based on a student population of 2,200.

Pedestrian Access: City of Beaverton code requires consideration of pedestrian access from transit stops and public ways. This will need to be balanced with desired school security measures.

Water: Potable and Fire Water supplied by city of Beaverton main lines appear to be adequate to meet code requirements for this project. It is possible that some on site public water lines will need to be relocated to accommodate new development. It is also possible that water taps into public utilities in Stott and Erickson may need to be relocated to serve the new development.

Stormwater: For the main campus, it appears that there is currently no treatment or detention being provided for a majority of the storm water runoff from the site. City of Beaverton of adopted CWS strategies which will be required to be implemented on this project. There are four possible strategies which are detailed further in this report.

Sewer: Existing sanitary sewer lines in Erickson and Stott appear to be adequate for this project.

Flood Plain: The finished floor elevation of the new building will need to be a minimum of 1 foot above the floodplain base flood elevation as agreed upon with the City's floodplain manager.

Trash & Recycling: New refuse areas established as part of the new master plan concept will need to incorporate covered structures and sanitary trapped drains.

EXISTING HIGH SCHOOL FACILITY

The existing Beaverton High School campus is located in an urban area near the center of Beaverton south of the intersection of SW Farmington Road and SW Cedar Hills Boulevard. The Beaverton High School campus consists of six tax lots in the area. All tax lots are adjacent to either SW Erickson Avenue or SW Stott Avenue and the school has entrances off both streets.

The campus consists of the main high school building, a cafeteria building, the Merle Davies Building, a classroom annex building, athletic fields, parking lots, and several other smaller structures. The existing Beaverton High School was originally built in 1915 and several additions have been constructed over the years.

The Merle Davies Annex is registered as historic with the City of Beaverton but is not listed on the National Registry of Historic Places.

The main school campus and the athletic fields are located in zone R10 and the parking lots located east of SW Stott Street is located in zone RC-OT.



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ENVISIONED HIGH SCHOOL FACILITY AND BOND PROGRAM

The envisioned bond project would include replacing the existing high school building with a new high school. The existing cafeteria building will likely be protected. The current bond program does not anticipate any permanent impacts or changes to the athletic facilities.

The high school campus will need to feature phased construction to allow for continual occupation during the school season. This will require the project to feature phased construction and the existing high school will be left in place during the construction of the new high school.

DESIGN JURISDICTION

The site is within the City of Beaverton and is within the City’s design jurisdiction. The standard City of Beaverton development standards will apply to the site design. The City of Beaverton has adopted the current version of the Clean Water Services Design and Construction Standards, Resolution and Order. All surface water management (SWM) facilities must be in substantial conformance with the CWS Standards. The following list summarizes the design development standards that will be used.

- | | |
|---------------------------------------|--|
| 1. Parking/Landscaping: | Beaverton Development Code |
| 2. Storm Drainage and EDM Supplements | Clean Water Services (CWS) |
| 3. 1200C/Erosion Control | Oregon Department of Environmental Quality (DEQ) |
| 4. Sanitary Sewer and EDM Supplements | Clean Water Services (CWS) |
| 5. Water Supply Manual (EDM) | Beaverton Engineering Design |
| 6. Fire System | Tualatin Valley Fire and Rescue |

ADJACENT PUBLIC ROADWAYS

There are four main public roadways that surround the Beaverton High School site. These roads are listed below. There are several other minor streets that meet the four listed below.

1. SW Farmington Road (Functional Classification: Arterial)
2. SW Erickson Avenue (Functional Classification: Collector)
3. SW Stott Avenue (Functional Classification: Local)
4. SW 6th Street (Functional Classification: Collector)

City of Beaverton Standard Drawings showing the typical street cross sections can be seen in Exhibit 1.

EXISTING ONSITE VEHICLE PARKING

There is limited on-site parking located south and east of the Merle Davies Annex. There is additional parking along the SW 2nd Street campus extension and roundabout, which is located northwest of the existing high school building and west of the Cafeteria building. There is also a small parking lot southeast of the existing high school building and west of the termination of SW Stott Avenue. There are five additional parking lots owned by the school but located off the main campus. Three of the parking lots are on the west side of SW Erickson Avenue within the Sports Complex and two are located east of SW Stott Avenue, between SW 1st and SW 3rd Streets. Lastly, there are three parking spaces located northwest of the football field near the maintenance building. The approximate parking count for the existing school site is summarized in the table below. The areas of existing parking are shown in the accompanying drawing (see Exhibit 2).

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Table 1: Summary of existing parking lots

Lot #	Building / Site Area	Location of Parking Area	Number of Parking Stalls
1	Merle Davies Annex (south)	South side of the Merle Davies Building.	72 standard 4 ADA stalls
2	Merle Davies Annex (east)	Parallel along east side of building.	16 standard
3	SW 2nd Street Roundabout	Northwest side of existing high school building	30 standard 4 ADA stalls
4	SE of Main Building	SE of Main Building	16 standard
5	Sports Complex (north)	West of school across SW Erickson Avenue south of SW 2nd Street	70 standard 4 ADA stalls
6	Sports Complex (middle)	West of school across SW Erickson Avenue north of the tennis courts	57 standard 2 ADA stalls
7	Sports Complex (south)	West of track across SW Erickson Avenue south of the tennis courts	68 standard
8	SW Stott Street Lot (north)	East of cafeteria across SW Stott Street between 1st and 2nd Streets	23 standard
9	SW Stott Street Lot (south)	East of school across SW Stott Street between 2nd and 3rd Streets	52 standard
10	NW Corner of Track	NW corner of track and SW corner of existing school	3 standard
			407 standard 14 ADA stalls

CITY OF BEAVERTON PARKING ANALYSIS

Parking requirements are identified in the Beaverton Development Code, Chapter 60.30: Off-Street Parking. A review of the applicable potential requirements for redevelopment of the high school was developed based on the existing site zoning category of R10. Per Table 60.30.10.5.A, the minimum parking ratio for educational institutions (high schools) is 0.2 spaces per number of FTE students and staff. The maximum allowable parking ratio is 0.3 spaces per number of FTE students and staff.

Using the standard 'Educational Institutions' category, a base parking requirement calculation will be developed for the proposed Beaverton HS program. For example, if preliminary programming indicates that the project will be designed around an expected FTE population of approximately 1,500 students and 120 staff, using these criteria, the minimum base parking calculation would equal **324 spaces** and the maximum parking calculation would equal **486 spaces**.

ADDITIONAL PARKING REQUIREMENTS

In addition to the minimum base parking count requirement, Section 60.30.10 outlines the additional parking standards listed below.

1. All required off-street parking spaces shall be provided on the same property as the use requiring the spaces, with the following exceptions:

- a. The decision-making authority may permit the required off-street parking spaces in Residential, Commercial, and Industrial zoning districts to be on any property within 500 feet of the property where the use requiring the parking is located.
 - b. By approving a Temporary Displaced Parking application, the decision-making authority may permit parking displaced by development to be located off site temporarily.
2. Compact car parking spaces may be allowed as follows:
 - a. Twenty percent (20%) of the required vehicle parking spaces for long-term or designated employee parking lots may be compact spaces. The Facilities Review Committee may recommend allowing more than twenty percent (20%) of the required parking spaces to be used for compact car parking when the applicant shows that more compact car spaces are appropriate.
 - b. The Facilities Review Committee may recommend allowing the required parking spaces for short-term parking to include spaces for compact cars if the applicant shows that there will be adequate parking for non-compact cars and a method of enforcing the compact car parking is available.
 - c. Compact car parking spaces shall be generally grouped together and designated as such.
 3. Carpool and Vanpool Parking Requirements:
 - a. In industrial, institution, and office developments, including government offices, with 50 or more employee parking spaces, at least three percent (3%) of the employee parking spaces shall be designated for carpool and/or vanpool parking. For the purposes of this section, carpool is defined as two or more persons per car, and vanpool is defined as five or more persons per van. The carpool/vanpool spaces shall be clearly marked and signed for reserved carpool and/or vanpool parking. The reserved carpool/vanpool parking time may be specified so that the reserved spaces may be used for general parking if the reserved spaces are not occupied after a specific period of time, which shall be clearly posted on the sign.
 - b. Location – Designated carpool/vanpool spaces shall be the closest employee motor vehicle parking spaces to the building entrance normally used by employees, except for the motor vehicle parking spaces designated for persons with disabilities, which shall be the closest to the building entrance.

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PARKING LANDSCAPING STANDARDS

Section 60.05.20(5) outlines the parking area landscaping design standards listed below.

1. Landscaped planter islands shall be required according to the following:
 - a. All uses in Commercial and Multiple Use zones, one for every ten (10) contiguous parking spaces.
 - b. All Conditional Uses in Residential zones, one for every twelve (12) contiguous parking spaces.
2. The island shall have a minimum area of 70 square feet, and a minimum width of 6-feet, and shall be curbed to protect landscaping. The landscaped island shall be planted with a tree having a minimum mature height of 20 feet. If a pole-mounted light is proposed to be installed within a landscaped planter island, and an applicant demonstrates that there is a physical conflict for siting the tree and the pole-mounted light together, the decision-making authority may waive the planting of the tree, provided that at least seventy-five (75%) percent of the required islands contain trees. Landscaped planter islands shall be evenly spaced throughout the parking area.
3. Linear raised sidewalks and walkways within the parking area connecting the parking spaces and on-site building(s) may be counted towards the total required number of landscaped islands.
3. A reasonably direct walkway connection is required between primary entrances, which are the main point(s) of entry where the majority of building users will enter and leave, and public and private streets, transit stops, and other pedestrian destinations.
4. A reasonably direct pedestrian walkway into a site shall be provided for every 300 feet of street frontage or for every eight aisles of vehicle parking if parking is located between the building and the street. A reasonably direct walkway shall also be provided to any accessway abutting the site.
5. Pedestrian connections through parking lots shall be physically separated from adjacent vehicle parking and parallel vehicle traffic through the use of curbs, landscaping, trees, and lighting, if not otherwise provided in the parking lot design.
6. Where pedestrian connections cross driveways or vehicular access aisles a continuous walkway shall be provided and shall be composed of a different paving material than the primary on-site paving material.
7. Pedestrian walkways shall have a minimum of a 5-foot-wide unobstructed clearance and shall be paved with scored concrete or modular paving materials. In the event that the Americans with Disabilities Act (ADA) contains stricter standards for any pedestrian walkway, the ADA standards shall apply.

PARKING AND PEDESTRIAN CIRCULATION

Section 60.05.20 outlines the circulation and parking design standards listed below.

1. Connections to the public street system: Pedestrian, bicycle, and motor vehicle connections shall be provided between the on-site circulation system and adjacent existing and planned streets as specified in Tables 6.1 through 6.6 and Figures 6.1 through 6.23 of the Comprehensive Plan Transportation Element.
2. Pedestrian connections shall be provided that link to adjacent existing and planned pedestrian facilities as specified in Tables 6.1 through 6.6 and Figures 6.1 through 6.23 of the Comprehensive Plan Transportation Element, and to the abutting public street system and on-site buildings, parking areas, and other facilities where pedestrian access is desired.

BICYCLE PARKING

On-site bicycle parking requirements are addressed in Chapter 60.30.05. The Chapter distinguishes between 'Short-Term' and 'Long-Term' spaces. Per Table 60.30.10.5.B, short-term spaces are not required for high schools. A minimum of one (1) long-term bike parking space is required at high schools for every 18 students.

Using the standard 'Educational Institutions: High School' category in Table 60.30.10.5.B, a base long-term bicycle parking calculation was developed for the proposed Beaverton High School program. Using the preliminary programming example of 1,500 students, the base long-term bicycle parking count calculation equals 84 bike spaces.

Unlike the vehicle parking analysis, there are no allowable code reductions for bike parking. There are, however, additional standards related to the configuration of required bike parking spaces.

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Per Chapter 60.30.05 of the Beaverton Development Code, Long-term bicycle parking spaces accommodate persons that can be expected to leave their bicycle parked longer than two hours. Cover or shelter for long-term bicycle parking shall be provided. School buildings are exempted from the requirement to cover long-term bicycle parking. Bicycle parking shall be designed, covered, located, and lighted to the standards of the EDM and Standard Drawings.

Per Section 340 of the EDM, the bicycle parking standards are as follows:

1. Bicycle parking shall be visible and conveniently located for cyclists.
2. Bicycle parking shall offer security in the form of either a stationary rack to which the bicycle can be locked, a bicycle locker, or inside a building or lockable enclosure.
3. Bicycle parking spaces shall not obstruct walkways.
4. Bicycle parking for multiple uses may be clustered in one or several locations.
5. Short-term bicycle parking is encouraged to be located on site within 50 feet of a primary entrance. If there are site, setback, building design, or other constraints, short-term bicycle parking shall be located no more than 100 feet from a primary entrance in the closest available area to the primary entrance as determined by the decision-making authority.
6. For buildings with multiple entrances, short-term bicycle parking spaces shall be distributed proportionately.
7. Directional signage to the bicycle parking should be provided if the parking is not directly visible and obvious from an entrance or public right-of-way.
8. Bicycle parking spaces shall be lighted to the standards of section 450 of the EDM.

ALLOWABLE PARKING REDUCTIONS

In addition, the chapter lists a number of allowable reductions in the base parking requirement calculation. Reductions listed below cannot exceed a combined fifteen percent (15%). Reductions specific to other zones have been omitted:

1. Vehicle Parking Reduction for Transit Amenities: any existing use or proposed use on an existing transit route may apply for and the City may reduce the number of required vehicle parking spaces by either five percent (5%) or ten percent (10%) through provision of a pedestrian plaza.

2. Reduction for Transportation Management Association Participation: The minimum number of off-street parking spaces may be reduced by as much as ten percent (10%), if the applicant agrees to participate in a Transportation Management Association program approved by the City for the area within which the project is located.
3. Reduction for Combination of Uses with Shared Parking: The minimum number of off-street parking spaces may be reduced by as much as thirty percent (30%) subject to all of the following:
 - a. The combination of uses will permit shared parking sufficient to justify a reduction in the parking standard and the design of the site and parking, and conditions of operation of parking agreed to by the applicant, will promote parking patterns and parking use consistent with the permitted reduction.
 - b. The probable long-term occupancy of the building or use, based upon its design, will not generate additional parking demand; and
 - c. The applicant agrees to participate in a Transportation Management Association approved by the City for the subarea within which the project is located.
4. Reduction for Substitution of Bicycle Parking: For uses located within a 1/4 mile radius of a transit stop, as measured from any portion of a parcel to the centerline of the nearest adjacent public right of way or the center of the station platform, the provision of bicycle parking may be used to reduce minimum vehicle parking requirements at a rate of two long-term bicycle parking spaces per vehicle space, but not more than five percent (5%) of the total number of required vehicle parking spaces.

Not all the reductions suggested above are applicable to the high school redevelopment project. The selection of applicable reductions is based on a number of site and program factors and will evolve during the design. Based on previous projects, an example calculation of how reduction factors might be applied to the Beaverton HS site appears below.

Base Requirement

Example Base Parking Requirement
= 1,620 FTE x 0.2 = 324 spaces

Reductions

Transit Amenities = 10% = (32 spaces)
Provide additional 32 bike spaces = 5% = (16 spaces)

Adjusted Total (15% Reduction) 276 spaces

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VEHICLE LOADING AND SOLID WASTE FACILITIES

Onsite vehicle loading requirements are addressed in Section 60.05.20(2).

1. All on-site service areas, outdoor storage areas, waste storage, disposal facilities, recycling containers, transformer and utility vaults and similar activities shall be located in an area not visible from a public street or shall be fully screened from view from a public street.
2. All loading docks and loading zones shall be located in an area not visible from a public street, or shall be fully screened from view from a public street.
3. Screening from public view for service areas, loading docks, loading zones and outdoor storage areas, waste storage, disposal facilities, recycling containers, transformer and utility vaults and similar activities shall be fully sight-obscuring, shall be constructed a minimum of one foot higher than the feature to be screened, and shall be accomplished by one or more of the following methods:
 - a. Solid screen wall constructed of primary exterior finish materials utilized on primary buildings.
 - b. Solid hedge wall with a minimum of ninety-five percent (95%) opacity within two (2) years.
 - c. Solid wood fence
4. Screening from public view by chain-link fence with or without slats is prohibited.

Onsite vehicle loading requirements are also addressed in Section 60.25. Per Table 60.25.15, schools with greater than 14,000 square feet are required to have one type B loading berth. A type B berth is required to be at least 30 feet long by 12 feet wide by 14 feet 6 inches high. It also requires a 30 foot maneuvering apron.

1. The off-street loading facilities required for the uses mentioned in this Code shall be in all cases on the same lot or parcel of land as the structure they are intended to serve. In no case shall the required off-street loading space be part of the area used to satisfy the off-street parking requirements.
2. No space for loading or unloading vehicles shall be so located that a vehicle using such loading space projects into any public street. Loading space shall be provided with access to any alley, or if no alley adjoins the lot, with access to a street. Any required front, side or rear yard

may be used for loading unless otherwise prohibited by this Code.

POTABLE & FIRE WATER SUPPLY

A diagram of the existing water services to the campus buildings and hydrants around the perimeter of the site is shown in the accompanying Exhibit 3.

Fire Hydrants: There are thirteen existing hydrants that have been located around the Beaverton High School campus. Three of these hydrants appear to be private and the rest appear to be public. The average spacing between the existing hydrants around the school is approximately 300-feet.

1. West side of the track along east side of NW Erickson Avenue (Public)
2. NW corner of the track near the site driveway (Private)
3. NW corner of SW 2nd Street and SW Erickson Avenue intersection (Public)
4. NW of the existing athletic buildings along north side of SW 2nd Street (Public)
5. NW of Baseball field along north side of SW 2nd Street (Public)
6. SW Corner of SW Farmington Road and SW Erickson Avenue (Public) FIRE HYDRANT #10
7. Near SW 2nd Street site extension and roundabout (Public)
8. SE corner of SW Farmington Road and SW Stott Avenue (Public)
9. NE corner of SW Stott Street and SW 1st Street (Public)
10. NE corner of SW Stott Street and SW 2nd Street (Public)
11. SW corner of SW Stott Street and SW 2nd Street (Public)
12. Near southern terminus of SW Stott Street (Private)
13. Near NE corner of track (Private)

Existing School Building: According to the 2008 remodel survey drawing, the main school building is currently served by two existing potable services fed from an existing main in SW Erickson Avenue to the west side of the building. The existing laterals are of an unknown size. The associated meter and backflow preventer assemblies for these services are accessible in vaults in the public right of way next to the building. According to the 2019 concession

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building as-built plans, the building is also fed by a fire water supply system consisting of a 4-inch FDC line and a 6-inch fire water sprinkler line which are fed from a 12-inch public water main located in a public water easement that runs between the cafeteria building and the main school building. The associated FDC and double check backflow preventer assemblies for these services are accessible in a vault on the property near the intersection of SW Stott Avenue and SW 2nd Street.

Existing Cafeteria Building: According to the 2019 concession building as-built plans, the cafeteria building is currently served by a 2.5-inch PVC potable service fed from a 12-inch public water main located in a public water easement that runs between the cafeteria building and the main school building. The associated 2-inch meter and backflow preventer assemblies for this service is accessible in vaults located near the SE corner of the cafeteria building. The building is also fed by a fire water supply system consisting of a 6-inch FDC line fed from the same 12-inch public water main. The associated FDC and double check backflow preventer assemblies for this service is accessible in a vault on the property near the intersection of SW Stott Avenue and SW 2nd Street. This is the same FDC vault that feeds the main school building.

Existing Concession Stand Building: According to the 2019 concession building as-built plans, the concession building is currently served by a 2-inch potable service fed from a 6-inch public water main located just north of the concession building, this public main is not shown on the 2008 remodel survey drawing. The public main runs approximately parallel to a private water line that is shown on the 2008 survey. The associated 1.5-inch meter and 2-inch backflow preventer assemblies for this service is accessible in vaults located near the NE corner of the track. The building does not appear to be fed by a fire water supply system.

Existing Maintenance Building: According to the 2008 remodel survey drawing, the maintenance building (west of the track) is currently served by a potable service fed from an existing private water main that runs between the north end of the track and the main building. Both the service and the private main sizes are unknown. The building does not appear to be fed by a fire water supply system.

Existing Merle Davies Annex Building: According to the 2008 remodel survey drawing, the Merle Davies Annex building is currently served by an unknown size potable service fed from a public water main located in SW Stott Avenue. The building is also fed by a fire water supply system consisting unknown size FDC line fed from a 12-inch public water main. The associated FDC and double check backflow preventer assemblies for this service is accessible in a vault on the property near the intersection of SW Stott Avenue and SW 2nd Street. This is the same FDC vault that feeds the main school building.

SANITARY SEWER

Sanitary sewer service for the Beaverton High School campus is provided by several public sewer mains that run in the public streets that border the school. The Merle Davies Annex, the cafeteria building, and a portion of the main building drain through a 6-inch sanitary sewer toward a 6-inch public sanitary sewer main in SW Stott Avenue. The rest of the main building, the maintenance building, and the concession building drain through a 8-inch sanitary sewer toward a 8-inch public sewer main in SW Erickson Avenue that ultimately drains to the west. According to the 2019 concession building as-built plans, the sanitary drainage from the concession stands uses a lift station. A diagram of the existing sewer system is shown in Exhibit 3.



Main building, Cafeteria, and Merle Davies FDCs

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STORM DRAINAGE

Storm drain service for the Beaverton High School campus is also provided by several public storm mains that run in the public streets that border the school. There also appears to be a public storm drain that crosses the site diagonally under the SW corner of the track. It is unclear whether or not this storm drain has an existing public easement.

For the main campus, it appears that there is currently no treatment or detention being provided for a majority of the storm water runoff from the site. It appears the area immediately around the 2019 concession stands drains to LIDA flow through planters for water quality treatment. It also appears that at least part of the area near the SW 2nd Street campus extension and roundabout drains to a water quality swale. A diagram of the existing storm drain system is shown in Exhibit 3.

The City of Beaverton has adopted the current version of the Clean Water Services (CWS) Design and Construction Standards. All surface water management (SWM) facilities must be in substantial conformance with the CWS Standards unless specifically modified in the City of Beaverton EDM.

Clean Water Services – Runoff Flow Control

Per CWS Design and Construction Standards Section 4.03, all projects which create or modify 1,000 or more square feet of impervious surface, or increase the amount or rate of surface water leaving the site, are required to implement or fund techniques to reduce impacts to the downstream receiving water body. The following techniques may be used to satisfy this requirement:

1. Construction of permanent low impact development approaches (LIDA) designed in accordance with Chapter 4 of the CWS Standards; or
2. Construction of a permanent stormwater detention facility designed in accordance with Chapter 4 of the CWS Standards; or
3. Construction or funding of a hydromodification approach that is consistent with a district-approved subbasin strategy; or
4. Payment of a hydromodification fee-in-lieu.

The City of Beaverton is moving towards a sub-basin strategy (option 3 above) for hydromodification. This would include the School District paying a fee to the city.

Clean Water Services Runoff Treatment

Per CWS Design and Construction Standards Section 4.04, all projects which create or modify 1,000 or more square feet of impervious surface, or increase the amount of stormwater runoff or pollution leaving the site, are required to implement or fund permanent water quality approaches to reduce contaminants entering the storm and surface water system.

The following approaches are available for meeting the treatment design efficiency standards of CWS Chapter 4:

1. Pretreatment as specified in Section 4.07.1 of the CWS Standards in combination with one of the following vegetated water quality approaches:
 - a. Vegetated Swale
 - b. Extended Dry Basin
 - c. Constructed Water Quality Wetland
 - d. Structural Infiltration Planter
 - e. Non-structural Infiltration Planter (rain garden)
 - f. Structural Flow-through Planter
 - g. Non-Structural Flow-Through Planter/Rain Garden
 - h. Street-Side Planter
 - i. Landscape Filter Strip
 - j. Vegetated Corridor as a Filter Strip
2. Proprietary treatment systems meeting the requirements of Section 4.07.8 of the CWS Standards.
3. Alternative water quality approaches that can be demonstrated, to the satisfaction of the District, to meet the removal efficiency standard in this section.

The required area to be treated for water quality will be determined by using the equations from Section 4.08.1.d.1 of the CWS Standards, as described below.

All new impervious surfaces and three times the modified impervious surface, up to the total existing impervious surface on the site. The area requiring treatment is shown in the formula below:

$$\text{Area} = \text{New Impervious} + 3(\text{Modified Impervious})$$

When modification results in the permanent removal of 1,000 square feet or greater of impervious surface, the treatment approach shall be sized for three times

the replaced impervious surface, in addition to the new impervious surface. In this case, the area requiring treatment is shown in the formula below:

Area = New Imp. + 3(Modified Imp. - Permanently Removed Imp.)

FLOODPLAIN

A portion of the Beaverton High School site is within the Erickson Creek floodplain. The affected areas are the SW corner of the track and several of the existing athletic fields. The relevant FEMA FIRMs and a FIRMette are attached for reference (see Exhibits 4, 5, and 6).

The finished floor elevation of the new building will need to be a minimum of 1 foot above the floodplain base flood elevation as agreed upon with the City's floodplain manager.

The project will need to meet a "No-Rise" via balancing the cut and fill within the floodplain.

TRASH & RECYCLING AREAS

Existing trash and recycling refuse areas have been established on the south side of the main building, the NE corner of the cafeteria building, and it is assumed the Merle Davies building also has a separate trash area. New refuse areas established as part of the new master plan concept will need to incorporate covered structures and sanitary trapped drains.

Landscape

RECOMMENDATIONS

All trees around the Merle Davies building are classified by the City of Beaverton as historic and preservation requirements will need to be considered when assessing impacts in these areas.

The redevelopment of the new high school will play an integral role within the downtown design project boundary, which lies east of the project site. Relationships between the school property and adjacent uses now and in the future may be considered in support of that plan.

DISTRICT ZONES

The project site, which is zoned R10, encompasses approximately 28 acres and bridges the gap between multiple district zones including residential and commercial. The re-development of the new high school will play an integral role within the downtown design project boundary, which lies east of the project site. Connections and relationships between the school property and adjacent uses now and in the future should be carefully considered to ensure they support the goals of creating a vibrant, walkable mixed use downtown Beaverton. See Figure 1.

TOPOGRAPHY

The existing site topography is generally flat with approximately 15' of vertical grade change between the highest and lowest elevations. The high school has a finish floor elevation of approximately 202' which slopes to the lowest point located in the floodplain at the western corner with an elevation of 187'. Erickson creek runs along the southwestern property line and flows through a sub-surface piped system. This area, which includes ball fields and tennis courts is within a 100-year floodplain and designated by FEMA as Zone AE which is defined as a "special flood hazard area that is subject to inundation by the 1% annual chance flood." Based on our onsite observations there is little to no concern of flooding in this area. However, regulatory constraints should be fully understood when considering this area for the location of future structures. At the time of this due diligence, no information about the current state of the sub surface pipe system was made available. On the north side of the site, stormwater is piped east underneath SW Farmington Road. See Figure 2.

VEHICULAR CIRCULATION AND PARKING

Beaverton high school is positioned within the downtown urban fabric with public vehicular access available on all sides except the southwest property line. To the north, SW Farmington Road is an arterial with four lanes of east-west bound traffic. SW Erickson Avenue is a collector and bisects the school campus with two lanes of north and southbound traffic. At the southern end, 5th-6th streets are collectors that provide 2 lanes of east-west bound traffic. All other streets adjacent to the project site are local streets with two-way traffic. Other modes of transportation include a railroad and bus routes 52 and 57 which run along the north side of the site. A future Bus Rapid Transit route is planned along SW Canyon Road to the north of the site. Future bicycle routes include planned major bikeways and protected bike lanes on SW Farmington Road and shared bikeways on SW Erickson Avenue and 5th -6th Streets. For more detailed information refer to the City of Beaverton's 2035 transportation plan. A total of 8 surface parking lots provides approximately 424 parking spaces and cover about 3.8 acres of impervious surface. Based on our site observations most of these parking areas will require upgrades including landscaping and stormwater improvements to meet current code requirements. See Figure 3.

PEDESTRIAN CIRCULATION AND ACCESSIBILITY

Designated pedestrian walkways exist through the school property and extend into adjacent public streets. There are minimal stair and ramp conditions given the flat topography. Way finding is limited to building entrances and future development would benefit from a comprehensive wayfinding plan and signage implementation. Nearby destinations include Beaverton Central MAX Station to the north and Beaverton Library to the southeast. In reference to the City of Beaverton 2035 Transportation plan, SW Farmington Road, which runs along the north side, is planned to be a future pedestrian parkway and connections to the new high school replacement should be evaluated and considered. See Figure 4.

EXISTING TREES AND VEGETATION

Existing vegetation consists of natural grass lawns, athletic fields, perimeter foundation plantings and approximately 200-250 existing deciduous and coniferous trees. The City of Beaverton has 6 different tree category types which

include Significant, Historic, Landscape, Street, Significant Natural Resources, and Community trees. New site impacts to existing trees such as grading, building locations, views and screening should be considered in detail during the concept design phase. The tree inventory and summary included is based upon existing survey information and on-site observations. We recommend that an arborist report and assessment is performed and provided for review prior to the concept design phase. All trees around the Merle Davies building are classified as historic and preservation requirements will need to be considered when assessing impacts in these areas. See Figure 5. These trees can be removed as part of the land use approval process.

Structural

RECOMMENDATIONS

As part of the due diligence phase, KPFF was retained to review the existing buildings on the campus of Beaverton High School that may be retained as part of the future replacement high school. These buildings include the Commons/Cafeteria Building, the Merle Davies Building, and the Concession/Restroom Building. The purpose of this narrative is to describe the structural system of each building, the condition of the buildings, and list any upgrades or modifications required as part of the future new high school. Based on our review, all three buildings are in good condition and do not require seismic or other upgrades. Minor modifications may be required based on architectural programming.

COMMONS/CAFETERIA BUILDING

The Commons/Cafeteria Building is a stand alone building constructed in 2003. Existing as-built drawings are available with an original issue date of December 16, 2002. The building is two-stories with a steel framed roof and steel framed second floor, supported on exterior and interior CMU bearing walls and steel columns. The foundation system consists of conventional concrete continuous and spread footings with an allowable bearing pressure of 2,500 psf. The floor slab is a 5 ½" thick reinforced concrete slab on grade.

The roof structure consists of a combination of steel wide flange beams, steel open web joists, and steel castellated beams. The beams and joists support a 1 ½" metal roof deck. There are several large skylights in the roof. The second floor consists of steel wide flange beams and steel castellated beams supporting a 5 ½" concrete composite slab. The

composite slab consists of a 3 ½" concrete topping slab over a 2" composite metal deck.

The CMU walls range in thickness from 8" to 12". The CMU walls act as bearing walls as well as shear walls to resist lateral loads. The primary lateral load resisting system for the building is CMU shear walls.

There is a free-standing steel canopy at the front (west side) of the building and a bridge on the south side that connects the second floor to the main high school building.

The building appears to be in good condition with no signs of distress or settlements. Minor concrete shrinkage cracks were observed in the floor slabs which are to be expected. The function of the building is not expected to change for the future replacement high school. Therefore, no mandatory code upgrades are required. While the building has a well detailed lateral system, it would likely not meet current seismic code requirements, due to changes in the building codes since 2002.

MERLE DAVIES BUILDING

The Merle Davies building was originally the Beaverton Grade School built in 1938. It is assumed additions were added to the east and west sides of the building at some point in its history. No existing drawings were available for our review. It is assumed the building consists of unreinforced masonry (brick) bearing walls (URM) supporting a wood framed roof. Portions of the floor appear to be wood framed over a crawl space. The building underwent an extensive renovation in 2009 which included a complete interior demolition and re-construction, new MEP systems, and seismic upgrades.

The building appears to be in very good condition for its age. There were no signs of distress or settlement. It is unclear to what extent the seismic upgrades were, since the structure is covered by finishes. The function of the building is not expected to change for the future replacement high school. Therefore, no mandatory code upgrades are required. We understand options for the future high school could involve removing portions of the Merle Davies building. Ideally the portions removed would align with the original additions, as there would be less structural impacts. Either way, some modifications and upgrades would be required if a portion of the building is removed.

CONCESSION/RESTROOM BUILDINGS

This building is a small one-story stand-alone site building consisting of CMU walls supporting a wood roof. The wood roof consists of glu-lam beams supporting tongue and groove decking. The building was constructed in 2019. The building is in good condition and meets current code requirements.

Mechanical

MERLE DAVIES

Recommendations Existing VRF units will be 17 years old at the time of construction, with an expected life of 20 -25 years. Recommendation is to replace equipment with new as part of this project if Merle Davies is to remain as is.

Summary The facility HVAC systems have been upgraded and modernized, involving the additions of refrigerant based VRF heating/cooling heat pumps and fan coils, and dedicated outdoor air ventilators with heat recovery. An existing mechanical room houses natural gas fired heating boilers and hydronic piping circuits. Existing HVAC equipment is mainly located on the roof with internal ducted circuits, while VRF heat pumps are located in dedicated screened in outdoor mechanical yards. The benefit of rooftop and central mechanical room located equipment is they may be replaced new with limited disturbances to internals of the building.



COMMONS BUILDING

Recommendations Replace equipment to maintain operations and adjust accordingly to any needed internal upgrades, such as replacements of kitchen exhaust hoods which may be needed for improved kitchen upgrades.

Summary HVAC systems serving the kitchen and dining spaces comprise of rooftop located equipment and internal ducted circuits. Previous assessments determine most of equipment is nearing or past the service life of the equipment and thus likely to all be replaced. The benefit of rooftop located equipment is they may be replaced new with limited disturbances to internals of the building.

MAIN BUILDING

Recommendations Existing operations may continue either by constructing temporary facilities or by strategically setting temporary yet stable operation of existing infrastructure. For example, there may be needed continue use of a gymnasium space. A temporary gymnasium may be constructed on site and served by a field constructed HVAC system. Or an existing gymnasium space may be allowed to continue to operate on the existing system by isolating its control and function from the rest of the facility. Either way the invested effort must be carefully calculated to end in a net positive outcome of the investment.

2. DUE DILIGENCE REPORT CONSULTANT NARRATIVES

Summary Renovations in 2008 and 2017 introduced steam to heating hot water heat exchangers to supply various fan coils and unit ventilators. Existing steam appears to continue to serve various equipment directly throughout the facility. A mix of chilled water and DX condensers serve the cooling to various equipment. Previous assessments determine most of equipment is nearing or past the service life of the equipment and thus likely to all be replaced. The main challenge is keeping existing operations to designated areas while demolition occurs in a phased sequence.

Next Steps Prepare a measured program of activities from must maintain to permissible to delay. Then prepare a phased approach to maintain the must have activities during demolition and construction.



Electrical

MERLE DAVIES BUILDING

The electrical equipment service the Merle Davies Building was installed around 2010. All equipment appears to be in good working condition

COMMONS BUILDING

The electrical equipment serving the Cafeteria Building was installed around 2003. All equipment appears to be in good working condition. Renovations to the building electrical equipment is not anticipated, unless required due to Kitchen upgrades.

MAIN CLASSROOM BUILDING

Other than the exterior equipment that was installed around 2003, majority of the observed electrical equipment throughout the classroom building is old and past its expected useful life. Depending on the configuration of the new building, the exterior equipment (switchboards, step down transformer, disconnect switches, and generator) and PGE transformers may need to be relocated or replaced.

ANNEX BUILDING

The electrical equipment serving the Annex Building appears to be installed in 1970. The equipment manufacturer and style are no longer available, and the equipment is past its expected useful life.

AUXILIARY BUILDINGS

Auxiliary Buildings include Football Field Concession Stand, Press Box, Baseball Stands & Concession Building, and Softball Stands & Concession Building. The new Football Field Concession Stand was constructed in 2019 and the electrical equipment appears to be in good condition. The Baseball and Softball Field Concession Buildings electrical panels were installed around 2003 and appear to be in good condition. These structures are fed from the Shop Building. The equipment in the Locker Building appears to be old and past its useful life.

Summary All services to buildings provided by Portland General Electrical and are fed underground to the buildings.

MERLE DAVIES BUILDING

The Merle Davies Building is served by an 800 Amp, 480 Volt, 3-Phase, 4 Wire service originating from the same grade mounted transformer as the Cafeteria Building. The utility meter and CT cabinet are located on the exterior of the building near the Boiler Room. The Boiler Room is located off the northwest corner of the courtyard area. The Merle Davies Building also utilized the exterior generator near the Cafeteria Building to serve the emergency loads in the building.

COMMONS BUILDING

The Cafeteria Building is served by an 800 Amp, 480 Volt, 3-Phase, 4 Wire service originating from a grade mounted transformer located near the northeast corner of the building. The utility meter and CT cabinet are located on the exterior of the building near the transformer. The main electrical room is in the northeast corner of the building, through the kitchen. A 50 kilowatt, 480 Volt, 3-Phase, 4 Wire generator is located near the utility transformer on site. In addition to serving the emergency loads for the building, the generator also provides standby power to the freezer, cooler and evaporator kitchen equipment.

MAIN CLASSROOM BUILDING

The Main Classroom Building is served by (1) 1600 Amp, 480 Volt, 3-Phase, 4 Wire service and (1) 2500 Amp, 208 Volt, 3-Phase, 4 Wire service. Both utility transformers, the utility incoming switchboard, and emergency generator are

2. DUE DILIGENCE REPORT CONSULTANT NARRATIVES

located in a “utility” yard outside of the Main Electrical Room on the south side of the building. During a 2003 upgrade to the electrical services, the exterior equipment now feeds sub-distribution switchboards in the Main Electrical Room. The sub-distribution switchboards are older fused-type construction by a manufacturer that is now obsolete. Branch panels throughout the building are fed from the sub-distribution switchboards. A 100 kilowatt, 480 Volt, 3-Phase, 4 Wire generator was installed during the 2003 service upgrades and provides emergency and standby power to the building.

ANNEX BUILDING

The Annex Building is served by a grade mounted transformer located on the west side of the building. The utility meter is located on the exterior of the building on the east side of the building. The main electrical room is located on the east side of the building and does not meet current code. The building is served by an 800 Amp, 208 Volt, 3-Phase, 4 Wire service. The Shop Building also feeds the Baseball and Softball Concession Buildings.

AUXILIARY BUILDINGS

A grade mounted transformer is located near the Football Locker Building and serves a 200 Amp, 208 Volt, 3-Phase, 4 Wire service panelboard mounted in a weatherproof enclosure. The utility meter is also located in the same area, mounted on the outside of the enclosure. Electrical services to the Auxiliary Buildings around the football field originate from the panelboard.

The Shop Building also feeds the Baseball and Softball Concession Buildings, each with a 125 Amp, 208 Volt, 3-Phase, 4 Wire branch panel.

Lighting

It was observed that majority of the existing lighting throughout the school are fluorescent luminaires or LED replacement tubes. While LED tubes do provide some energy savings, integral LED luminaires are recommended for all new lighting. For spaces with limited scope, this can be achieved by one-for-one luminaire replacements.

Plumbing

MERLE DAVIES

Recommendations If building is demolished and a new structure is installed, existing water and sewer services will need to be modified as needed to conform to the new building.

If building is partially demolished, then depending on area of demolition existing utility services and water heater locations will need to be reviewed to see if existing services are able to remain. Utility systems may need to be modified or relocated to make the existing building plumbing systems function properly.

A new central hot water system should be installed for any new buildings built at this location.

Summary The main water service (2-1/2-inches) comes up in the SW side of the building in Custodial 2 in the east wing. Due to water pressure exceeding 80 PSI, the water routes through pressure reducing valves and is then distributed throughout the building.

There are multiple water heaters located throughout the building that deliver hot water to various parts of the buildings.

Vent piping for plumbing fixtures is routed through the ceiling space with various penetrations through the roof.



Merle Davies, Domestic Water Service

2. DUE DILIGENCE REPORT CONSULTANT NARRATIVES

Sewer piping is routed under the building and collects waste from all fixtures and is routed to single location where the building sewer piping is connected to the site sewer system.

Natural gas is routed to the building through a meter provided by the local gas company.

COMMONS BUILDING

Recommendations Currently there are no plans for remodeling this building. The existing plumbing fixtures are in good condition and do not need to be replaced unless directed by the school district.

If any remodel inside the building were to occur, then the existing plumbing utility systems will need to be modified as needed to connect to any new plumbing fixtures that are installed.

Summary The main water service (2-1/2-inch) comes up in the NW corner of the building in Custodial C118. Domestic cold-water piping is then distributed throughout the building from this location.

There is a central hot water system serving the building and is in a storage room over Custodial C118.

Vent piping for plumbing fixtures is routed through the ceiling space with various penetrations through the roof.

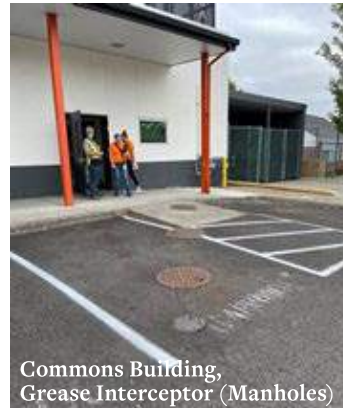
There are two waste laterals that exit the east side of the building, a standard waste line and a grease waste line. The grease waste line is routed from the kitchen areas and goes through a grease interceptor located in the parking lot on the east side of the building. The standard waste line connects to the waste piping on the downstream side of the grease interceptor and connects to the site sewer system.

Natural gas is routed to the building through a meter provided by the local gas company.

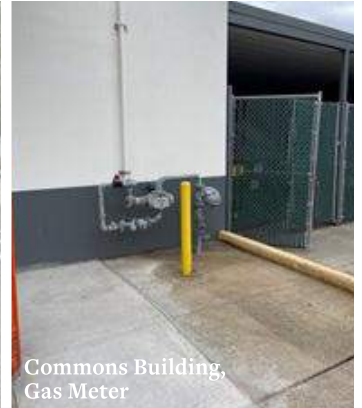
MAIN BUILDING

Recommendations There is a potential of phasing the construction so that part of the existing building is operational while other parts of the building are demolished for new construction. Existing utility systems will need to be maintained in any portions of the building that remain operational during construction.

For the new construction, a central hot water system should be utilized for the new building(s). If admin offices remain open during the summer, then a hot water system should be installed for just that area so that the main hot water system for the rest of the building can be shut down as needed.



Commons Building, Grease Interceptor (Manholes)



Commons Building, Gas Meter



Commons Building, Water Riser

Summary The main water service (4-inch) comes into the building on the south side of the school and distributes throughout the building.

There are multiple water heaters scattered throughout the building that deliver hot water to isolated areas.

Vent piping for plumbing fixtures is routed through the ceiling space with various penetrations through the roof.

Sewer piping is routed under the building and collects waste from all fixtures and is routed to multiple locations where the building sewer piping is connected to the site sewer system.

Natural gas is routed to the building through a meter provided by the local gas company.



Main Building, Water Service



Main Building, Gas Meter

Technology

Summary

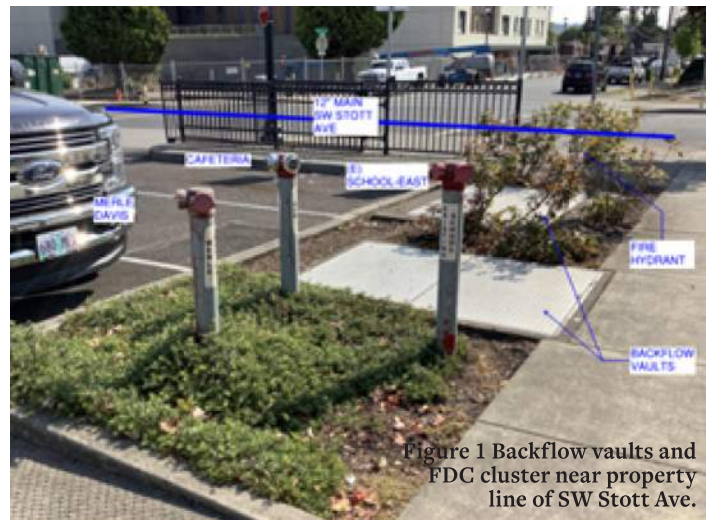
The Main Telecom room will continue to be used during construction of the new building. The existing incoming analog voice lines and the incoming county fiber will be relocated to the new Main Telecom Room once it is built. Three 4-inch conduits will be installed from the service provider tie in point at the street to the new location. All existing IDF's and new IDF's in areas or buildings unaffected by the construction will need to be re-fed with fiber and copper to the new Main Telecom Room. If any modular buildings are required during construction, they will also be fed from the existing Main Telecom Room.

Permanent service provider pathways will consist of three 4-inch conduits from the MDF in the new building to the utility right-of-way at the street for each service provider. One 4-inch conduit will be provided for each of two service providers, and one will be provided for spare. The intrabuilding pathways will consist of three 4-inch conduits from the MDF to the telecom room for backbone cabling. The horizontal cabling will require a 1-inch conduit and a double gang box and mud ring at each outlet location. Main cabling pathways will be supported using wire basket tray and J-hooks for less dense areas. EZ path sleeving is required at all full height walls and fire walls. Conduit sleeving is required through all inaccessible spaces and open to structure spaces.

Fire Protection

FIRE SERVICE

The Site is serviced via an existing 12-inch city main which is routed underground, between the main building and Cafeteria building. This existing 12-inch main is connected to another 12-inch city main located in SW Stott Ave and continues across the site into SW Erickson Ave. Each building is connected to the 12-inch site main via a single dedicated underground 6-inch fire service line. The Main school building is served via an additional 6-inch fire service main at the far west end at the Theater. Except for the Theater riser location near SW Erickson, dedicated backflow preventers vaults for all services and Fire Department Connections (FDCs) are located on site near the property line of SW Stott Ave. (Figure 1)



MERLE DAVIES

Recommendations

- System piping is in good working order without any need for major repairs or upgrades. Including restraints and seismic bracing
- Sprinkler heads are will within 25-year life cycle and do not need to be replaced.
 - Note: if sprinklers are removed from piping for any other reason (architectural or other modifications) new sprinklers shall be installed.
- Dedicated FDC at site line near backflow vault.
- The sprinkler system is hydraulically designed to discharge .10gpm/per sq.ft over a 1500 remote area when flowing 65.7psi @ 620.8gpm.

Summary The 6-inch incoming underground fire service enters the building in a dedicated fire riser room with immediate exterior access, located on the exterior wall of the South east side of the building nearest the 12-inch site main. The system drain discharges out of the building to grade.

The sprinkler control valve and flow switch are monitored by a dedicated fire alarm system. The system appears to be well maintained and inspected at regular intervals.

Steel piping was observed in open areas and appears in good working condition. Including in the attic spaces and were accessible above ceilings. Piping in the Multipurpose space is painted white to match the ceiling elements.

Quick response recessed pendent type sprinklers were observed in finished ceilings in both chrome and white finishes. Sprinklers located in ACT tiles subject to seismic requirements are provided with an oversized escutcheon. In areas without ceilings, quick-response upright brass sprinklers were observed.

No existing as-built drawings were located.



COMMONS BUILDING

Recommendations

- System piping is in good working order without any need for major repairs or upgrades. Including restraints and seismic bracing
- Sprinkler heads are will within 25-year life cycle and do not need to be replaced.
 - Note: if sprinklers are removed from piping for any other reason (architectural or other modifications) new sprinklers shall be installed.
- Dedicated FDC at site line near backflow vault.
- The sprinkler system is hydraulically designed to discharge .10gpm/per sq.ft. over a 1500 remote area when flowing 75psi @ 219gpm.
 - Note: testing and inspection records attached to system riser record the supply to be 75psi static indicating no safety factor in the water supply may exist.

Summary The 6-inch incoming underground fire service enters the building in a combined janitor and fire riser room located on the exterior wall of the North east side of the building nearest the 12-inch site main (Figure 3). The room does not have an immediate exterior access. The system drain discharges to the exterior.

The sprinkler control valve and flow switch are monitored by a dedicated fire alarm system (Figure 3). The system appears to be well maintained and inspected at regular intervals.

Steel piping was observed in open areas and appears in good working condition. Piping is concealed throughout the public spaces.

Quick response recessed pendent type sprinklers were observed in finished ceilings in chrome finishes.

Extended coverage pendent are utilized. Pendent sprinklers are connected utilizing flexible sprinkler hose fittings.



2. DUE DILIGENCE REPORT CONSULTANT NARRATIVES

In areas without ceilings, quick-response upright brass sprinklers were observed. The covered passageway connection the cafeteria building to the new school building is protected and served from the Cafeteria sprinkler system.

Complete and accurate as-built drawings were located and made available.

MAIN BUILDING

Recommendations

- Existing sprinkler systems located in the Merle Davis Annex and Cafeteria building appear in good working order and no major system defect or deficiencies were noted. Systems should remain in place and actively inspected and maintained.
 - Existing 6-inch underground fire mains, FDCs and backflows serving both building should be protected and remain in place. If the dedicated 6-inch fire services or the 12-inch site main is disturbed, shutdown or otherwise compromised these sprinkler systems could become non-operational.
 - FDCs could be relocated to meet the new programming needs with Fire Department approval.

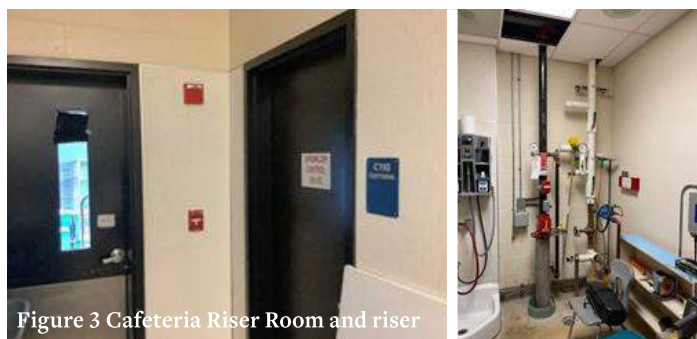


Figure 3 Cafeteria Riser Room and riser

- The main school buildings fire service located in the SW Stott area should be demolished and capped at the backflow vaults or as close to the city-tap as possible or as recommended by Civil. Future connections for the new school building may be able to utilize existing tap underground to feed new sprinkler system riser located in a dedicated riser room. The FDC serving the main school building should be replaced in the same location.
 - It is highly likely additional and new FDCs will be required to serve the new school building
- The West side theater riser in the Main School building and associated underground work should be demolished or as recommended by civil. A new underground fire service will likely be required to serve a portion of the new school building and be connected to the 12-inch site main.

- New building(s) requiring sprinkler protection will be provided with a dedicated fire service line sized to accommodate the hydraulically designed fire sprinkler system.
 - The dedicated fire service line will be provided with a backflow preventer and FDC vault at or near the property line unless otherwise approved by the local water authority.

Summary A 6-inch incoming underground fire service enters the building in a combined janitor and fire riser room located interior adjacent to the Library room on the North side across from the Cafeteria building. The underground service is connected to the 12-inch site main and ties back into the backflow and FDC clusters near SW Stott Ave. (Figure 1). An additional fire service line and riser is located on the west side in the theater main seating area adjacent to the exterior wall and immediately next to the stage exit. (Figure 4).

Sprinklers are not provided throughout all spaces. Areas without sprinklers are not clearly marked or identified with proper signage. Some sprinkler heads appear to show advanced signs of aging, some were loose from the ceiling placement as well. This occurs mostly in the Eastern portion of the building.

Areas with finished ceilings contain quick response pendent type sprinklers. Areas without finished ceilings are provided with brass upright sprinklers.

Steel piping was observed throughout. In the Theater areas the piping was mixed with galvanized piping and in overhead areas was painted to match the ceiling.

Hose stations were noted throughout the building; however, they are missing the interior hose and nozzle. Fire Extinguishers were provided in the cabinets.

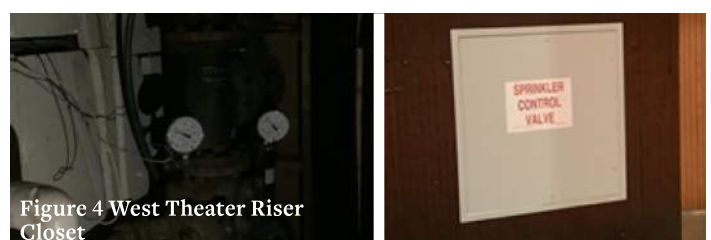


Figure 4 West Theater Riser Closet

Fire Alarm

The campus fire alarm system is controlled by a Simplex 4100U Fire Alarm Control Panel (FACP) and consists of audible horn and strobe occupant notification. A single FACP serves the entire campus. Therefore, the building demolition phasing will need to be carefully planned to maintain the operation of the fire alarm system within the areas to remain occupiable.

Additionally, the existing audible horn occupant notification will need to be replaced with loudspeaker notification to meet the current code requirements for an Emergency Voice Alarm Communication System (EVACS) within educational occupancies.

MERLE DAVIES BUILDING

Recommendations

- The Merle Davies building can be connected to the new FACP in the Cafeteria building to serve the existing initiating and control devices.
- As the occupant notification within the Merle Davies building utilizes audible horn appliances, to meet current code requirements, the horn audible notification will need to be replaced with loudspeaker audible notification.

Summary

- The Merle Davies building is served by the main building FACP. Similar to the Cafeteria, all initiating and control devices communicate with the main building FACP. A NAC panel is located within the telecommunications room in the back of Storage 1 in Classroom 6. This panel is controlled by the main building FACP and powers the audible and visual notification appliances within the building.



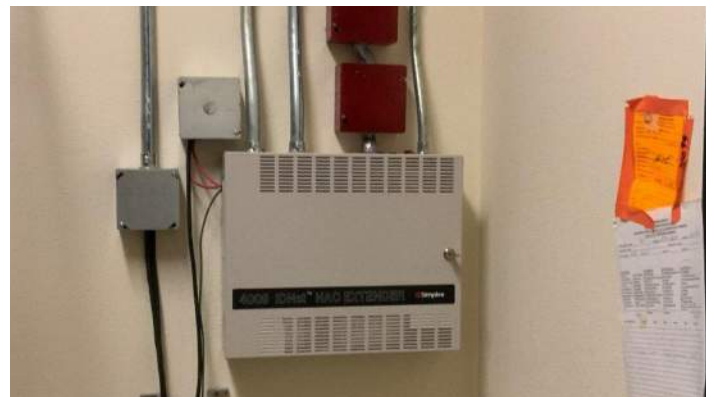
COMMONS BUILDING

Recommendations

- A new FACP can be added to the Commons building to serve the existing initiating and control devices and effectively separate the Commons building from the main building fire alarm system. It can also then be networked with the main building FACP to create a campus fire alarm system network while the main building undergoes phased demolition.
- As the occupant notification within the Commons utilizes audible horn appliances, to meet current code requirements, the new FACP will need to be provided with EVACS capability, and the horn audible notification will need to be replaced with loudspeaker audible notification.

Summary

- The Commons is served by the main building FACP. All initiating and control devices communicate with the main building FACP. A NAC panel is located within the telecommunications room near the electrical room. This panel is controlled by the main building FACP and powers the audible and visual notification appliances within the building.



2. DUE DILIGENCE REPORT CONSULTANT NARRATIVES

MAIN BUILDING

Summary

- The FACP, FAC and NAC panels serve the entire main building. There are also other NAC panels located in other areas of the main building. When phasing plans are developed for the demolition of the main building, it will be necessary to maintain the existing fire alarm system in operation in order for portions of the building to remain occupiable.

Review of Existing Conditions

- The existing main building is served by a Simplex 4100U FACP, located in the Main Office. This panel supervises the entire campus, including the Merle Davies building and the West Annex building.



- Opposite the main FACP is a Fire Alarm Communicator (FAC) transmitter and Notification Appliance Circuit (NAC) panels for powering the audible and visual occupant notification appliances. The FAC provides for off-site monitoring of the alarm, trouble, and supervisory signals from the FACP.



WEST ANNEX BUILDING

Summary

- The West Annex building is scheduled for demolition. This building should be taken offline and demolished prior to the demolition of the main building FACP.

Existing Conditions

- The West Annex building is served by the main building FACP. Similar to the Cafeteria and Merle Davies, all initiating and control devices communicate with the main building FACP. A NAC panel is located within the building and is controlled by the main building FACP and powers the audible and visual notification appliances within the building.

Food Service

Recommendations

The Kitchen, Servery, and remote Kiosks are good working spaces. Our recommendation for the Kitchen is to provide some strategically located pass-thrus in the island Kitchen walls to open the space visually and improve staff communication from back of house to the front serving area. Replacing and/or adding new energy efficient and flexible equipment will support a changing menu as required.

Renovating the serving lines will give the students a modern experience and ideally generate more interest for them to participate in the school breakfast, lunch, and afternoon meal programs.

Upgrading room finishes throughout to be easily cleanable will meet the health department regulations.

Summary

The Food Service Program supports daily preparation/meal service for a maximum 2,200 student population. The Kitchen functions as a cook/serve operation and has cold and dry storage space to support the production schedule. The main Servery backs up to the Kitchen and there are four remote Serving Kiosks in the Dining space. All spaces are showing some signs of age.

DESIGN CONSIDERATIONS

Finishes

- Overall finishes are in decent condition. Paint needs a refresh and wall tile colors are dated. Flooring is in good condition – needs a good cleaning. Ceiling and lighting needs upgraded materials/fixtures.

Existing Kitchen

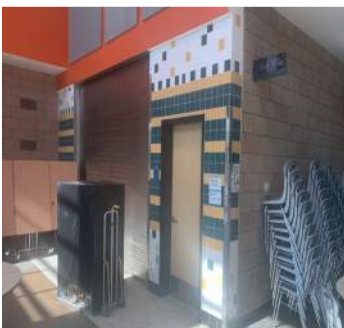
- The Kitchen space is sized adequately for the population to be served. There are some underutilized spaces where equipment can be added.
- Cold storage rooms are 2003 boxes and appear to be in good condition. Both cooler and freezer light switches are cracked and will need replacement. Refrigeration systems are holding good room temps but should be assessed and possibly replaced to meet National Energy Codes.
- Dry storage appears to be adequate, but we would like to confirm this with Kitchen staff.

- The office area in a good location with good natural light and provides supervision of receiving and production areas.
- The existing prep sink counter has double sinks with an indirect waste line to a floor sink which meets code.
- Hand washing stations:
 - In Room C110 Main Kitchen multiple hand sinks cover the zones as required by the Health Department.
 - Room C130 Fresh Express – a designated hand sink will need to be added.
 - Room C107 Taqueria has a designated hand sink and meets the health code.
 - Room C134 Pizza & Sandwiches has a designated hand sink and meets the health code.
- Support equipment (island work tables, racks, carts) appear to be in good condition.
- There are two cooking lines. The hoods and stainless steel wall flashing can be maintained and are sufficient. Existing cooking equipment consists of two double stack convection ovens, a double stack combi-oven/steamer, and a 12-gallon tilting kettle. Both hoods have extra space to add new equipment as needed to support the current and future menu. Depending on the types of new equipment added the fire protection system down nozzles may need to be revised.
- The warewashing layout is fine and the equipment is enough for the Kitchen operation. The warewasher is 28 years old. A new machine will be more energy efficient (less water and power consumption) and will support the warewashing needs for the next 25 – 30 years.

Serving Lines and Equipment

- In Room C110 Main Kitchen – stainless counter top is in good condition; cabinet base is wood with p-lam; there is no tray slide on student side. There are food guards over each drop-in hot well and the rest of the serving equipment is self-serve heated slides and refrigerated cases.

2. DUE DILIGENCE REPORT CONSULTANT NARRATIVES



Items for Consideration: Replace/reconfigure line to allow for direct staff passage to student side, provide for newer equipment, and upgraded finishes. Note: it would be more aesthetically pleasing if the wall separating the serving line queue from the Commons were to be more transparent. Upgrades to tile, lighting, and menu boards would give the space a refreshed look for students.

- Room C107 Taqueria Kiosk - stainless steel counter tops and cabinet bases are in good condition. Equipment appears to be in good condition as well.
- Room C130 Fresh Express Kiosk- stainless steel counter tops and cabinet bases are in good condition. Equipment appears to be in good condition as well. There is no serving counter at the coiling door. The residential refrigerator should be removed and replaced with a support the current/future menu. The space currently appears to be used for storage.
- C134 Pizza & Sandwiches Kiosk – stainless steel counter tops be in good condition as well but there are notes to check operating temps; some replacement may be required.
- Recommendations for all Kiosks: Coordinate with Kitchen staff to see if additional serving equipment is needed to support the current/future menu. Upgrades to tile, lighting, and menu boards would give the space a refreshed look for students.

Historical

Summary

The Merle Davies Building has previously undergone the ORS 358.653 in 2002. During that process, the building was determined eligible for listing on the National Register of Historic Places. The building is also listed as a local landmark by the City of Beaverton. If not pursuing demolition, the proposed scope of work for any interior and/or exterior modifications of Merle Davies will still require at least a Determination of Eligibility (DOE) and Finding of Effect (FOE) (see below for more detail of these processes). If the proposed scope of work is limited to interior alterations, it is unlikely that an MOA would be required as the interior of the building lacks historic integrity. If pursuing demolition of the Merle Davies Building, it would require an MOA and a Type 3 review with the City of Beaverton.

The High School Building is an assortment of buildings and additions constructed from 1916 to 2002. The High School has been heavily modified and lacks interior integrity. During the SHPO process, PMA believe the building will not be determined eligible for listing on the National Register of Historic Places.

History of the School

Below is a brief description of the evolution of each of the school buildings. At the end of this memo is an image which roughly dates the different additions of the schools.

BEAVERTON HIGH SCHOOL BUILDING

Based on historic drawings provided by the Beaverton School District and historic newspapers, the high school building was added onto over the course of nine decades. The original building was constructed in 1916 and included 21 rooms. Around 1930, seven classrooms incorporated into the existing building and a new auditorium and gymnasium with two additional classrooms were constructed. This addition was designed by architect Claude N. Freeman. The building continued to be expanded in 1938, 1949, 1950, 1951, and 1954. The 1950s era additions were completed by architecture firm Freeman, Hayslip, and Tuft. At this time, the third floor of the original 1916 building was removed. The building was further expanded in 1970 and 1971. In 1979 the theater addition burned and was rebuilt. A cafeteria building was added in 2002. The building is separate from the main high school building structure and connected with a skybridge at the second floor.

The interior of school has been heavily modified over time. The limited remaining historic fabric is located in the 1951 addition including wood veneer panels and classroom built-ins.

MERLE DAVIES BUILDING

Beaverton Grade School was constructed in 1937. It was designed by architect Claude N. Freeman. In 1938, a 97 foot by 52 foot play room was added, also designed by Freeman. In 1944, an addition of classrooms and a cafeteria was design by Freeman & Hayslip. The building was renamed Merle Davies School to honor a longtime teacher and principal. Beginning in 1963, the building was used as a location for students to attend while new schools were being built. In 1983, the building was annexed by Beaverton High School for overflow classrooms.

The interior of school has been heavily modified over time. The limited remaining historic fabric is located in the southeast wing where an exposed truss roof is still visible. The majority of the window sashes have been replaced with aluminum, and the new windows were installed within the existing wood frames.

ORIGINAL DESIGNERS

Claude N. Freeman

Freeman was born in Somber County, Kansas on August 29, 1885. He worked as a draftsman for Frank Clark, a prominent architect in Ashland Oregon from 1905 to 1907, and attended Oregon State College from 1908 to 1910. In 1922, Freeman established his practice in Portland. He practiced on his own until 1942 when he entered into a partnership with Sydney B. Hayslip. The firm became Freeman, Hayslip, & Tuft in 1948, and subsequently grew to Freeman, Hayslip, Tuft, and Hewlett in 1954, before finally becoming Freeman, Hayslip, Tuft, Hewlett & Jamison in 1957. He retired in 1958. The firm specialized in designing schools. Prior to his partnership, Freeman's other works included Skyline School (11536 NW Skyline Boulevard, Portland), Dayton High School (801 Ferry Street, Dayton), Corbett Union High School (35800 E Crown Point Highway, Corbett), Oak Grove School (2838 Jacksonville Highway, Medford), Bellevue School (1070 Tolman Creek Road, Ashland), and Wagner Creek School (8448 Wagner Creek Road, Talent vicinity).

2. DUE DILIGENCE REPORT CONSULTANT NARRATIVES

Freeman, Hayslip, & Tuft

The partnership of Claude Freeman, Sydney Hayslip, and Stewart Tuft was established in 1949. By this time, Freeman and Hayslip had already worked together for seven years.

Sydney Hayslip was born in Redlands, California on October 17, 1899, and moved to the Portland area with his family in 1905. He graduated from Vancouver High School and the University of Oregon School of Architecture. From 1924 to 1927 he worked in the office of Lawrence & Holford in Portland, and from 1928 to 1930 he worked in Seattle under noted school architect Floyd A. Narramore. In 1959, after Freeman, Hewlett and Jamison all left the firm, Hayslip continued to work with Tuft until the partnership dissolved in 1965. Hayslip passed on October 31, 1967.

Stewart Tuft was born in Oakland, California on July 27, 1906 and moved to Portland in 1920. He graduated from the University of Oregon School of Architecture in 1930. From 1934 to 1937, he worked for Charles W. Ertz Co. and for Ertz, Burns & Co. During World War II he was on the architectural staff of the Housing Authority of Portland. After the War, Tuft went to work from Freeman & Hayslip and was made a partner in 1948. Stewart Tuft died on March 29, 1978.

The firm's notable works include, Peninsula School (8125 N Emerald Street, Portland), West Sylvan School (8111 SW West Slope Drive, Portland), Gray School (5505 SW 23rd Avenue, Portland), Union High School (60 Main Street, Lebanon), Central Point Elementary School (450 S 4th Street, Central Point), and Redmond Union High School (437 SW 9th Street, Redmond).

REVIEW PROCESSES

Oregon State Historic Preservation Office (SHPO)

ORS 358.653 is a state law that requires state agencies and political subdivisions of the state, in this case the Beaverton School District, to conserve "historic properties" and consult with the State Historic Preservation Office (SHPO) to, whenever possible, avoid and minimize negative impacts as a result of project actions. The process is completed in three phases: 1) Determination of Eligibility, 2) Finding of Effect, and 3) Memorandum of Agreement.

The DOE demonstrates if a building is either eligible for listing on the National Register of Historic Places or already listed. If the building is determined ineligible for listing, then the consultation project is complete, and no further action is necessary.

The FOE determines the impact of the proposed scope of work on a historic resource. If the proposed scope of work is

in conformance with the Secretary of the Interior's Standards and National Park Service Preservation Briefs, then the work will be found to have no adverse effect at which point the consultation project is complete and no further action is necessary.

If negative impacts cannot be avoided, appropriate mitigation is captured in a Memorandum of Agreement (MOA). Mitigation is determined by the public entity, SHPO, and other consulting parties. Mitigation can take many forms, including but not limited to documentation, interpretation, public education, protective covenants, or other historic preservation work that provides a public benefit.

City of Beaverton

The Merle Davies School is listed as a local landmark by the City of Beaverton. As a result, the school is subject to historic review per the Development Code of the City of Beaverton, Chapter 40, Section 35. Historic review is limited to exterior alteration, modification, demolition, or moving of a designated historic landmark. The following does not require historic review: 1) changes in use, 2) interior remodeling, or 3) maintenance or repair of the exterior where any change to the original building materials or physical appearance is conducted in a manner that is consistent with previous approvals.

Other buildings on the tax lot, including the high school building, stadium, concession stand, and cafeteria building, are not subject to historic review but will be undergo the City of Beaverton's standard design review process.

2. DUE DILIGENCE REPORT CONSULTANT NARRATIVES



Part 3 Appendix

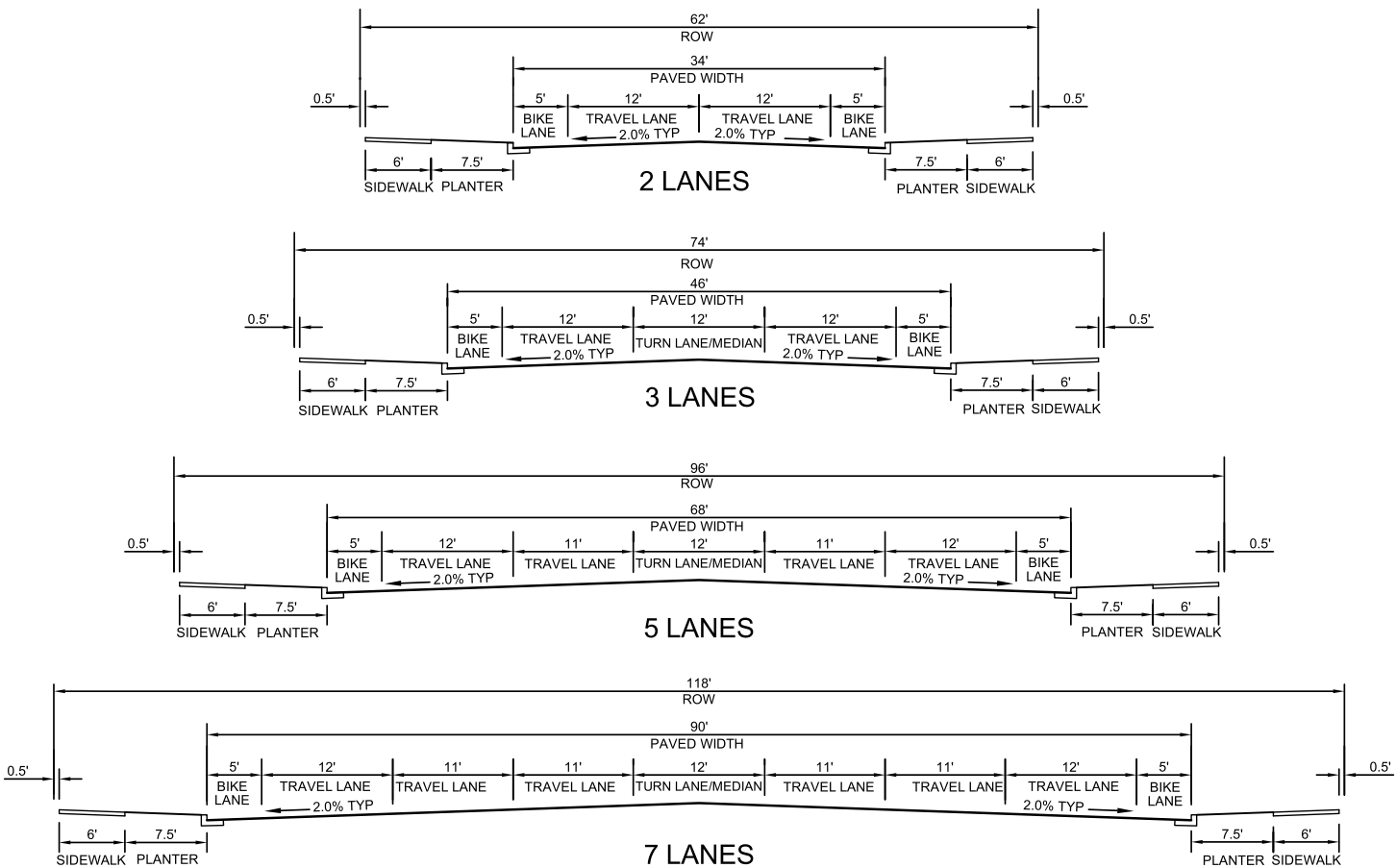
Appendix

Existing Site Plan

Minimize disruption during construction-
Phased approach

Existing Condition
Concept 1

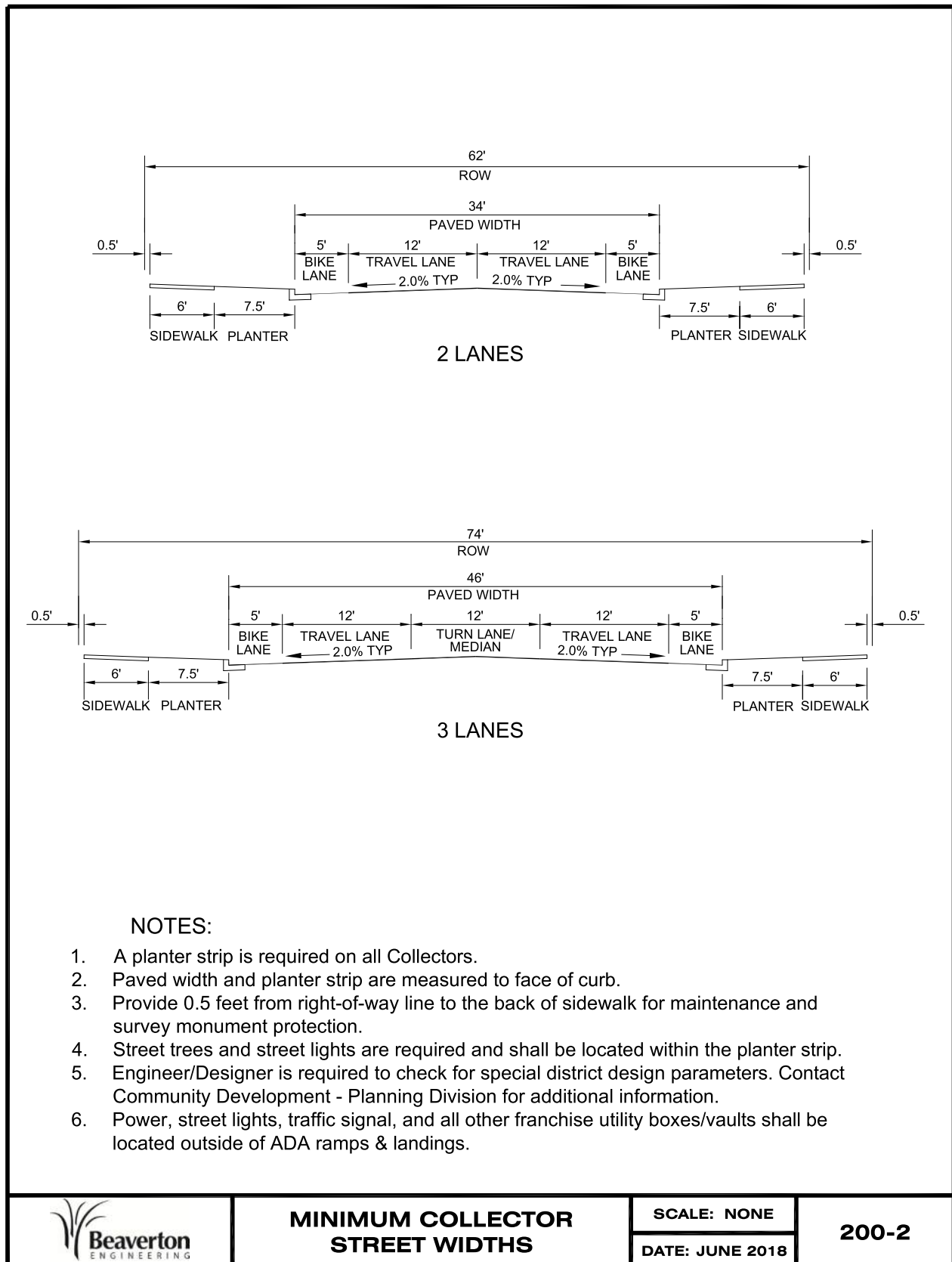




NOTES:

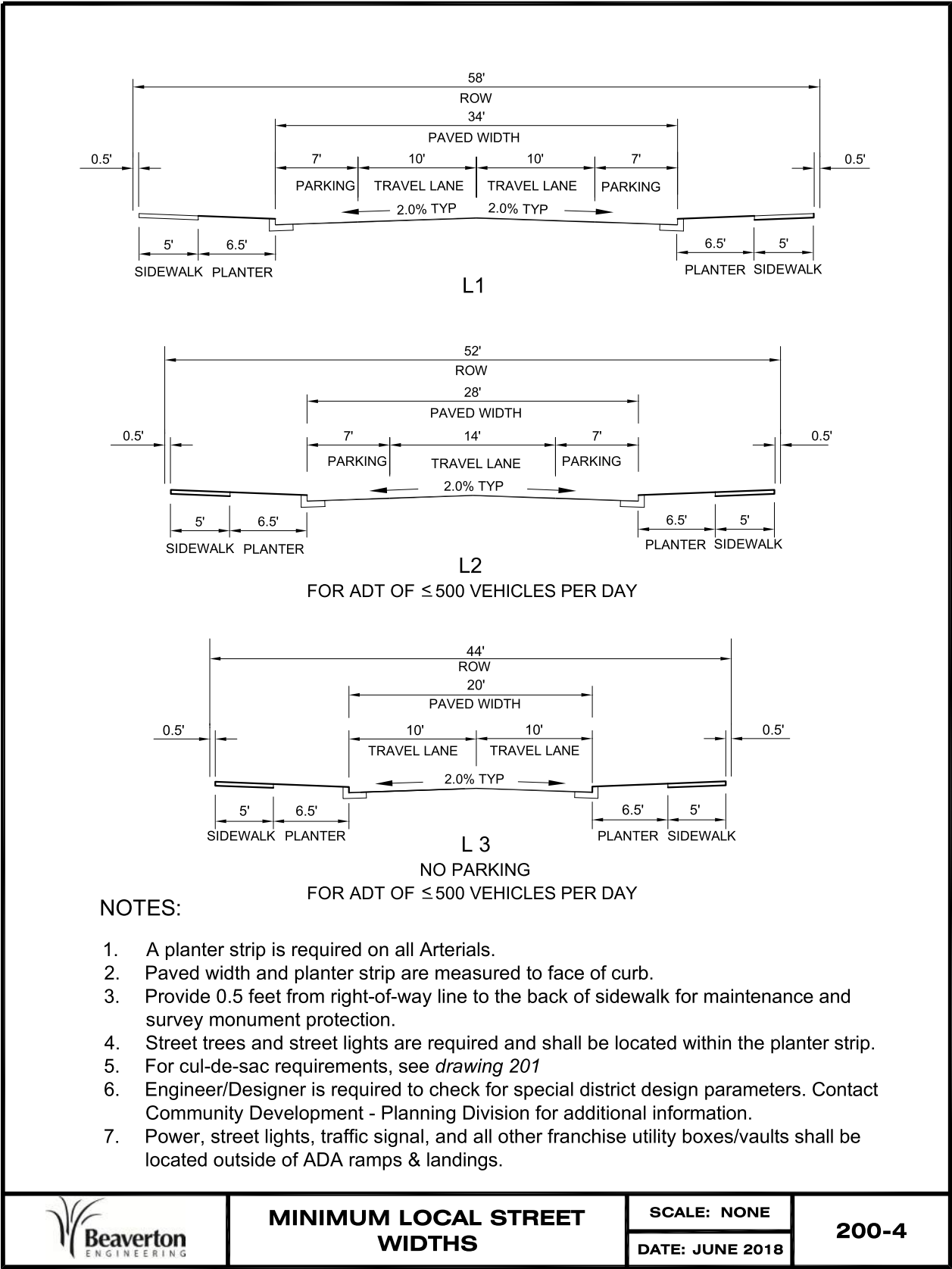
1. A planter strip is required on all Arterials.
2. Paved width and planter strip are measured to face of curb.
3. Provide 0.5 feet from right-of-way line to the back of sidewalk for maintenance and survey monument protection.
4. Street trees and street lights are required and shall be located within the planter strip.
5. Engineer/Designer is required to check for special district design parameters. Contact Community Development - Planning Division for additional information.
6. Power, street lights, traffic signal, and all other franchise utility boxes/vaults shall be located outside of ADA ramps & landings.

Civil Exhibits - Street Sections

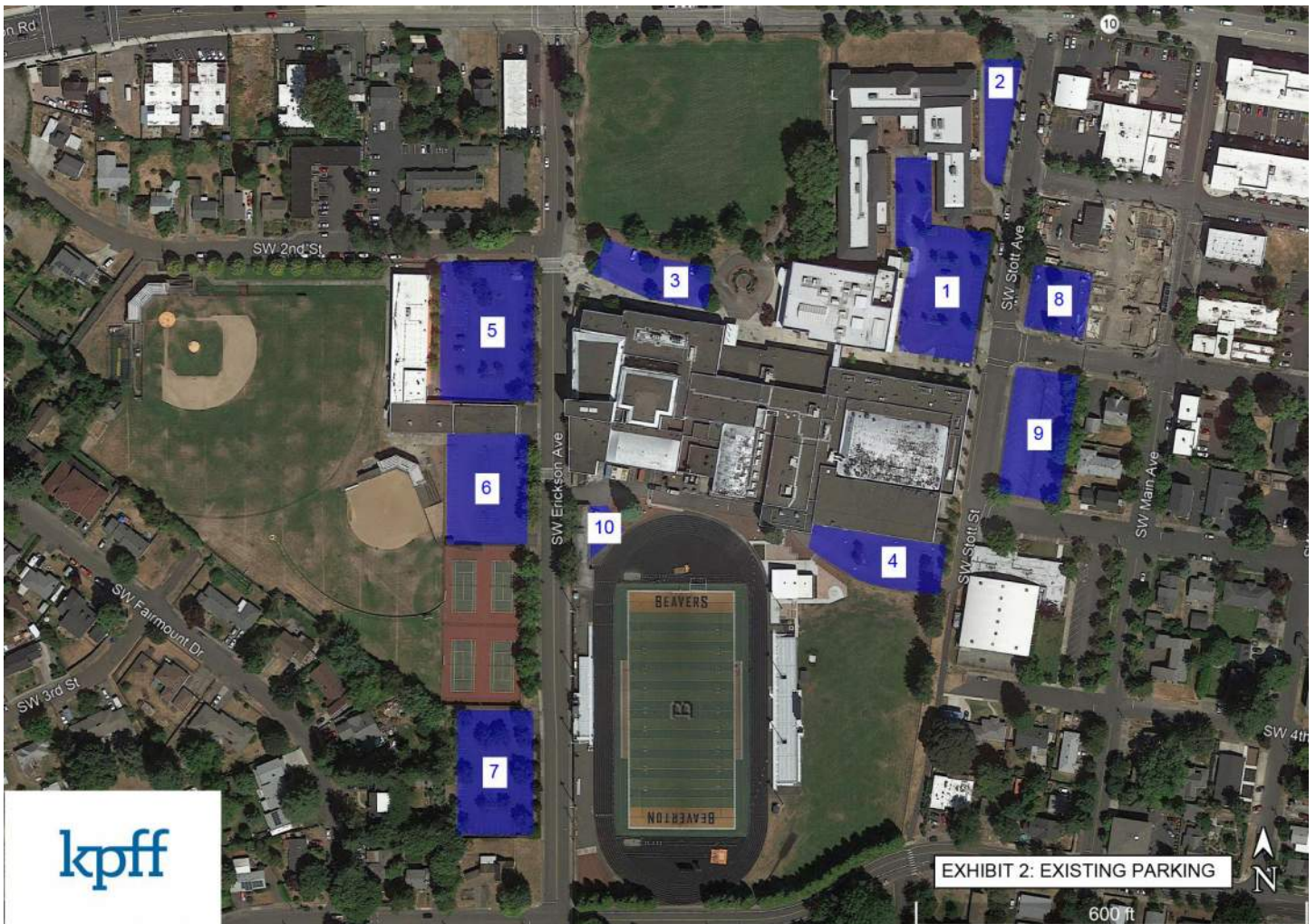


3. APPENDIX

Civil Exhibits - Street Sections

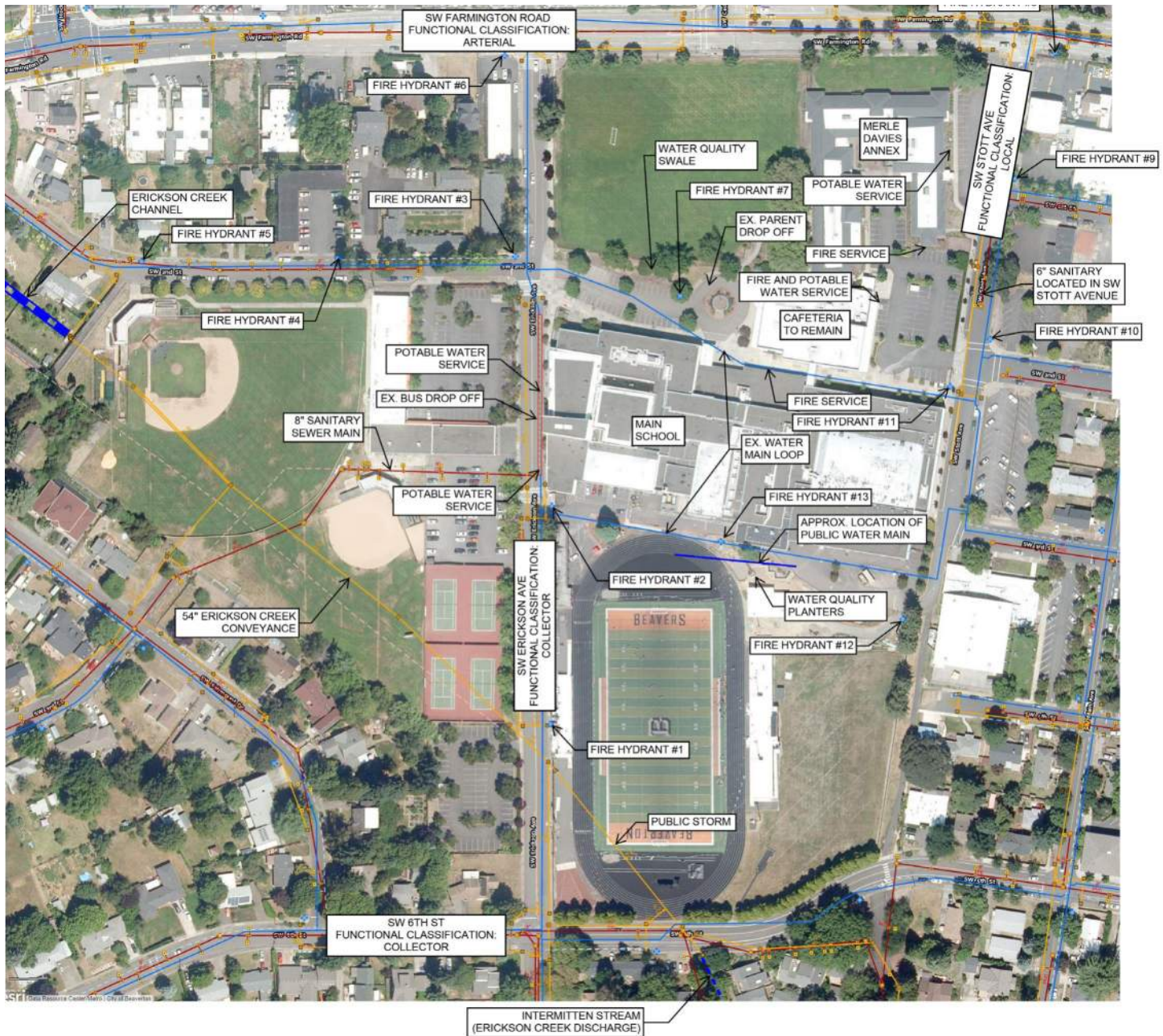


Civil Exhibits - Existing Parking

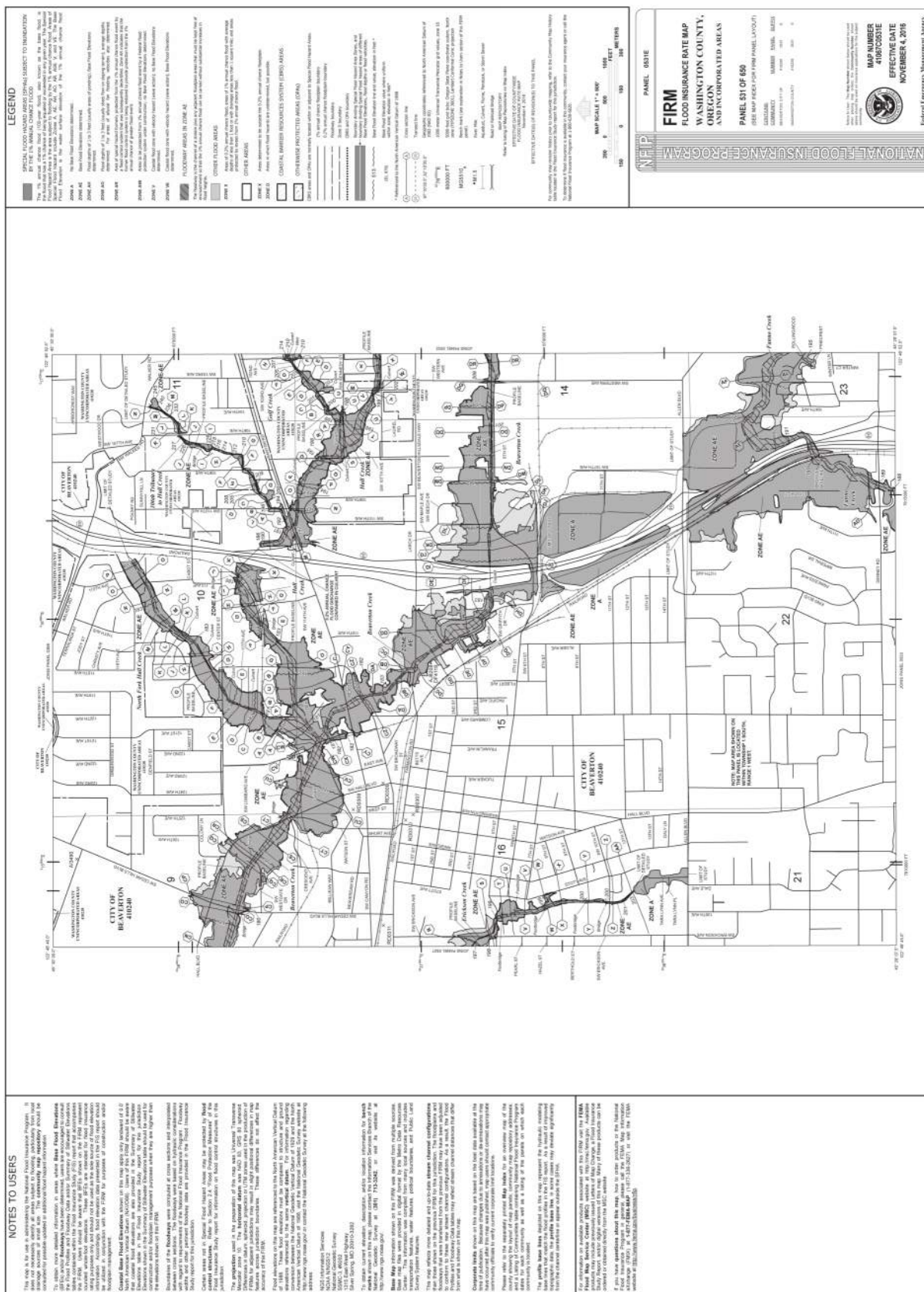


3. APPENDIX

Civil Exhibits - Site Utilities

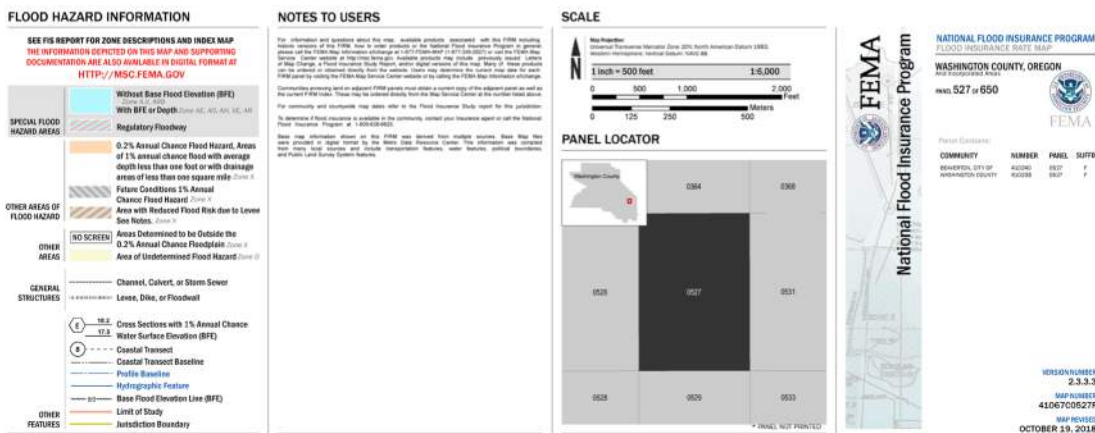
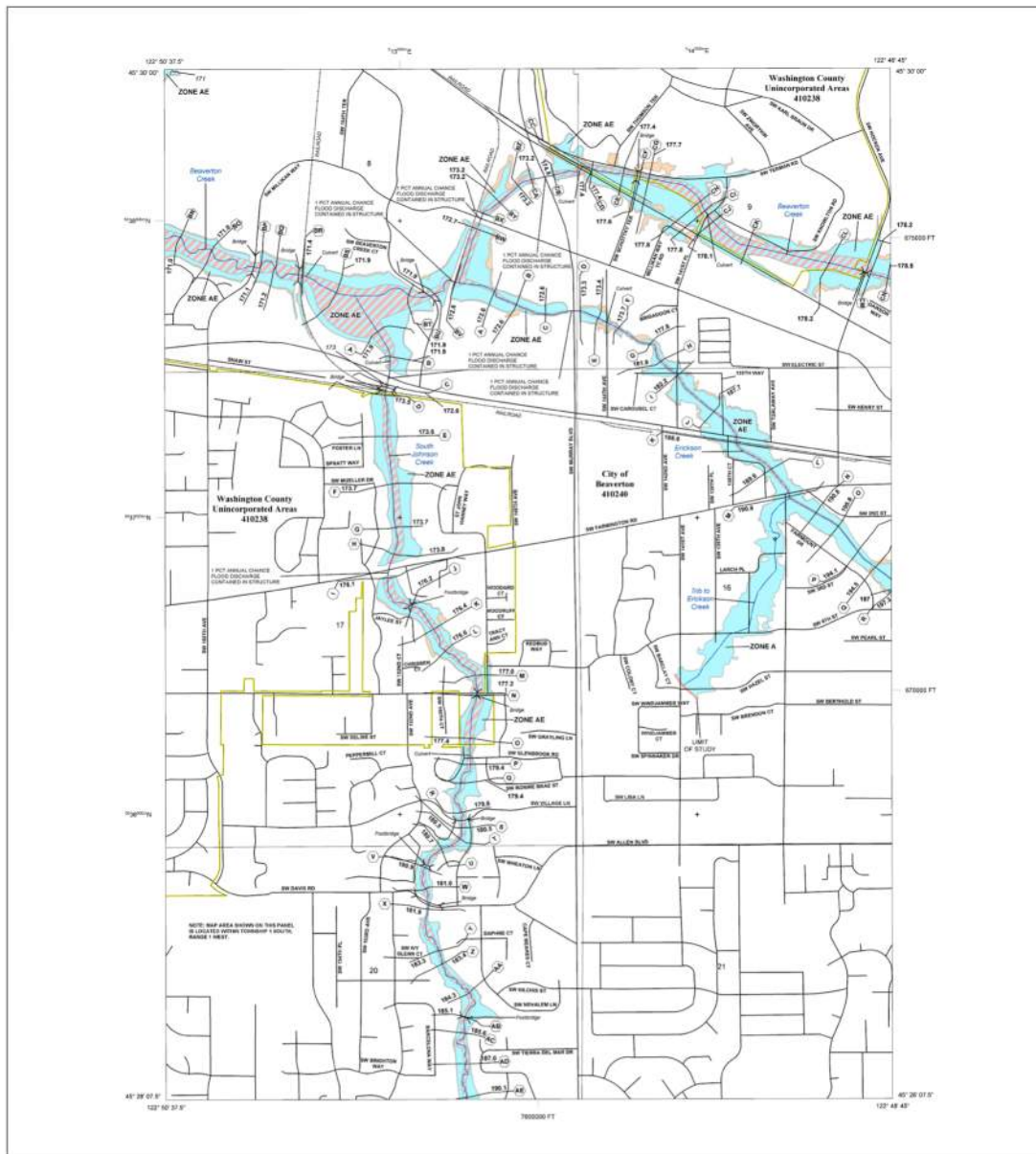


Civil Exhibits - FIRM E



3. APPENDIX

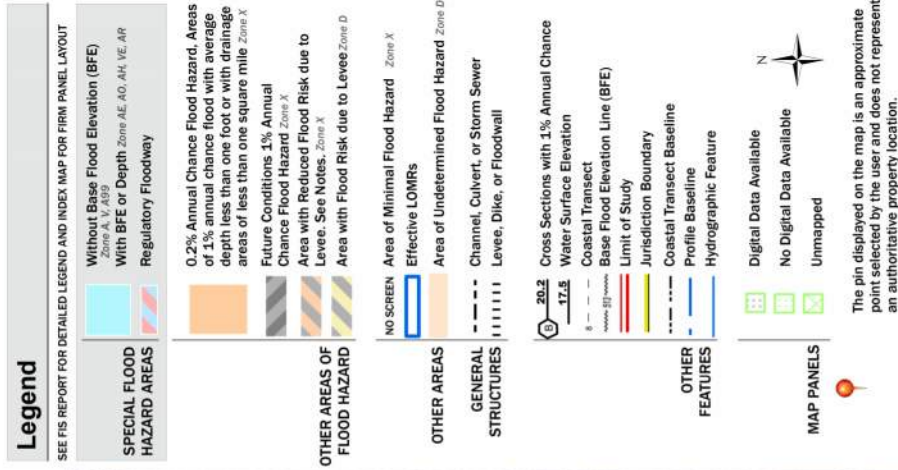
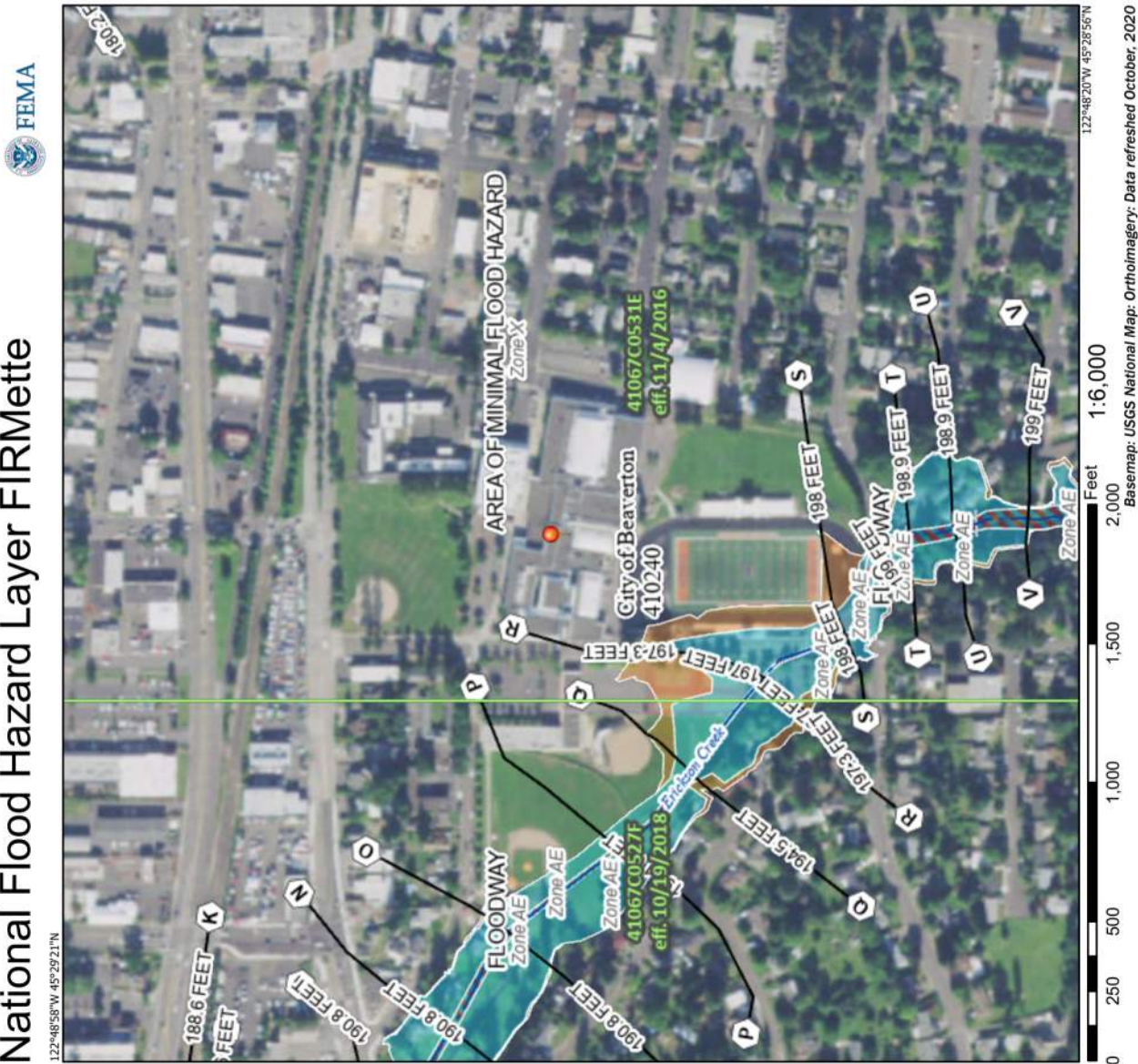
Civil Exhibits - FIRM M



Civil Exhibits - FRIMette

3. APPENDIX

National Flood Hazard Layer FIRMette



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/26/2021 at 5:14 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

3. APPENDIX

Landscape Figure 1 - District Zones



Landscape Figure 2 - Topography

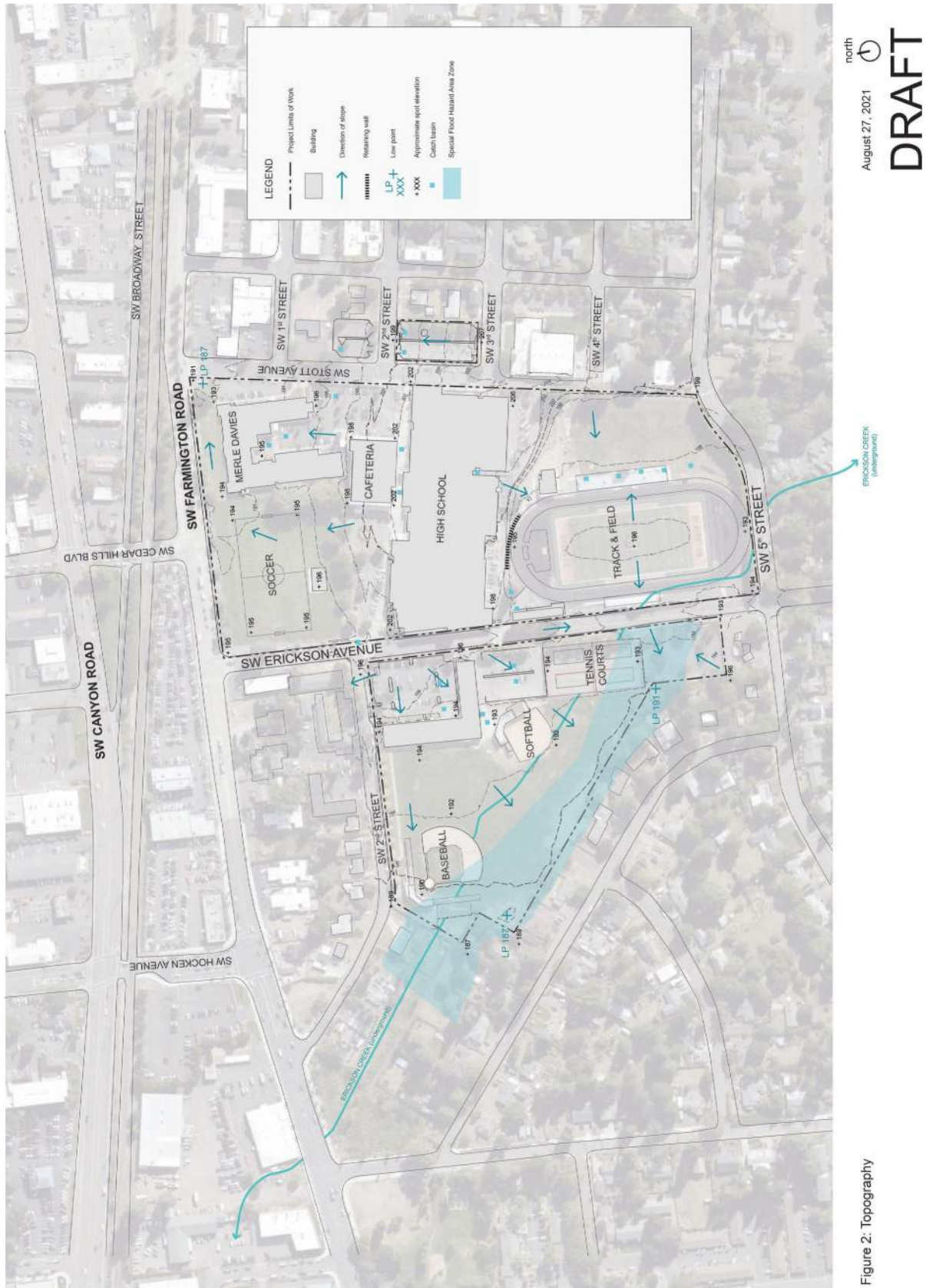
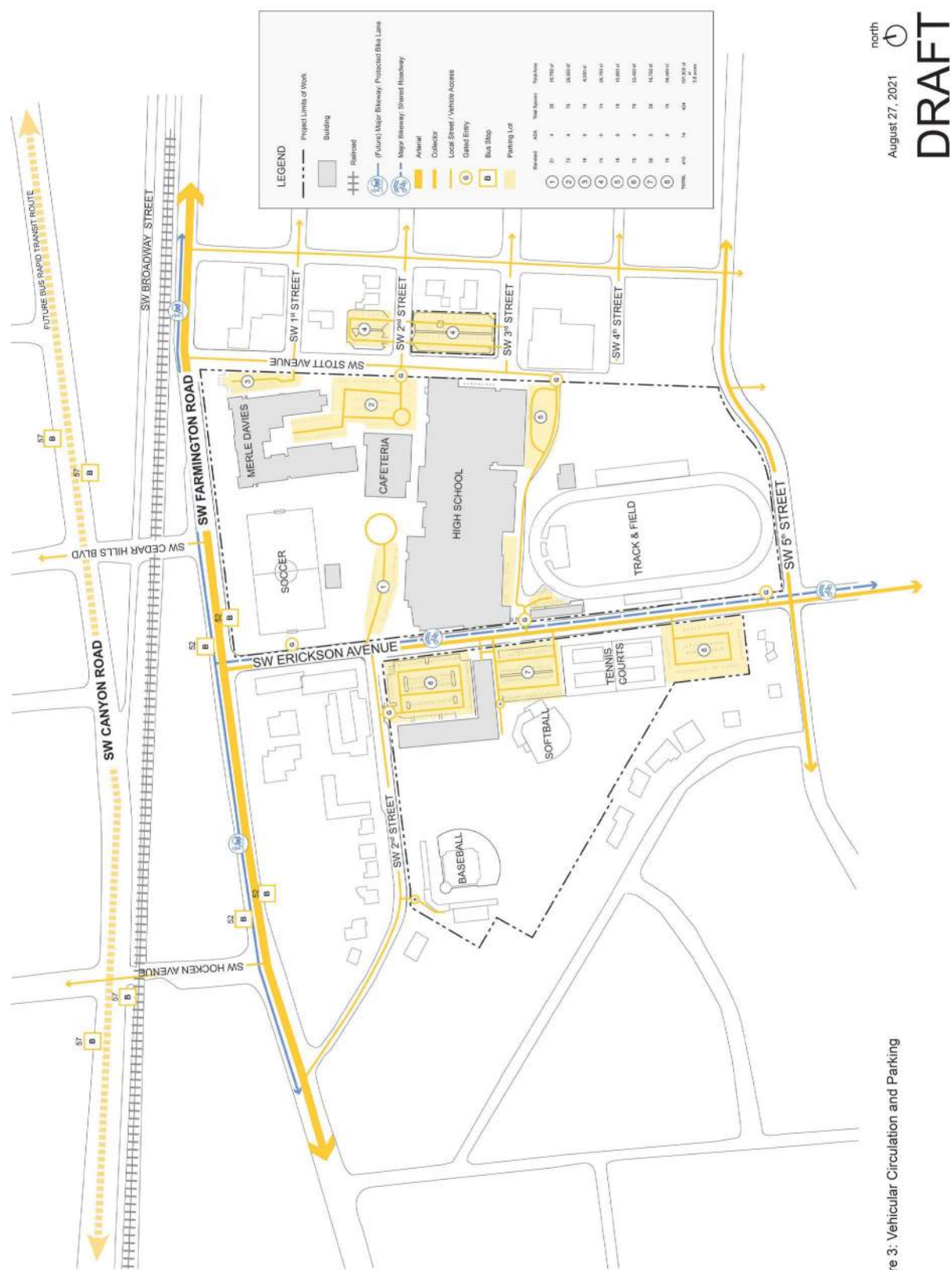


Figure 2: Topography

3. APPENDIX

Landscape Figure 3- Vehicular Circulation and Parking



Landscape Figure 4 - Pedestrian Circulation and Accessibility

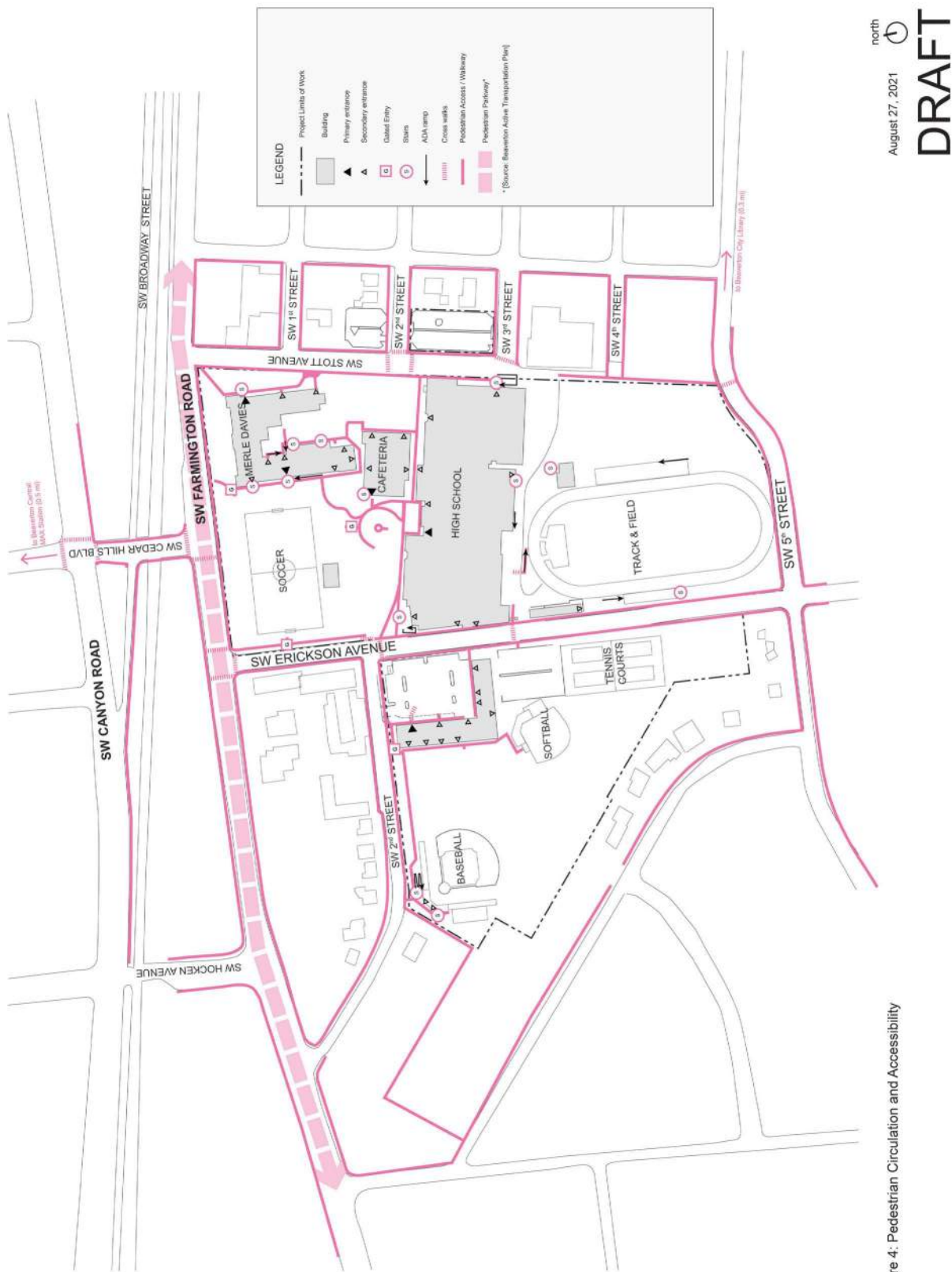


Figure 4: Pedestrian Circulation and Accessibility

3. APPENDIX

Landscape Figure 5 - Existing Trees and Vegetation



north
August 27, 2021
DRAFT

**BEFORE THE BOARD OF DESIGN REVIEW
FOR THE CITY OF BEAVERTON, OREGON**

IN THE MATTER OF A REQUEST FOR)	
	)	ORDER NO. 1506
DESIGN REVIEW APPROVAL FOR THE)	
	)	BDR 2001-0213
CONSTRUCTION OF A 30,000 SQUARE)	
	)	ORDER APPROVING
FOOT TWO-STORY CAFETERIA BUILDING))	
	)	REQUEST WITH
& PARKING AREAS (BEAVERTON HIGH)	
	)	CONDITIONS
SCHOOL CAFETERIA & PARKING LOT),)	
)	
FRANK ANGELO, BEAVERTON)	
)	
SCHOOL DISTRICT, APPLICANT)	

The matter came before the Board of Design Review on March 28, 2002, and was continued to May 9, 2002, on a request for approval for the construction of a new 30,000 square foot, two-story cafeteria building, and parking areas, including new driveways, associated landscaping, and public right-of-way improvements, at the existing Beaverton High School Campus. The development proposal is located at 13000 SW 2nd Street, and is more specifically identified as Tax Lots 11100, 11000, 02900, 07100 and 10900 on the Washington County Tax Assessor's Map 1S1-16AD, and Tax Lots 02100 and 02500 on Map 1S1-16AC. The affected parcels are zoned Urban Low Density (R-10) and is approximately 27 acres in size.

Pursuant to Ordinance 2050 (Development Code), Section 40.10.15.3.A, the Board of Design Review conducted a public hearing and considered testimony and exhibits.

After holding the public hearing and considering testimony, the Board of Design Review adopts the findings of the Staff Report dated March 21, 2002, as well as all exhibits thereto, including materials presented to the Board of Design Review at the public hearing, as to applicable criteria contained in Section 40.10.15.3.C of the Development Code. The Board of Design Review also adopts the following supplemental findings, contained herein, in response to the primary issues of concern that were presented to the Board of Design Review on May 9, 2002, during the period of oral testimony. Supplemental findings in response to key issues of concern, as identified herein, are as follows:

1. *The Removal of Tree #47.* The Historic Resource Review Committee, in a prior public hearing, agreed with the applicant to have Tree #47 removed. Since the issue of this tree has been addressed by another hearing body and to minimize conflicts between the Board of Design Review's decision and the decision of the Historic Resource Review Committee, the Board of Design Review removed Condition #20 from the Staff Report.

2. *Developing the area east of the Merle Davies Building.* The applicant requested that Condition #19 of the staff report be revised. Staff had recommended that the area east of the Merle Davies building remain in its existing condition until adequate review of the proposed design of the area has occurred. The applicant, in Exhibit 11, provided the Board of Design Review the proposed layout of the area. Because staff did not have the opportunity to review the proposed design, the Board of Design Review does not incorporate the submitted design labeled Exhibit 11 in this action. The Board of

Design Review find that an administrative design review application for the subject area would be necessary for the proposed design changes to this area.

3. *Fencing south of Parking Lot 'H'*. Testimony from Edna Starke and Shannon Starke conveyed concerns relating to the impacts to the abutting property south of Parking Lot 'H' from noise and vehicle exhaust. Specifically, concerns were raised regarding the type of barrier to be provided and the proposed plantings along the fence. Although the Planning Commission conditioned (as part of the approval of CUP2001-0031), the construction of a wooden barrier, Ms. Starke requested that a masonry or brick wall be provided. The Board of Design Review agreed that a fence should be placed on the site; however, the construction of a masonry wall would be excessive mitigation for the parking area and would not conform to the Planning Commission's requirement of a wooden barrier. In review of the condition of approval of the Planning Commission, staff recommended that the fence be placed on the Beaverton School District property to ensure that maintenance and replacement of the fencing would be the responsibility of the School District and not the adjacent property owner. The applicant stated that the intent of the Planning Commission condition is to extend the existing fence, as shown on exhibit 12 and not the construction of a new fence in a different location. The Board of Design Review agreed that the maintenance of the fencing is the responsibility of the applicant. However, relocating the fence, which is in good condition, a few feet to the north of its present location was inefficient and building a new fence along the Beaverton School District Property would result in an area where trash and debris would collect. The Board of Design Review agreed that the extension of the existing fencing to match in height and design would be adequate and that the issue of the upkeep of the fence would

be addressed through a maintenance agreement between the two (2) property owners. To provide additional screening of the parking lot to the adjacent property owner, the Board of Design Review conditioned that the plantings proposed along the southern property line of Parking Lot 'H' should be changed to 'Viburnum tinus' in 5 gallon containers to supplement the screening along the property line.

4. *Bicycle Parking.* Testimony from Kat Iverson discussed concerns relating to the design of the bike parking. Ms. Iverson addressed the use of the "wave" racks in front of the school and that the spaces provided by the racks as stated by the manufacturer is not correct. Additionally, Ms. Iverson had concerns with the spacing of the wall mounted racks proposed along the south elevation of the school and believes that they should be spaced 24 inches apart instead of the proposed 16 inches to allow the bicycles to be hung with the handle bars of bicycles next to one another. The applicant provided pictures (Exhibit 13) showing how of the proposed racks, both the wall mounted and the "wave" racks, are to be used. Exhibit 13 shows how the "wave" racks will accommodate the number of spaces identified by the manufacturer. The Board of Design Review find that the design of the bicycle racks meet the requirements of the Development Code and adequately provide the minimum requirement of 122 spaces.

5. *Campus Safety.* Testimony from Casey Schleich identified concerns with the safety of the campus with the proposed design. The location of the proposed cafeteria would limit school security's vision of the north area of the campus from the main school building. Ms. Schleich also stated a safety concern regarding having access to the front of the school available relating to the removal of the gates on SW 2nd Street and the location of school buses along SW Erickson Street. The applicant stated that the internal

security of the campus with the proposed development has been reviewed by the School District and addressed. The applicant also stated that issues of pedestrian safety along SW Erickson have been recognized and mitigated such as extending curbs and providing crosswalks as a part of the application to improve the safety of students crossing SW Erickson. The Board of Design Review agreed with the applicant's testimony on the matters of student safety.

IT IS HEREBY ORDERED that BDR 2001-0213 is **APPROVED**, based on the testimony, reports and exhibits presented during the public hearing on the matter and upon the background facts, findings, and conclusions found in the Staff Report dated March 21, 2002, subject to the following conditions:

1. All site development and landscaping shall be carried out in accordance with the plan marked "Exhibit A". (On file at City Hall).
2. All construction shall be carried out in accordance with the color and materials board marked "Exhibit B", as approved by the Board. (On file at City Hall).
3. All construction shall be carried out in accordance with the elevations and plans marked "Exhibit C". (On file at City Hall).
4. All landscaping required and approved by the Board for commercial and industrial projects shall be installed prior to issuance of occupancy permits unless security equal to 110 percent of the cost of the landscaping is filed with the City assuring such installation within six months of occupancy. All security bonds submitted must itemize major items in terms of cost.
5. Height and screening shall be emphasized through the planting of deciduous trees. These trees shall have straight trunks, be fully branched, have a minimum caliper of 1-1/4-inches and a minimum height of 8-feet at the time of planting. Deciduous trees can be supplied bare root provided the roots are protected against damage. Each tree is to be adequately staked.
6. Evergreen trees must be balled and burlapped or in suitable containers in which the tree has grown for one year. The ball of each tree shall be firm and the burlap

sound; no loose ball or made ball will be accepted. Each tree shall be a minimum of 6 feet in height, fully branched and adequately staked at the time of planting.


7. Ground cover plantings shall be planted on a maximum of 30-inches on center and 30-inches between rows. Rows of plants are to be staggered for a more effective covering. Ground cover shall be supplied in a minimum 4-inch size container or a 2 ¼-inch container if planted 18-inches on center.
8. Shrubs shall be supplied on 1-gallon containers or 8-inch burlap balls with a minimum spread of 12-inches to 15-inches.
9. In landscape areas to be planted in grass, sod shall be placed from October 1 to May 1. Grass seed shall be an option at other times of the year.
10. Landscaping shall be provided within areas designated for parking in accordance with the following provisions:
 - (a). All off-street parking and maneuvering areas shall be screened from the public right-of-way or surrounding property by evergreen and/or deciduous plant material with a minimum height of 30-inches to 36-inches.
 - (b). If landscaped parking areas include landscaped berms, decorative walls or raised planters which effectively screen the parking lot areas from view, the evergreen and/or deciduous plant materials measuring a minimum of 30-inches to 36-inches will not be required.
 - (c). A planter island for approximately every 12 spaces in the parking lot shall be landscaped and be a minimum of 8 feet wide by one parking stall depth.
11. The installation of an approved irrigation system shall be required to ensure the longevity of all landscaping. Further, landscaping shall be maintained by weeding, pruning and replacing as necessary.
12. All mechanical equipment, vents and utility meters shall be screened from public view and made an integral part of the structure.
13. The site shall be kept clean at all times and all trash shall be stored within the building or within the exterior opaque enclosures and be gated. The design and materials of the trash enclosures shall be compatible with the subject development and shall be a minimum of 6-feet in height.
14. All exterior lighting shall have cut-off fixtures so no glare is emitted beyond the property line or into the public right-of-way.

15. The installation and location of all mailboxes shall be incorporated and made an integral part of any proposal.
16. The Facilities Review Committee Recommended Conditions of Approval, dated March 13, 2002, are hereby made a part of the approval. Those conditions are listed below in Conditions Nos. 27 through 81.
17. Building permits must be secured prior to any site clearing, grading, parking lot paving, and public works construction.
18. A Site Development Permit shall be secured prior to any site clearing, grading, parking lot paving and public works construction.
19. The area east of the Merle Davies School building will be subject to an administrative Design Review based upon the design that was submitted May 9, 2002.
20. The applicant shall provide tree grates for all tree wells proposed with this development. The design of the tree grates shall be provided to staff prior to Site Development permits.
21. The applicant shall provide groundcover in all landscape islands. The groundcover shall be of a plant material already identified in the plant legend.
22. The applicant shall provide additional light poles in Parking Lot "H" to ensure that all areas of the parking lot are illuminated at 0.5-foot candlepower. The applicant shall provide staff a revised Lighting Plan prior to issuance of the Site Development permit.
23. The applicant shall provide shielding for the light poles along the south property line of Parking Lot "H" to ensure that the 0.5- foot candlepower does not cross the southern property line.
24. Design Review approval shall be void after two years from the date of approval unless a building permit has been issued and substantial construction pursuant thereto has taken place.
25. Notwithstanding Condition No. 24, the approval of BDR 2001-0213 (Beaverton High School Cafeteria and Parking Lots) shall be void if SW 2nd Street between SW Stott Avenue and SW Erickson Avenue is not vacated by the City Council.
26. The applicant shall provide a wooden barrier along the southern property line of Parking Lot "H" from the existing wood fence to SW Erickson Street, at a height of six feet, matching the design of the existing wood screen fence, and a Maintenance Agreement providing that the maintenance of the fence is the

responsibility of the applicant. The Manhattan Euonymus along the southern property line of Parking Lot 'H' shall be replaced with Viburnum tinus at a size of 5-gallons.

27. An ornamental gate to match the existing ornamental fence shall be located across the pedestrian path connecting the Merle Davies School building to Parking Lot 'D'.
28. The applicant shall remove the 16 parking stalls located northeast of the Merle Davies School building and provide improvements demarcating the public right-of-way and the Beaverton School District property.
29. The drainage plans for the site development permit application shall clearly show the area of new and existing impervious areas that will be tributary to the proposed vegetated swale(s) that receive a composite average of: A minimum hydraulic residence time of 9 minutes, and a minimum treatment length of 100 feet. Any connections to the vegetated swale that receive less than 20 feet of treatment length shall not count in the composite average calculation. The actual plumbed connection points into the vegetated swale(s) will be used for the calculated determination. This information shall be shown on the drainage plans both graphically (for area) and with calculations. A report that documents the final design shall include adequate documentation and summary sheets to allow City staff to easily follow the document. In addition to the drainage report and drainage plans criteria stated in USA R&O 2000-007, Appendix A, a flowchart type graphic shall be provided as part of the drainage report. The intent of this graphic is to communicate pertinent design details for the stormwater quality/quantity control facilities such as, but not limited to, stage/storage/discharge, references to plots of hydrographs, flow control structure elevations, drainage areas, etc. (Note: An excel spreadsheet showing as example of a flowchart type graphic is available from CDD. Contact Jennifer Kammerer at 526-2439 for more information.) The plan(s) for the stormwater facility shall have a minimum of 2 cross sections one north/south and the other east west. The cross sections shall show existing grades and proposed grades to match line or 10 feet outside the facility. The plans shall also show the water levels for each design event (quality, 2, 10, 25, 100 year) and a chart for the outflow for those events shall be placed next to the facility cross sections.
30. The design and construction of the project shall comply with all applicable requirements of Beaverton Municipal Code, Beaverton Development Code (Ordinance 2050 +rev.), the City of Beaverton Engineering Design Manual and Standard Drawings (Ordinance 4060), and the Unified Sewerage Agency Design and Construction Standards (February 2000, Ordinance 2000-007).
31. Prior to any work on the site governed by Beaverton Municipal Code 9.05.020, the project shall obtain a site development permit from the City Development Services Division. A separate application (with transmittal) shall be made to the

Development Services Division for this permit. (Note: All applications and legal form submittals shall be on originals as provided by the City; no facsimiles, copies, or substitutes will be accepted). Site plans shall be submitted on 24 inch x 36 inch size sheets, and to engineer's scale. Each sheet shall be stamped and signed by a registered professional engineer or as otherwise determined by the City Engineer. After the site development permit is issued, all revisions shall be approved by the City Engineer and the Planning Director; any required land use action must be final prior to approval of the engineering revision and work commencing as revised.

32. The applicant shall contract with a professional engineer (or professional architect as allowed by the City Engineer) to design and monitor the construction as set forth in the City Standard Applicant/Engineer agreement. The applicant shall submit a completed City Standard Engineer/Applicant agreement prior to issuance of a site development permit.
33. All public improvements, site grading, private streets, and common driveway paving shall be guaranteed at 100 percent of cost. The security shall be approved by City Attorney prior to issuance of a site development permit. The location, design, size, and type of all public improvements shall be approved by the City Engineer.
34. All existing overhead utilities, except high voltage lines (>57kV), within the project and along any existing street frontage shall be placed underground prior to the release of the site development performance security or as otherwise determined by the City Engineer and Planning Director. 
35. All underground piping which is not public shall be installed in accordance with Uniform Plumbing Specialty Code including Oregon amendments (UPC). The private plumbing plan for this project shall be approved by the City Building Division prior to the issuance of the site development permit. All plumbing that serves more than one lot, or crosses onto another lot, shall be considered a public system and shall be constructed to the requirements of the City Engineer as required with a site development permit.
36. All easements necessary for public facilities (including slope easements, and surface drainage easements) shall appear on the final plans and/or plat and shall be to the standard specified by the City Engineer and Planning Director.
37. All required easements shall be submitted for recording to the City and approved by the City Engineer and City Attorney, prior to the issuance of the site development permit. (*Beaverton Code 9.05.055C*)
38. All public utilities shall be installed and centered within a minimum fifteen foot wide easement. Easements for all public utilities including storm sewer, sanitary sewer, water, and illumination lines shall be of sufficient width to ensure that the

foundation of any structure or parallel utility line shall be a minimum of 45 degree vertical angle from the invert elevation of the pipe measured from the trench wall in accordance with Section 315 of the Uniform Plumbing Code. The applicant's engineer or architect of record shall verify all existing and proposed easements are of sufficient width to ensure that structures and parallel utility lines will be outside the trench zone described above. If the existing easement or proposed new easement is insufficient to meet the criteria above, a revised or additional easement shall be provided prior to issuance of the site development permit or a building permit.

39. No tree (with a mature height greater than 12 feet) shall be allowed within 5 feet of a public utility line or publicly-owned structure. Trees greater than 12 feet in height at maturity that are proposed between the outside of the 5 foot zone and the edge of the required easement can be evaluated by City staff on a case by case basis, and if acceptable, allowed by the City Engineer.
40. A detailed grading plan shall be prepared by a professional engineer or surveyor, showing existing and proposed grading at two foot contour intervals. Grading plan topography shall extend a minimum of fifty feet onto adjacent properties, or as otherwise approved by the City Engineer. The use of aerial photos, or the City's quarter-section grading plans will be allowed for preliminary design, however final plans shall be from on-site surveys. The applicant's engineer or surveyor shall submit to the City a copy of the field notes documenting the extent of the field survey with the site development permit application. No grading shall occur within 10 feet of a property line unless the requirements of Beaverton City Code sections 9.05.110 and 9.05.115 are met.
41. All existing wells, tanks, and septic drain fields shall be shown on the site development plans. These items, if proposed by the applicant or required by City Engineer to be abandoned, shall be removed during the site work in a manner approved by the governing authority.
42. The site development plans shall include erosion control measures that are designed to meet the requirements of Oregon Administrative Rule 340-41-455.
43. The applicant shall submit a completed 1200-C General Permit (Erosion Control Joint Permit) application to the City prior to the issuance of the site development permit.
44. The design and construction of private streets and parking lots along with drive access to public streets shall comply with City standards.
45. Sidewalks which are damaged, deteriorated, or removed by construction shall be replaced to City specifications.

46. The site development plans shall show water service, meter size, location and easements. All water services shall be installed and paid for by the applicant. The materials and workmanship shall conform to City standards and service line size shall match meter size, unless specifically approved by both the City Water Section Supervisor and the City Engineer.
47. The site may require a Clean Water Services Industrial Sewage Permit. If an Industrial Sewage Permit from CWS is required, this shall be obtained by the site owner. *ADVISORY NOTE: Contact Clayton Brown (503.844.8923) at CWS Source Control for more information. This is a condition required by CWS for all non-residential projects; CWS must be aware of any unusual chemicals will be used in new buildings that could end up being discharged to the sanitary sewer system. (Beaverton Code 9.05.035D, and Intergovernmental Agreement)*
48. The applicant shall submit a copy of issued permits or other approvals needed from Clean Water Services for storm system connections prior to the issuance of the site development permit. *ADVISORY NOTE: Contact Lee Walker (503.648.8621) at CWS for more information (Beaverton Code 9.05.035D USA Resolution and Order 2000-007, and Intergovernmental Agreement).*
49. The applicant's engineer shall provide a detailed drainage analysis of the subject site and prepare 24 x 36-inch sheet identifying all contributing drainage areas and plumbing systems on and adjacent to the site with the site development permit application. The analysis shall also delineate all areas on the site that are inundated during a 100 year storm event in addition to any mapped FEMA flood plains and flood ways.
50. This project shall provide on-site storm detention. Detention systems shall be designed for the 2, 10, and 25-year frequency storms to the technical requirements of the 1999 Engineering Design Manual, with provision for the safe overflow of the 100 year event. The applicant's engineer shall provide design computations with the site development permit application and field verification with submittal of "as-built" drawings that the detention volume and conveyance required by this condition has been provided. Prior to the installation of any asphalt or concrete pavement, the detention facility shall be completed and operational.
51. This project shall construct and maintain on-site storm water quality facilities meeting or exceeding the minimum requirements of the City of Beaverton and the Unified Sewerage Agency. Prior to the installation of any asphalt or concrete pavement, the storm water quality facility shall be completed and operational.
52. A storm water system development charge shall be assessed at time of building permit issuance. *ADVISORY NOTE: Currently per Ordinance 4195, this is \$726*

per each Equivalent Dwelling Unit (EDU) (2,640 square feet of new impervious surface).

53. The applicant's engineer, architect, or surveyor shall provide to the City a certified impervious surface determination of the proposed project. Preliminary calculations shall be submitted with the site development and building permit applications. The final certification shall be submitted to the City prior to final occupancy. The analysis and calculations shall include square footage of all impervious surfaces as a total. In addition, specific types of impervious area totals, in square feet, shall be given for roofs, parking lots and driveways, sidewalk and pedestrian areas, and any gravel surfaces. Calculations shall also indicate the square footage of pre-existing impervious surfaces, the new impervious surface area created, and total final impervious surfaces areas on the entire site or individual tax lots if applicable. (*Ordinance 4060 and Ordinance 3687*)
54. The landscape plans for the stormwater quality/quality control facilities shall be part of the plans submitted for the site development permit. Landscape plans scale for the landscape plans shall be 1-inch equals 20-feet and shall comply with the requirements (topsoil, plantings) shown in Appendix E of Unified Sewerage Agency Resolution and Order 2000-007.
55. The applicant shall provide street right of way dedication to the Beaverton Collector Street Standard (31 ft from centerline) on SW Erickson Avenue for the frontage between SW 2nd Avenue to SW Farmington Road (Development Code 40.10.15.3.C.1.b&c, 60.60.45.1). This section is being improved to accommodate bus parking and a wider sidewalk for bus unloading and pedestrian access. SW Erickson Avenue south of SW 2nd Street is restricted by the location of the existing high school building, preventing street widening and additional street right of way dedication.
56. The Applicant shall improve the east side of SW Erickson Avenue, from SW Farmington Road to SW 2nd Street, to the Beaverton Collector Street Standard, including planter area, sidewalk, and street trees, for the frontage of the site (Development Code 40.10.15.3.C.1.a&b, 60.60.30) with the following modifications; sidewalk width increased from 6 ft to 8 ft with no planter area and trees located in tree wells on 30 foot centers within 6 feet of the curb and no provision for an on street bicycle lane. The applicant has received approval from the Facilities Review Committee to modifying the collector street standard as described above.
57. The Applicant shall improve the west side of SW Stott Avenue, from SW Farmington Road to approximately 120 feet south of SW 2nd Street, to the Beaverton Local Street Standard, including planter area, sidewalk, and street trees, for the frontage of the site (Development Code 40.10.15.3.C.1.a&b, 60.60.30) with the following modifications; increase the sidewalk width from 6 foot to 8 foot with no planter area and trees located in tree wells on 30 foot centers within 6 feet

of the curb. The applicant has received approval from the Facilities Review Committee to modify the local street standard as described above.

58. The Development Code requires secure bicycle parking to accommodate long-term users (Development Code Section 60.60.65.4 and 60.20.10). Required long-term space bicycle parking for a high school is a minimum of 1 space per 18 students. The application indicates a shortage of 66 long-term bicycle parking spaces on the plan based on the projected student population of 2200 students. The applicant shall provide 122 bicycle parking spaces unless the requested variance (Dev. Case VAR2002-0002) to reduce the 122 required number of spaces to 56, a reduction of 66 spaces, is approved.
59. No obstructions shall be placed within the driveway intersection sight vision triangle except as provided by City Ordinance, including but not limited to parking. (Development Code 60.60.50.1 and Engineering Design Manual Sec. 210.5).
60. The applicant has requested the option to utilize the City's 10% parking credit for construction of a pedestrian plaza next to the transit route on SW Farmington. The Facilities Review Committee approved this request. The proposed plaza and details of its construction are being finalized with Tri-Met and are subject to the approval of City staff and Tri-Met prior to issuance of the site development permit (Development Code 60.60.60.1). The Code requires that the pedestrian plaza be open to the public, be at least 300 square feet, exclusive of connecting walkways, and provide a transit shelter (if required by Tri-Met and the City), landscaping and trash receptacle as part of the pedestrian plaza. The Code requires that the property owner, prior to staff review, provide a parking analysis demonstrating to the City's satisfaction that the vehicle parking demand for the existing or proposed use will be met with the reduction in place (Development Code Sec. 60.20.10.A.2).
61. That the applicant install signage reserving on street parking for school bus parking only on the west side of SW Stott Avenue and the east side of SW Erickson Avenue along the frontage of the site in the locations of the bus parking areas in accordance with a bus parking plan, including the limits of the hours of the day, approved by the City Transportation Engineer.
62. The proposed project shall comply with the State of Oregon Building Code in effect as of date of application for building permit. This currently includes: The 1998 edition of the Uniform Building Code and 1999 International Mechanical Code, published by the International Conference of Building Officials, including the State of Oregon Amendments; the 2000 edition of the Uniform Plumbing Code, published by the International Association of Plumbing and Mechanical Officials, including the State of Oregon Amendments, 2000 edition of the National Electrical Code published by the National Fire Protection Association, including the State of Oregon Amendments.

63. Applications for plans review must include the information outlined in the "Application Checklist" available at the Building Division Counter. Incomplete applications will not be accepted. [City policy.]
 64. Building permits will not be issued until all related plans and permits have been reviewed, approved and issued (i.e., mechanical, plumbing, electrical, fire sprinkler systems, fire alarm systems, ...). [City Policy.]
 65. The building code plan review can run concurrent with the BDR and Site development review.
 66. A separate plumbing permit is required for installation of private on-site utilities (i.e., sanitary sewer, storm sewer, water service, catch basins, ...). If the applicant desires to install those types of private utilities during the same period as the "Site Development" work, a separate application and three sets of the private utility plans must be submitted to the building division for review and approval.
 67. Disabled parking stalls shall be provided in accordance with ORS 447.233.
 68. An accessible route shall be provided to persons with disabilities throughout the site. [SSC Section 1106]
 69. The proposed addition shall be accessible to persons with disabilities. An accessible route shall be provided to the addition from the exterior or through the existing building.[SSC Section 1111]
 70. The applicant should be aware that food service operations are required to be reviewed and approved by the Washington County Health Department for applicable health regulations. For more information contact the Washington County Health Department 693-4402.
 71. Any excavation must comply with the regulations of ORS 952-001-0010 to 952-001-0090 as pertains to locating and protecting underground utilities. The Tri-County Utility Notification Center at 246-6699 must be called a minimum of 48 hours prior to any excavation so underground utilities may be located.
- (Commercial, Multi-family and other projects)
72. Following completion of construction, and prior to the City's release of the performance bond, the as-constructed drawings shall be provided to the City. Each sheet of the as-constructed drawings shall be stamped "As-Built", and signed and dated by the Engineer. As-Builts shall be black India ink on originals or reverse reading, fixed-line, photographically reproduced 4-mil mylar, 24 by 36-inches in size and to engineering scale. Each sheet included in the construction plan shall be as-built. Sepia mylars or vellums will not be accepted. Contact Ed Parks for questions at 526-2441.

- a. All public utility easements will be shown on the as-built.
- b. Distance between main lines in shared easements will be shown.
- c. Type of main line, size and material will be shown.
- d. Public sidewalk detail will be included.
- e. If project was designed on a CAD system, the City also shall receive a copy of all related drawings and documents (such as point files) in AutoCad format dxf or dwg, on disk.

[Res. 3240]

73. The Applicant shall have its registered engineer analyze all existing, proposed and planned uses of potable water, both for domestic and fire protection, to determine the ultimate water demand to be served by the resultant public waterline on the portion of public rights-of-way of SW Second Street, from Erickson Avenue to Stott Avenue. Using City of Beaverton engineering design standards, the Applicant's engineer shall calculate the required diameter of ductile iron waterline required to serve the Applicant's ultimate water uses.
74. From preliminary design plans of the proposed development, the Applicant proposes to re-locate portions of the existing waterline to construct substantial building and other improvements. The Applicant further proposes to re-locate the waterline between two buildings and under a proposed elevated "sky-bridge," which will provide access to a new cafeteria north of the main existing high school building. With the proposed vertical clearance above ground surface over the waterline, there is not sufficient room for maintenance equipment to maintain, repair or replace the waterline. To protect the waterline and allow repair and replacement of the waterline, the Applicant shall install the waterline inside a casing pipe (sleeve), as approved by the City Utilities Engineer, similar to the types of provisions for crossing of railroad tracks, State highways, and arterial concrete City streets. On each side of the cased waterline under the sky-bridge, the Applicant shall also install butterfly valves to provide a means of isolating the section of waterline with confined horizontal and vertical access in the event of a water main leak, rupture, or replacement of same.
75. It is the City's intent and desire to upgrade the size of the waterline that is calculated by the Applicant as the required size to serve all future uses, to a size of 12 inches in diameter, which is contemplated by the City as needed in the water system grid to serve the abutting areas to the high school. The City agrees to reimburse the Applicant for waterline betterments greater than the waterline size determined to be needed to serve the Applicants needs. If the Applicant agrees, the City requests that the Applicant act as the contracting agency for both design and construction of the waterline. The financial arrangements for this transaction and those needed to execute the work is to be set out in an intergovernmental agreement that will be prepared by the City and upon approval by both parties executed by the Mayor and authorized School District representative.

76. Development to comply with City of Beaverton's Cross Connection Control Ordinance 4.02.160 and 4.02.165. Backflow prevention assemblies for protecting the public water supply shall be installed at the property line in accordance with the City of Beaverton standards. All backflow prevention assemblies, and installation details shall be shown on site development plans. Contact Lyle Heilman at 503-350-4042
77. Any building in excess of 30 feet above the water main at the service tap is required to have an approved backflow prevention assembly installed on the domestic water service. Contact Lyle Heilman at 503-350-4042 for approved type and installation standards. All backflow prevention assemblies, and installation details shall be shown on site development plans.
[OAR 333 & Beaverton Development Code 4.02.160]
78. All gates obstructing fire department access must be equipped with "Knox" locks.
79. Complete fire flow calculations for the proposed building must be submitted prior to the issuance of a site development permit.
80. The minimum number of fire hydrants for the building will be based on the required fire flow prior to giving credit for fire protection systems, divided by 1500.
81. The location of the Fire Department Connection for the automatic sprinkler system of the Cafeteria Building is not identified on the submitted plans. The FDC must be within 70 feet of a fire hydrant.

CARRIED by the following roll call vote:

AYES:	Doukas, Shipley, Antonio, Beighley, Nardozza, and Straus.
NAYS:	None.
ABSTENTIONS:	None.
ABSENT:	None.


Dated this 17th day of May, 2002.

To appeal the decision of the Board of Design Review, as articulated in Land Use Order No. 1506, an appeal must be filed with the City of Beaverton Recorder's Office by no later than 5:00 p.m. on Tuesday, May 28, 2002.

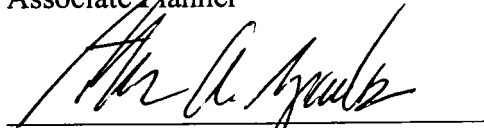
BOARD OF DESIGN REVIEW
FOR BEAVERTON, OREGON:

ATTEST:

APPROVED:


SAMBO KIRKMAN
Associate Planner


STEWART STRAUS
Chairman


STEVEN A. SPARKS, AICP
Development Services Manager

BEFORE THE PLANNING COMMISSION
FOR THE CITY OF BEAVERTON, OREGON

IN THE MATTER OF A REQUEST FOR)	
	)	ORDER NO. 1504
CONDITIONAL USE PERMIT APPROVAL TO)	
	)	CUP 2001-0031
CONSTRUCT A CAFETERIA & PARKING)	
	)	ORDER APPROVING
AREAS AT THE EXISTING BEAVERTON)	
	)	REQUEST WITH
HIGH SCHOOL CAMPUS (BEAVERTON)	
	)	CONDITIONS
HIGH SCHOOL CAFETERIA & PARKING)	
)	
LOT), FRANK ANGELO, APPLICANT)	

This matter came before the Planning Commission on March 20, 2002, and was continued to April 24, 2002, on a request for approval of a Conditional Use Permit (CUP) for the construction of a two-level, 30,000 square foot cafeteria building and parking areas at the existing Beaverton High School campus. Educational institutions, including public, private or parochial academic schools are identified specifically as a conditional use within the R-10 zone. The proposal is located directly to the north of and connecting to the existing high school building at 13000 SW Second Street. The Beaverton High School campus is specifically described on Washington County Assessor's Map 1S1-16AD, Tax Lots 11100, 11000, 02900, 07100 and 10900, and Map 1S1-16AC, Tax Lots 02100 and 02500. The site is zoned Urban Low Density (R-10) and is approximately 27 acres in size.

Pursuant to Ordinance 2050 (Development Code), Section 40.05.10 and Section 50.30.1, the Planning Commission conducted a public hearing and considered testimony and exhibits.

Prior to commencement of the public hearings on March 20, 2002 and April 24, 2002, Vlad Voytilla, Planning Commission Chairman, recused himself from the proceedings due to his conflict of interest as being an employee of the Beaverton School District.

After holding the public hearing and considering testimony, the Planning Commission adopts the Staff Report dated March 13, 2002, as to applicable criteria contained in Section 40.05.15.2 of the Development Code. The Planning Commission also adopts the following supplemental findings, contained herein, in response to the primary issues of concern that were presented to the Planning Commission on April 24, 2002, during the period of oral testimony. Supplemental findings in response to key issues of concern, as identified herein, are as follows:

1. Drop off facility for students. The applicant stated that student drop-off would occur in the driveway areas on either side of the proposed cafeteria and buses would load and unload students along SW Erickson and SW Stott Avenues. The Commission was concern with the delays to parents using the main driveway, off of SW Erickson Avenue from buses loading and from the number of students dropped off on SW Erickson Avenue in the morning. To provide an additional location for student drop off, the Commission adopts a condition to locate an area on SW Erickson Avenue for morning student drop off.

2. *Pedestrian Plaza.* The applicant stated that a pedestrian plaza would be constructed at the northeastern portion of the Beaverton High School campus. The pedestrian plaza was provided to allow a 10% reduction in the minimum parking requirement. The Commission was concerned that without a complete review of the proposed plaza, the elements of the pedestrian plaza as identified in Section 60.20.10.10 of the Development Code would not be met. The Commission adopts a condition that the applicant provide the pedestrian plaza meeting the requirements outlined in Section 60.20.10.10.A.2 of the Development Code.

3. *Design elements of the proposed parking area.* Testimony from Edna Starke and Shannon Starke conveyed concerns relating to the impacts to the abutting property south of parking lot 'H' from noise, lighting, and vehicle exhaust. Specifically, concerns were raised regarding an adequate barrier between the two properties, the proposed landscape materials provided, and the impacts to their property from the proposed lighting. The Commission agreed that a physical barrier between the two properties would provide some mitigation to the parking area for the abutting property owner; however, issues of lighting, fence design, and landscape plantings are discussed as part of the Design Review application. The Commission adopts a condition to provide a physical barrier between the Starke property and parking lot 'H'. The applicant also discussed concern with the proposed development lowering their property value. The Commission found that no evidence was provided to show that this would occur and staff clarified that in review of CUP applications, property value impacts are not evaluated in the approval criteria.

4. *The closure of SW 2nd Street.* Testimony from Henry Kane conveyed concern with the closure of SW 2nd Street and that Tualatin Valley Fire and Rescue (TVF&R) were not provided adequate emergency access to the campus. The Commission clarified that the application was to address a proposed expansion and that the issue of closing SW 2nd Street had been addressed in the Street Vacation application that was approved by City Council. Staff clarified that TVF&R had reviewed this application and found that the emergency access provided was adequate.

IT IS HEREBY ORDERED that CUP 2001-0031 is approved, based on the facts and findings of the Planning Commission, on April 24, 2002, subject to the following conditions:

1. Prior to obtaining a Site Development Permit, the applicant shall provide staff with a copy of a recorded lot consolidation of all parcels in the area of the proposed building in accordance with Washington County's requirements.
2. The permit granted shall run with the land and shall continue to be valid upon a change of ownership of the site or structure unless otherwise specified in conditions attached to the permit.
3. Prior to issuance of a building permit, the applicant shall, in accordance with Section 40.05.15.2.D.2 of the Beaverton Development Code, file a copy of this approved permit with the Washington County Department of Records and Elections.
4. Building permits must be secured prior to construction. For further information regarding building permits and/or related building code issues, please call 503-526-2403.
5. A Site Development Permit shall be secured prior to any site clearing, grading, parking lot paving and public works construction.
6. The Beaverton School District shall provide a morning student drop off area approximately 60 feet on SW Erickson Street, adjacent to Beaverton High School.

7. The applicant shall provide a pedestrian plaza, as defined in Development Code Section 60.20.10.10.A.2. This pedestrian plaza must be open to the public and be at least 300 square feet and provide landscaping and a trash receptacle, as well as a transit shelter, if required by Tri-Met.
8. The applicant shall provide a wooden barrier along the southern property line of parking lot 'H' to SW Erickson Street to provide screening for the adjacent property owners, the height and design of which is to be determined by the Board of Design Review.

Motion **CARRIED**, by the following roll call vote:

AYES: Maks, Young, Pogue and Barnard

NAYS: Bliss and Johansen.

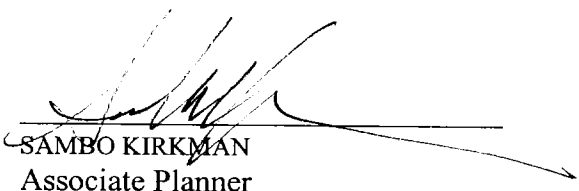
Dated this 26th day of April, 2002.


To appeal the decision of the Planning Commission, as articulated in Land Use Order No.1504, an appeal must be filed with the City of Beaverton Recorder's Office by no later than 5:00 p.m. on Monday, May 6, 2002.

PLANNING COMMISSION
FOR BEAVERTON, OREGON

ATTEST:

APPROVED:


SAMBO KIRKMAN
Associate Planner


ROBERT BARNARD
Vice-Chairman


STEVEN A. SPARKS, AICP
Development Services Manager



CITY of BEAVERTON

4755 S.W. Griffith Drive, P.O. Box 4755, Beaverton, OR 97076 General Information (503) 526-2222 V/TDD

STAFF REPORT

TO: Board of Design Review

STAFF REPORT DATE: Thursday, March 21, 2002

STAFF: Sambo Kirkman, Associate Planner ✓

APPLICATION: **BDR2001-00213 (Beaverton High School Cafeteria and Parking Lots)** J.B.

LOCATION: 13000 SW 2nd Street
Map 1S1-16AD; Tax Lots 11100, 11000, 02900, 07100 and 10900
Map 1S1-16AC, on Tax Lots 02100 and 02500

ZONING: Urban Low Density (R-10)

REQUEST: The applicant request Design Review approval to build a new 30,000 square foot, two-story cafeteria building and parking areas at the existing Beaverton High School Campus. The proposal also includes new driveways, associated landscaping, and public right-of-way improvements.

PROPERTY OWNER: Beaverton School District
16550 SW Merlo Road, Beaverton, OR 97006

APPLICANT: Frank Angelo, Angelo Eaton & Associates
620 SW Main, Suite 201, Portland, OR 97205

AUTHORIZATION: Ordinance 2050, The Development Code

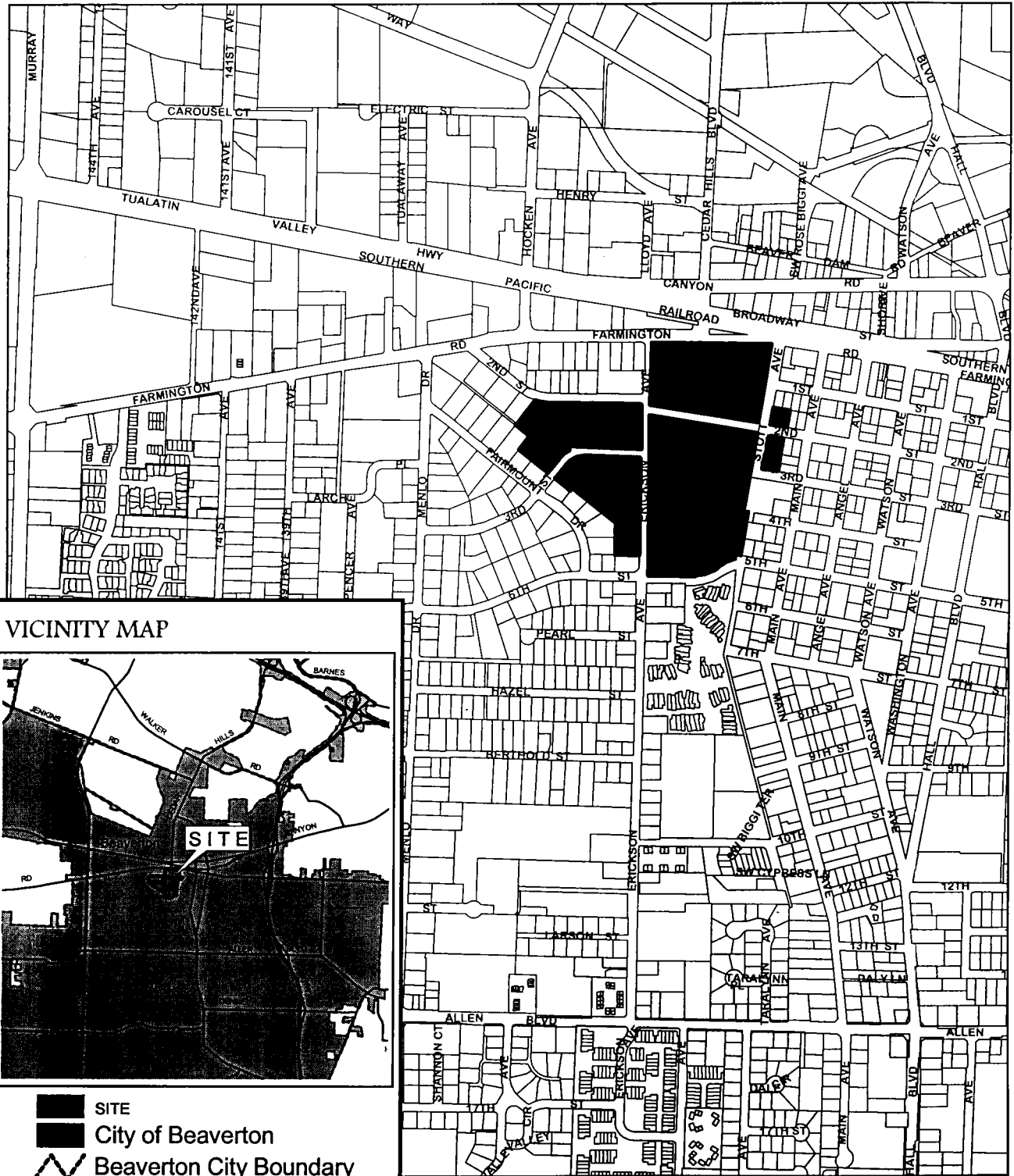
APPROVAL CRITERIA: Development Code, Section 40.10.15.3.C

HEARING DATE: Thursday, March 28, 2002

RECOMMENDATION: **APPROVAL of BDR2001-00213 (Beaverton High School Cafeteria and Parking Lots)**, subject to conditions identified at the end of this report.

DETAIL MAP

1



City of Beaverton

BEAVERTON HIGH SCHOOL CAFETERIA & PARKING LOTS
 COMMUNITY DEVELOPMENT DEPARTMENT
 Development Services Division

01/02/02

Map Number

1S116AD

Application #

BDR 2001-0213/CUP 2001-0031
 VAR 2002-0002/TPP 2001-0008



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APPLICATION PROCESSING

Subject Application:

The project as proposed requires a Design Review (DR) Type 3 application. The DR Type 3 requires a public hearing before the Board of Design Review (Board). Notice shall be given in accordance with Sections 50.30.1.C of the Development Code.

The Board, after the public hearing, shall approve, approve with conditions, or reject the plans of the applicant. The Board shall include as part of its approval the recommendations of the Facilities Review Committee (Committee) relating to the application. The Board shall not modify any recommendation of the Committee which reflects technical requirements or conditions set forth in provisions of the Development Code or state law without first receiving a full report on the legal and technical implications of changing the requirement. An approval of the Board shall not be construed to have granted a variance from the provisions of any ordinance unless the approval clearly states that a variance has been granted

Appeals:

Appeal of a Board decision shall be to the City Council. The procedure for filing such an appeal and the manner of the hearing shall be governed by the provisions of Section 50.40 of Ordinance 2050, The Development Code. The appeal request must be made in writing and delivered to the City within 10 calendar days from the date of the Land Use Order memorializing the Board's final decision. In addition, there is a non-refundable \$600.00 fee, which must accompany the request for hearing.

To be effective the notice of appeal shall contain:

- A. A reference to the matter sought to be reviewed and the date the Board of Design Review made the decision.
- B. If the appellant is not the applicant, a statement of why the appellant is an "aggrieved person".
- C. The specific grounds including ordinance and section numbers relied on for the appeal. To be effective the appeal must relate to the specific criteria on which the decision was based. If the notice of appeal is filed prior to the receipt by the appellant of the Board's written order, the notice shall state this fact and indicate the notice of appeal will be supplemented with a statement of the specific grounds relied upon within 15 days of the date of the Board of Design Review order. The Director or City Recorder, at the direction of the City Attorney, may reject the request if it does not meet the requirements of this ordinance. In such instances, the City Attorney shall provide written notice that the request for review has been rejected within 10 days of receipt of the request for review. (ORD 3739).

120 Day Requirement:

In accordance with State statute, all land use applications must have a final decision within 120 days from the date the application was made complete. Completeness of the application was perfected on January 30, 2002. Therefore, the City must take final action on the application on or before May 30, 2002. The Commission's hearing date of March 28, 2002 is day 57 of the review process.

Public Notice:

1. Property was posted in two locations on February 7, 2002.
2. Mailed notice to property owners within 500 feet on February 5, 2002 and March 11, 2002.
3. Legal notice was published in the Valley Times on February 7, 2002.
4. In addition, notice was posted at the Library, City Hall, and Post Office.

Previous Actions:

BDR2001-0085 Beaverton High School Parking Lot Improvement
CUP2001-0018 Beaverton High School Parking Lot Improvement
BDR99-00083 Beaverton High School Repaint
BDR91-00091 Beaverton High School Two Portable Classrooms
CUP91-00027 Beaverton High School Two Portable Classrooms
BSDR3-84 Beaverton High School Parking Lot
BSDR31-84 Beaverton High School Batting Cage
BSDR39-79 Beaverton High School Addition
CUP4-70 Beaverton High School Expansion

Other Current Applications:

CPA2001-0022 Beaverton High School Comprehensive Plan Amendment
Application submitted November 15, 2001
SV2001-0003 Beaverton High School Street Vacation
Application submitted November 15, 2001
CUP2001-0031 Beaverton High School Cafeteria and Parking Lot CUP
Application submitted December 21, 2001
TPP2001-0008 Beaverton High School Historic Tree Removal
Application submitted December 21, 2001
VAR2002-0002 Beaverton High School Bicycle Parking Variance
Application submitted January 30, 2002. On March 4, 2002 the application was withdrawn.

BACKGROUND INFORMATION**Summary:**

The proposal is to expand the existing high school to include a new two-story building located between the main high school building and the Merle Davies building. The proposed building is to be approximately 30,000 square feet in size with a sky bridge connecting the proposed building with the main building. The proposed development includes the construction of three parking lots. Two located

on either side of the proposed building and one south of the existing tennis courts on the west side of SW Erickson Avenue. Driveway area with turnarounds are located within the two parking lots on either side of the proposed cafeteria building. The proposal includes improvements to the pedestrian streetscape making them more ADA compliant, the construction of raised sidewalks along SW Erickson and extended corners, the construction of a pedestrian plaza, and associated landscaping.

Major Issues:

The applicant is proposing to expand the existing Beaverton High School (BHS) campus to include an additional parking lot and a new two-story cafeteria facility. The location of the cafeteria is within the current public right-of-way of SW 2nd Street. The approval of this Design Review and the associated Conditional Use Permit and Tree Preservation application are contingent upon the approval to vacate SW 2nd Street. Prior to approval of the Street Vacation, the applicant will need to have approved a Comprehensive Plan Amendment to remove SW 2nd Street from the Street Functional Classification Plan as a neighborhood route.

Public Comment:

As of the date of this staff report no written comments have been received.

Comprehensive Plan Designation:

Land Use:

The Comprehensive Plan identifies the parcels as Public Facilities – Schools and Parks, except for one parcel, located south of the existing tennis courts along SW Erickson Street. This parcel is designated as Residential – Urban Low.

Street Functional Classification Plan:

SW 2nd Avenue is designated on the Functional Classification Plan Map as a Neighborhood Route. The applicant has requested a Comprehensive Plan Amendment to remove this designation on SW 2nd Street between SW Stott and SW Erickson Avenues.

SW Farmington Road (State Highway 10) is designated as an Arterial.

SW Erickson Street and SW 5th Street are designated as “Collector” streets.

SW Stott Avenue is designated as a local street.

Street Improvement Master Plan:

The Street Improvement Master Plan Map illustrates the future street widening of SW Farmington Road west of SW Hocken.

Traffic Signals Master Plan:

There are no future traffic signals identified for abutting streets on the Traffic Signals Master Plan. There are two existing traffic signals located on SW Farmington within close proximity to the project area located at SW Hocken and at SW Cedar Hills Boulevard.

Bicycle Master Plan and Action Plan:

SW Erickson is designated as a street where bike lanes are proposed. The applicant, as a part of the Design Review application includes a Street Design Modification requesting not to add bicycle lanes along SW Erickson Avenue.

Zoning:

Subject Property: Residential – Urban Low Density (R-10)

Surrounding Area: North: Regional Center Old- Town (RC-OT) and General Commercial (GC)
South: Urban Standard Density (R-5) and Urban Low Density (R-10)
East: Regional Center – Old Town (RC-OT)
West: Urban Low Density (R-10)

Existing Land Uses:

Subject Property: Public High School

Surrounding Area: North: Commercial
South: Residential
East: Residential & Commercial
West: Residential

Existing Site Conditions:

The Beaverton High School (BHS) campus consists of seven parcels approximately 27 acres in size. There are three existing buildings on the site, the main building, the Merle Davies Building, and a building located west of the main building across SW Erickson Avenue. The Merle Davies building along with the landscaping surrounding this building is listed in the City's Historic Inventory. There are athletic fields located north of the main building and west of the Merle Davies building, south of the main building, and on parcels located along the west side of SW Erickson Avenue. The applicant has identified 311 private and 77 public parking spaces on the BHS campus and 57% open space on the existing campus. The site is relatively flat with an overall grade change of less than 10 feet. SW Erickson Avenue, SW Stott Avenue, and SW 2nd Street are located within the BHS campus, providing access to the buildings. SW 2nd Street and SW Stott Avenue have gates closing the roadway to vehicular traffic during school hours.

PROPOSAL

Site Area Data:

<u>Item</u>	<u>Square Feet</u>	<u>Percent</u>
Estimated Building:	212,500	18
Parking & Drives & Sidewalks:	225,000	19
<u>Landscaping/Open Space</u>	<u>754,000</u>	<u>63</u>
TOTALS (approx.):	1,191,500	100

Proposed Parking:

Pursuant to Section 60.20.10.5 of the Development Code, off-street parking required for educational institutions such as high schools is based on the ratio of 0.2 of a parking stall per FTE students and staff. The applicant states that the existing counts are 1800 students and 150 staff at the facility and the projected numbers are 2000 students and 200 staff. At the existing population of the campus, the number of required parking for the 1950 people is 390 stalls and for the projected numbers, the required parking for 2200 people is 440 stalls. The proposed development will include the construction of three parking lots, two east and west of the proposed cafeteria building and one south of the existing tennis courts on the west side of SW Erickson Avenue. With the proposed parking lots, the BHS campus will provide only 436 parking stalls, not meeting the minimum parking stall requirements for the projected population of the school.

However, the applicant has requested the option to utilize the Development Code's 10% parking credit for construction of a pedestrian plaza next to the transit route on SW Farmington to reduce the minimum parking space requirement. If the design of the proposed pedestrian plaza is approved by Tri-Met and the City of Beaverton, the 10% reduction would be allowed and the 432 spaces will therefore meet the required minimum number of parking spaces and will also not exceed the maximum parking spaces.

Proposed Site Plan:

The project area, the BHS campus, consists of seven parcels adjacent to SW Erickson Avenue, SW 2nd Street, SW 3rd Street, and SW Stott Avenue, SW 5th Street and SW Farmington Road. The site plans illustrate the proposed cafeteria building in the right-of-way of SW 2nd Street between the Merle Davies School building and the main high school building. The applicant proposes three parking lots, Parking Lots 'C' and 'D' on either side of the proposed cafeteria building with the main driveway and turnaround west of the proposed cafeteria accessing from SW Erickson and a turnaround east of the proposed cafeteria accessing SW Stott Avenue and SW 2nd Street. An additional parking lot, Parking Lot 'H', is proposed along the west side of SW Erickson Avenue south of the existing tennis courts, north of SW 5th Street accessing SW Erickson Avenue. Landscape areas are located throughout the proposed development in the parking lots and next to the proposed building. Two water quality facility swales are proposed for the site one north of the main driveway and the other along the western property line of Parking Lot 'H'.

Proposed Building Design:

As illustrated on the applicant's architectural elevation, the proposed cafeteria building is two-story with a height of 31 feet for the building and skylights that create an overall height of approximately 34 feet. The proposed development includes the construction of a sky bridge on the southern elevation of the proposed building connecting to the main high school building. The sky bridge is 12 feet tall and is approximately 12 feet high. The sky bridge will be made of glass blocks sides, a metal roof and exposed steel frame.

On the western elevation, the applicant proposes an entrance with two double doors and a canopy over the entrance and a window system above. The western elevation will also have a series of six window systems on the first and second story along the entire elevation. There are awnings proposed to cover the windows on the second story and a canopy that occupies a portion of the western elevation. One half of the eastern elevation of the proposed building has five window systems on the second story and three window systems on the first story with two sets of double doors on either side of the windows. The other half of the eastern elevation has one single door and two small windows on the first story and stainless steel perforated metal fascia on the second story. There is a canopy that runs the length of the proposed building on this elevation. The south elevation contains one entrance, below the sky bridge and four window systems on the first story and three window systems with awning on the second story. The northern elevation has one double door entrance with an awning above it and three window systems on the first story and three on the 2nd story. The northeast corner of the building has perforated metal fascia panels on the second story and panels surrounding the trash / recycling enclosure area. There is a canopy that covers a portion of the trash / recycling area.

The main exterior of the proposed cafeteria is a stucco finish painted "off-white", similar to the main color of the adjoining building with a perforated metal fascia along the top of the building painted "Spiced Vinegar." The building will be painted with two accent colors "Burning Sand" and "Spiced Vinegar" and a trim of "Vining Ivy" similar to the colors found on the main high school building. The windows frames are aluminum with a satin finish. The awnings and canopy are painted "Vining Ivy."

Proposed Landscape Plan:

Landscape planting is proposed as ornamental and native type landscaping. The Landscape Plan illustrates areas of trees, shrubs, and groundcover materials located around the building and parking area along with sidewalks and pedestrian plazas. For the area surrounding the proposed building, there are walkways connecting the proposed building to the existing buildings and the parking area. There are planter areas located around the proposed cafeteria, the main building and between the buildings with plants such as Vine Maple, Red Japanese Maple, Carolina Silverbells, Sourwood, Red Cascade Mt. Ash, Coral Bell Azaleas, Kelsey Dogwood, Compact Oregon Grape, Moon Bay H. Bamboo, Anna Kruschke Rododendron, Cat. Granifolium Rhododendron, Japanese Skimma, Evergreen

Huckleberry, Spring Bouquet Tinus, Mariessi Viburnum, and David Viburnum, with Kinickinnik Bowles Periwinkle, Salal, seeded lawn, and Creeping Mahonia as groundcover. Planting materials around parking area and in parking lot landscape islands include: Raywood Ash, Autumn Purple Ash, Rosy Glow Barberry, Winter Gem Boxwood, Isanti Dogwood, Burford Com. Chin. Holly, Pacific Wax Myrtle, and Otto Luyken Laurel, with Brong Bugleweed, Kinnikinnick and seeded lawn as groundcover. The bio-swale and water quality facility swale are proposed to contain Isanti Dogwood, Douglas Spirea, wet/ moist seed mix, and dry area seed mix. The applicant also proposes to place White Oaks north of the main driveway and Norway Maples along the north side of the campus near SW Farmington Road. The applicant has indicated that the contractor installing the plant materials will provide a temporary irrigation system during the two-year establishment period.

Proposed Lighting Plan:

The lighting plan shows locations of lights and areas of illumination including the 0.5-foot candle within the parking lot, driveway areas and at the entrances to the building. For the illumination of the parking lot, the plan indicates the use of 13 light poles, 15 feet in height with an acorn top lamp, along the main driveway west of the proposed cafeteria and the pedestrian path connecting the main driveway and the Merle Davies building. Recessed square-lensed down lights are located along the entire east and west elevations in the canopy area of the proposed building with some located underneath the sky bridge, in areas along the north and south elevation of the proposed building in the canopy areas, and in the canopy area of the main entrance of the main high school building. These recessed lights illuminate the proposed building its entries and the main entrance of the high school. The applicant also proposes gooseneck wall mounted lights along the western elevation of the proposed building, scone wall mounted lights along the eastern elevation of the proposed building and in various places on the main building. Between the main building and the proposed building, the applicant proposes to place light poles on either side of the sky bridge similar to the acorn lights found along the main driveway. Additionally light poles with round tops 22" in diameter are located in Parking Lot 'C' of the proposed development. The applicant also has at-grade well lights between the turnaround of the main driveway and the main entrance of the school. 20-foot tall light poles are proposed in Parking Lot 'H' of the proposed development.

Signage:

The location for signs are not shown on the drawings; however, all signing will require separate administrative approval and compliance with the requirements of the Development Code.

DESIGN REVIEW

CRITERIA, FACTS and FINDINGS

Conformance to the Comprehensive Plan for Design Review Approval:

Chapter 40, Section 10.05 of the Development Code states that the purpose and objectives of Design Review is to implement the Comprehensive Plan. Action by the Board of Design Review is an implementing measure of the Plan. Therefore, having conformed to the standards and criteria for approval listed in Chapter 40, Section 10.15.3 of the Code, this application is found to be in conformance with the Beaverton Comprehensive Plan.

Board of Design Review Standards for Approval:

Section 40.10.15.3 of the Development Code provides standards to govern the decisions of the Board as they evaluate and render decisions on proposals. The Facilities Review Committee has reviewed the Technical Standards of Section 40.10.15.3.C.1 and finds that the application meets the applicable standards. The Committee has recommended Conditions of Approval (dated March 13, 2002) in order to ensure compliance with the approval standards and other applicable Code requirements. The Board will determine whether the application as presented meets the Design Standards of Section 40.10.15.3.C.2. The Board may choose to address the Technical Standards section, or may simply adopt the Committee's findings and Conditions of Approval. In this report, staff evaluate the application in accordance with each of the Design Standards.

SECTION 40.10.15.3.C.2 DESIGN STANDARDS

Criterion (a):

"That, in relationship to the existing surroundings and future allowed uses, the location, size, shape, height and spatial and visual arrangement of the uses and structures are compatible, with consideration given to increased setbacks, building heights, shared parking, common driveways and other similar considerations."

Facts and Findings:

Location: The BHS campus has some residential uses on the south, east and west side of the campus, which the school provides buffering for some residential homes in the area from the commercial uses north of the BHS campus and from SW Farmington Road. The proposed cafeteria building would be located between two existing buildings, the main high school building and Merle Davies. The proposed development will have the greatest visual impacts to properties to the east and west of the proposed building. However the impacts are minimized with the proposed building located approximately 300 feet from SW Erickson and approximately 120 feet away from SW Stott Street. The proposed building proposes two parking facilities and driveways east and west of the building.

The parcel on the west side of SW Erickson, south of the existing tennis courts is proposed for use as a parking lot. The parking lot is surrounded by vegetation, such as canopy trees, continuous hedges, and other plant materials to minimize the visual impacts of the cars using the facility. Since no buildings are proposed on this parcel, there are less visual impacts to the surrounding residential area.

Size and Shape: The proposed expansion, at approximately 30,000 square feet, will be a separate building connected to the main high school building by a sky bridge. This proposed building is generally rectangular in shape with features such as canopies and awnings around the building.

Height: The applicant's elevation plans identify the height of the proposed cafeteria as 39 feet in their narrative and 34 feet in their architectural elevation. In discussions with the applicant, it was identified that the proposal is to construct the building at a height of 34 feet. The height of the proposed addition is 31 feet to the top of the building and is 34 feet including the skylights. The height of the main high school building in the area of the proposed cafeteria building is 31 feet which the overall height of the proposed building will be three feet higher than the main building in this area. However, the auditorium building, which is 60 feet in height, is substantially higher than the proposed cafeteria. With the current setback of the existing buildings and the setback provided for the proposed building, visual impacts will be minimal to the surrounding residential area.

Design: The applicant has submitted a conceptual drawing of the elevations of the proposed building addition. The main building is made up of stucco and the Merle Davies building is brick. The design of the proposed building is such that it is consistent with the design of the main building and does not result in alterations to the historic Merle Davies building. The application states "Fenestration is similar in size and location and will lessen heat gain and add natural light reducing dependence on light figures and generally save energy." The elevations of the proposed building provides a number of windows that compliment the windows found on both existing structures.

The color of the building and features such as the awnings proposed are similar to the color of the existing building and compliment the color of the brick façade on the Merle Davies building.

Staff find that the design of the proposed building, for the most part has taken into consideration its size, location, height and other features with respect to the surrounding area. The conditions identified by staff are to provide additional mitigation to the development to reduce the impacts to the surrounding area, especially those along SW Farmington Road north of the campus.

Therefore, staff find that the criterion is met.

Criterion (b):

“That there is a desirable, efficient and workable interrelationship among buildings, building entrances, transit stops, transit facilities and routes, parking, loading areas, circulation, open spaces, landscaping and related activities and uses on the site”

Facts and Findings:

The proposed building is located between two existing building with a sky bridge connecting the proposed building to the main high school building. The entrances along the northern elevation is in close proximity to the entrance of the Merle Davies building and the entrance from the main building to this proposed cafeteria building are also aligned below the existing sky bridge area. The east and west elevation of the proposed building have entrances available that connect to the pedestrian areas, parking lots and the turn around areas. There are canopies located along the proposed building and the entrances to the main building to provide sheltered connections to the building entrances.

School bus loading and unloading are to be located along SW Erickson Avenue and SW Stott. The applicant has proposed public improvements along both streets, which include 8-foot sidewalks. These sidewalks connect to the pedestrian areas and walkways connecting to the entrances to three buildings. The fourth building is located on the west side of SW Erickson as well as Parking Lot ‘H’. The proposed raised crosswalks and extended corners will provide improved crossings along SW Erickson. There is also a transit plaza proposed at the northeast corner of the campus along SW Farmington Road. The improved sidewalks and walkways throughout the campus will connect the pedestrians to this transit plaza.

As stated by the applicant the pedestrian areas along the new driveways and the proposed building have been provided to also improve ADA accessibility to the buildings and through the campus. The applicant has also provided sidewalks along SW Stott Avenue connecting SW Farmington Road SW 1st Street and improved the remaining sidewalks area to the terminus of SW Stott Avenue.

With the improved sidewalks along SW Stott, the applicant has proposed to add a 24-foot driveway east of the Merle Davies building accessing SW Stott Street and the removal of existing planter areas and landscaping east of the existing building. No additional improvements are proposed to this area. It appears that this driveway area could be used for excess parking and not required parking; however the applicant has not stated this in their application. If it is to be used as excess parking additional information will need to be provided to the Board to understand how the area will function. Since no additional improvements are proposed for this area except to remove landscaping and add a driveway access, staff recommends that this area, with exception to the public improvements, remain in its existing condition and at the time when future change is desired, that the applicant provide

the Board with information on how it is to be used and propose improvements through a Design Review application.

All of the above elements provides a layout that is efficient and workable; however the applicant has proposed the expansion to occur within the current public right-of-way. The approval of the proposed design will be contingent upon the approval to vacate a portion of SW 2nd Street. If SW 2nd Street is approved to be vacated, staff find that the proposed design provide a layout that is efficient and workable if the conditions identified in this report are met.

Therefore, staff find that by satisfying condition #20, the criterion is met.

Criterion (c):

"For Significant Natural Resource sites, features which have been identified on the site as part of the City's natural resources inventory process and the siting and design of buildings and other improvements, are appropriate to protect these resources as contemplated by the Comprehensive Plan for Beaverton's Natural Resources."

Facts and Findings:

The site does not contain a Significant Natural Resource as identified on the City's natural resources inventory.

Therefore, staff find the criterion is not applicable.

Criterion (d):

"That the development has been designed to, where possible, incorporate existing trees of significant size and species, and aesthetics can best be achieved by preserving groves or areas of trees as opposed to only individual trees."

Facts and Findings:

The applicant has stated that the proposed developed has protected as many trees as possible on the site, but that site constraints limit development in other areas. The applicant shows 20 historic trees to be removed on the campus, seven along SW 2nd Street for the proposed main driveway, four in the area of the proposed building, five in the proposed parking area east of the proposed building, three along SW Stott Avenue and one at the northeast corner of the Merle Davies building. Twelve of the trees to be removed are located along SW 2nd Street. The applicant has requested a Street Vacation to vacate this portion of SW 2nd Street between SW Stott and SW Erickson Avenues. BSD is proposing to remove the roadway and located the proposed building in this area. These trees were aligned along SW 2nd Street, which would no longer exist, changing the aesthetics of this portion of the campus. The proposed trees to remain are in areas such as the north portion of campus along SW Farmington Road. The applicant does not request removal of

trees in this area and has also proposed adding four additional Norway Maples to create a continuous tree line along SW Farmington Road. The applicant also proposes to add seven White Oaks north of the main driveway in close vicinity to where the existing trees are proposed to be removed. In the area of the parking lot east of the proposed building, the applicant has designed a parking area to include landscape islands and tree wells along SW Stott Avenue. The landscape islands and tree wells are proposed to have Raywood Ashes providing some new canopy trees in this area.

The tree to be removed on the northeast corner of the campus is a Red Maple. The removal of the tree appears to be part of the removal of the planter areas east of the Merle Davies Building. Although the applicant is requesting to remove only one tree in this area, this tree is in the vicinity of other historic trees at the northeast corner of the campus. This area in which the tree and planter areas are proposed to be removed appears to provide additional impervious surface and possibly excess parking area. The applicant does not include this as additional required parking area and there is no striping of this area proposed with this development. However, there is a 24-foot driveway accessing this area. Since there is no specific use of this area by the applicant and no additional improvements made staff is recommending that the tree remain.

Staff find that the proposed development limits the number of trees to be removed, while providing additional landscaping to mitigate for the trees being removed, with exception to the Red Maple located at the northeast corner of the Merle Davies School building.

Therefore, staff find that by satisfying condition #21, the criterion is met.

Criterion (e):

"That due consideration is given to the preservation of distinctive historic features."

Facts and Findings:

The Merle Davies building along with the trees and landscaping around this building is listed in the City's Historic Inventory. The proposed building is to be located between the main high school building and Merle Davies. The proposed building is designed as a two-story facility and is to be made of a stucco finish similar to the main high school building. The design of the cafeteria building appears to provide a continuation to the design of the existing main building. The proposed location of the building is at a minimum 12 feet from the Merle Davies building, the identified historic building. Although the materials are not similar to those found on the Merle Davies building, the applicant has provided materials that will complement in color to the brick façade of this historic building. Additionally the applicant is not proposing any changes to the existing Merle Davies building, preserving the historic design of the building. There are 20 historic trees proposed

for removal. The trees are located north of the main building in the area of the proposed building and the parking areas and driveway areas adjacent to the proposed building. The removal of these trees are evaluated as part of a Tree Preservation Plan that is being reviewed by the Historic Resource Review Committee. Although the request is to remove 20 trees, the applicant has identified other historic trees to remain and have proposed the planting of trees such as White Oak in the vicinity of the trees to be removed for the driveway and Norway Maples along the northern property line to improve the continuous tree line along SW Farmington Road. The trees along SW Farmington Road are also part of the historic trees found on the site. Staff find that impacts to the historic features on the site are minimize by not modifying the Merle Davies building, limiting the trees to be removed in the areas of the driveway, parking lot, and the proposed cafeteria building, and providing additional plant material on the site. However, as stated in the findings for Criterion #D, staff recommend that the Red Maple tree at the northeast corner of the Merle Davies School building remain.

Therefore, staff find that by satisfying condition #21, the criterion is met.

Criterion (f):

"That grading and contouring of the site shall take place with particular attention to minimizing the possible adverse effect of grading and contouring on the natural vegetation and physical appearance of the site."

Facts and Findings:

The applicant states that the proposed grading and stormwater system plans have been designed with attention to the preservation of the existing building and the surrounding development. The site has been previously graded, so that new grading will be minimal except for the construction of the water quality facility, parking areas, and the proposed building. The proposed project contains minor grading with the overall grade change of the site at less than 10 feet. Landscaping on the proposed project includes plant materials near the proposed building, in and around the parking areas, and as part of the water quality facilities. The area of the proposed building and the parking lots and driveway adjacent is within the area of the existing public right-of-way of SW 2nd Street and other impervious areas within the BHS campus. The main driveway is to be located in a portion of the open space area north of the main building. The driveway area, parking lots, proposed building and pedestrian areas are located as such that trees, grass area and some landscaping will be removed, but the proposed landscape plan identifies new plant materials proposed in this area with this development. Parking Lot 'H' is located in a vacant parcel covered by grasses, weeds, and three trees. Landscaping is also proposed within and around this parking area.

The applicant is proposing to construct bioswales on Parking Lots 'D' and 'H' to mitigate for the stormwater runoff associated with the new impervious surfaces. These water quality facilities will include native vegetation to the swale. The

proposed grading is not expected to increase drainage crossing the property line and is not expected to cause significant adverse impacts to the surrounding properties.

Staff find that the proposed grading provides minimal impacts to the current BHS site and that there are no impacts to natural vegetation in the area as the area contains landscaping installed with the current high school and that the only vacant parcel remaining, the location of Parking Lot 'H', contains vegetation that is not significant. The overall appearance of the campus will not change, as the grading will provide the expansion of the parcels already being used as a High School campus with buildings and parking areas.

Therefore, staff find that the criterion is met.

Criterion (g):

"That the quality, location, size and aesthetic design of walls, fences, berms, traffic islands, median areas, hedges, screen planting and landscape areas are such that they serve their intended purposes and have no adverse effect on existing or contemplated abutting land uses."

Facts and Findings:

The walls, fences and traffic islands have been designed so that they serve their intended purposes. The proposed development includes the relocation and new installation of ornamental iron fencing around the buildings, a concrete wall of a ramp along the northwest corner of the main building, a gate across the parking area accessing SW Stott, and raised crosswalks along SW Erickson, SW Stott, and SW 2nd Street with bulbous corners connecting to some of the raised crosswalks.

The ornamental iron fencing is located around the athletic fields north of the main building and along the parking area adjacent to SW Stott. The fencing is to enclose a portion of the school with gates at certain areas to allow public access to the BHS campus and an opening along the path connecting the Merle Davies School to the Parking Lot 'D' and the turn around. Existing fencing will be used in the new locations as well as additional fencing material of the same design.

The applicant proposes a ramp to provide ADA compliant access to the northwest corner of the main building. The ramp is "L" shaped and is approximately sixty-five lineal feet in length with two landings prior to connecting to the entrance of the building. The ramp begins at ground level and is five feet at its highest point. Abutting the ramp is a set of concrete stairs. There is a 42-inch high guardrail with a 36-inch high handrail, painted "vining ivy". The rails will be located along the northwest of the main building. The construction of the ramp area will require a building permit to meet all necessary structural requirements. Although the length of the ramp is such that a concrete wall, the height of the ramp is created, the overall intent of the ramp, to provide improved ADA access, would be met.

A gate system has been proposed across the Parking Lot 'C'. The applicant has indicated to staff that the gate will match the ornamental type of fencing found at the school, and the gate will be closed during school hours to maintain the closed campus policy of the school. The gate will be monitored during the closure to allow traffic in and out of the gate. The proposed gate will provide the school additional security for the students during school hours.

To improve safety of pedestrians in the area, the applicant proposes raised crosswalks along SW Erickson Avenue and extended corners. These features are to help pedestrians who cross SW Erickson Avenue.

The applicant's landscape proposal includes a variety of ornamental and native vegetation to be planted throughout the site. The Landscape Plans illustrates the use of planting materials and pedestrian features in the overall layout of the proposed development. The applicant proposes to provide sidewalk improvements along SW Erickson Avenue to include extended corners and five to eight foot sidewalks with tree wells containing Tatarican Maples. Along SW Stott Avenue, the applicant provides an 8-foot sidewalk with tree wells and extended corners at the intersection of SW Farmington Road, SW 1st Street and SW 2nd Street. The proposed sidewalks will provide improved pedestrian connections through the BHS campus. The applicant identifies Raywood Ashes to be planted in the tree wells, which will provide a canopy along the public right-of-ways. The tree wells are four feet by four feet in size. The proposed location is such that staff has concerns with pedestrians impacting the root zone of these trees and potential safety concerns with the uneven grade from the sidewalk and the tree well. Staff recommends that grates be placed over the tree wells to minimize impacts to the trees and provide additional safety to the pedestrians using the site.

The Landscape Plan provides a pallet of planting materials that includes trees, shrubs and groundcover. The proposed plant materials are located within planter areas to provide additional designs to the elevations while allowing for pedestrian and bicycle circulation in the area. The applicant includes a lawn area and a bench in the center of the turnaround of the main driveway, which will provide an additional space for pedestrians. The applicant proposes landscape islands throughout the parking lots. Parking Lot 'H' has landscape islands consisting of trees, shrubs, and groundcover. The trees proposed will provide canopies in the parking area. Parking Lots 'D' and 'C', east and west of the proposed building identifies trees and shrubs to be placed; however groundcover is not identified in these landscape islands. Staff will recommend groundcover be placed in the landscape island to accommodate the bare areas outside of the areas of the trees and shrubs. The placement of the groundcover will need to meet the standard conditions of approval adopted by the Board of Design Review.

The applicant has provided a typical of the water quality swales. This includes the treatment area in the middle of the swale with a wet/ moist seed mix, a slope area with dry area seed mix, shrubs and trees, which will meet the standard requirements of water quality swales.

The proposed landscape plan provides an additional design element to the proposed project area and also provides screening for certain uses such as parking. Overall, the applicant's landscape proposal does not appear to have adverse affect on abutting land uses.

Therefore, staff find that by satisfying conditions #22 and #23, the criterion is met.

Criterion (h):

"That proposed lighting is appropriate for the use and does not adversely impact surrounding properties."

Facts and Findings:

The Landscape and Lighting Plans show the location and the illumination level measured at 0.5-foot candle from lighting proposed for the development. The light poles with acorn tops located along the main driveway provide sufficient illumination of the parking areas, driveway pedestrian areas of this section of the development. For the proposed building and the main entrance of the high school the applicant proposes recessed lighting along the canopies and two types of wall mounted lights. The proposed wall lights provide sufficient lighting around the proposed building and the northern elevation of the main building. However the wall mounted light and one light post on the northwestern corner of the main building and a wall mounted light on the northeastern corner of the same building results in the .05-foot candlepower crossing over the property line onto the public right-of-way, but the illumination does not appear to affect the surrounding properties outside of the BHS campus.

The pedestrian path connecting SW Erickson and SW Stott Avenue south of the proposed building has light posts with the acorn top between the two buildings along with recessed lighting along the sky bridge, providing a continuation of the lighting along the main driveway.

On the east side of the proposed development, the applicant proposes light poles, 22 feet in height, with round tops in the parking area. The lights provide sufficient illumination of the proposed parking area and does not cross onto other properties outside of the BHS campus.

The applicant's lighting plan identifies four light poles in Parking Lot 'H'. The lights provide illumination for a majority of the parking area. However there are parking stalls along the western and eastern property line. Staff recommend that additional light poles be placed on the site to ensure that the parking areas are

effectively illuminated. Additionally, the light poles found along the northern and southern property line results in the 0.5-foot candlepower crossing onto the surrounding property. Although the BSD owns the property to the north, it does not own the abutting parcel to the south. Staff recommend that shielding be provided on the light posts found along the southern portion of Parking Lot 'H' so that the lighting will not affect this parcel.

Therefore, staff find that by satisfying conditions #24 and #25, the criterion is met.

DESIGN REVIEW CONCLUSION

Based on the facts and findings presented, staff conclude the proposal, **BDR2001-00213 (Beaverton High School Cafeteria and Parking Lots)**, meets the criteria for approval.

RECOMMENDATION

Based on the facts and findings presented, staff recommend **APPROVAL** of **BDR2001-00213 (Beaverton High School Cafeteria and Parking Lots)**, subject to the following conditions:

CONDITIONS OF APPROVAL

1. All site development and landscaping shall be carried out in accordance with the plan marked "Exhibit A". (On file at City Hall).
2. All construction shall be carried out in accordance with the color and materials board marked "Exhibit B", as approved by the Board. (On file at City Hall).
3. All construction shall be carried out in accordance with the elevations and plans marked "Exhibit C". (On file at City Hall).
4. All landscaping required and approved by the Board for commercial and industrial projects shall be installed prior to issuance of occupancy permits unless security equal to 110 percent of the cost of the landscaping is filed with the City assuring such installation within six months of occupancy. All security bonds submitted must itemize major items in terms of cost.
5. Height and screening shall be emphasized through the planting of deciduous trees. These trees shall have straight trunks, be fully branched, have a minimum caliper of 1-1/4 inches and a minimum height of 8 feet at the time of planting. Deciduous trees can be supplied bare root provided the roots are

protected against damage. Each tree is to be adequately staked.

6. Evergreen trees must be balled and burlapped or in suitable containers in which the tree has grown for one year. The ball of each tree shall be firm and the burlap sound; no loose ball or made ball will be accepted. Each tree shall be a minimum of 6 feet in height, fully branched, and adequately staked at the time of planting.
7. Ground cover plantings shall be planted on a maximum of 30 inches on center and 30 inches between rows. Rows of plants are to be staggered for a more effective covering. Ground cover shall be supplied in a minimum 4-inch size container or a 2-1/4 inch container if planted 18 inches on center.
8. Shrubs shall be supplied in one-gallon containers or 8-inch burlap balls with a minimum spread of 12 inches to 15 inches.
9. In landscape areas to be planted in grass, sod shall be placed from October 1 to May 1. Grass seed shall be an option at other times of the year.
10. Landscaping shall be provided within areas designated for parking in accordance with the following provisions:
 - a. All off-street parking and maneuvering areas shall be screened from the public right-of-way or surrounding property by evergreen and/or deciduous plant material with a minimum height of 30 inches to 36 inches.
 - b. If landscaped parking areas include landscaped berms, decorative walls, or raised planters which effectively screen the parking lot areas from view, the evergreen and/or deciduous plant materials measuring a minimum of 30 inches to 36 inches will not be required.
 - c. A planter island for approximately every 12 spaces in the parking lot shall be landscaped and be a minimum of 8' wide by one parking stall depth.
11. The installation of an approved irrigation system shall be required to ensure the longevity of all landscaping. Further, landscaping shall be maintained by weeding, pruning, and replacing as necessary.
12. All mechanical equipment, vents, and utility meters shall be screened from public view and made an integral part of the structure.
13. The site shall be kept clean at all times and all trash shall be stored within the building or within the exterior opaque enclosures and be gated. The

design and materials of the trash enclosures shall be compatible with the subject development and shall be a minimum of 6 feet in height.

14. All exterior lighting shall have cut-off fixtures so no glare is emitted beyond the property line or into the public right-of-way.
15. The installation and location of all mailboxes shall be incorporated and made an integral part of any proposal.
16. The Facilities Review Committee Recommended Conditions of Approval dated March 13, 2002, are hereby made a part of this approval.
17. Building permits must be secured prior to construction. For further information regarding building permits and/or related building code issues, please call 526-2403.
18. A Site Development Permit shall be secured prior to any site clearing, grading, parking lot paving, and public works construction.
19. The area east of the Merle Davies School building, with exception to the proposed public street improvements shall remain in its existing conditions. If change to this area is proposed, the applicant shall submit a Design Review application and identify the desired improvements associated with its use.
20. The Red Maple tree identified on the Tree Preservation Plan as Tree #47 shall not be removed.
21. The applicant shall provide tree grates for all tree wells proposed with this development. The design of the tree grates shall be provided to staff prior to Site Development permits.
22. The applicant shall provide ground cover in all landscape islands. The groundcover shall be of a plant material already identified in the plant legend.
23. The applicant shall provide additional light poles in Parking Lot 'H' to ensure that all areas of the parking lot are illuminated at 0.5-foot candlepower. The applicant shall provide staff a revised Lighting Plan prior to issuance of the Site Development permit.
24. The applicant shall provide shielding for the light poles along the south property line of Parking Lot 'H' to ensure that the 0.5 candlepower does not cross the southern property line.

25. Design Review approval shall be void after two years from the date of approval unless a building permit has been issued and substantial construction pursuant thereto has taken place.
26. Notwithstanding Condition #25, the approval of BDR2001-0213 (Beaverton High School Cafeteria and Parking Lots) shall be void if SW 2nd Street between SW Stott Avenue and SW Erickson Avenue is not vacated by City Council.

EXHIBITS

- | | |
|-------------|---|
| Exhibit 1. | Vicinity map (located on page 2 of this report) |
| Exhibit 2. | Facilities Review Conditions of Approval: Dated March 13, 2002. |
| Exhibit 3. | Facilities Review Advisory Notes |
| Exhibit 4. | Neighborhood Review Meeting Materials |
| Exhibit 5. | Reduced Plans |
| Exhibit 6. | Applicant's Narrative and Appendices |
| Exhibit 7. | Letter from Ben Baldwin, Tri-Met Dated February 15, 2002 |
| Exhibit 8. | Letter from Harper Houf Righellis, Inc. Dated March 5, 2002 |
| Exhibit 9. | Letter from Harper Houf Righellis, Inc. Dated March 6, 2002 |
| Exhibit 10. | Materials and Finishes Form |



CITY of BEAVERTON

4755 S.W. Griffith Drive, P.O. Box 4755, Beaverton, OR 97076 General Information (503) 526-2222 V/TDD

FACILITIES REVIEW CONDITIONS OF APPROVAL

MARCH 13, 2002

BEAVERTON HIGH SCHOOL CAFETERIA AND PARKING LOT EXPANSION

The following land use applications have been submitted to construct a new two-level, 30,000-square foot cafeteria building located directly north of and connecting to the existing high school building. The development proposal is located at 13000 SW 2nd Street; Washington County Assessor's Map 1S1-16AD, on Tax Lots 11100, 11000, 02900, 07100 and 10900 and 1S116AC, on Tax Lots 02100 and 02500. The site is zoned Urban Low Density (R-10) and is approximately 27 acres in size.

BDR2001-0213: Type III Design Review

The applicant is requesting the Board of Design Review to approve construction of a new cafeteria building and parking area at the existing Beaverton High School location. The proposal includes construction of a new two-level, 30,000-square foot cafeteria building located directly north of and connecting to the existing high school building, new parking area, and associated landscaping. In taking action on the proposed development, the Board of Design Review shall base its decision on the approval criteria listed in Section 40.10.15.3.C.

Design Review Technical Standards: Chapter 40, Section 10.15.2.C of the Development Code. The Facilities Review Committee will review the following Design Review Technical and Design Standards, below.

- a. *That the public and private facilities and services provided by the development are adequate as to location, size, design and timing of construction in order to serve the residents or establishments to be accommodated and meet City standards and the policies and requirements of the comprehensive plan. The service provider is presumed correct in the evidence which they submit. The evidence shall demonstrate that critical services be shown to be available now, and essential services within five years. The City is entitled to rely on the evidence submitted by the applicable service provider that the area can be served in making its determination; (ORD 3739)*

FINDING:

The applicant in their response to this criterion lists the applicable plans sheets that illustrate the existing and proposed public and private facilities and services. The plans show the proposal includes the under grounding of existing overhead lines and the relocation of utilities within the SW 2nd Street right-of-way between the proposed new building and the main high school building. The location of the utilities will require the applicant to provide an easement in the area of the relocated utilities and installation of

the utilities as identified in Section B and E of the Committee's Conditions of Approval. The applicant will construct the necessary extensions and connections to public facilities and services and the facilities proposed with development will meet all pertinent standards and requirements.

Staff find that by satisfying the condition of approval, the proposal meets the criterion for approval.

- b. *That based on anticipated vehicular and pedestrian traffic generation and the standards and policies of the Comprehensive Plan, adequate right-of-way and improvements to streets, pedestrian ways, bikeways, transitways and other ways are provided by the development in order to promote safety, reduce congestion, conserve energy and resources, and encourage transit use, bicycling and walking. Consideration shall be given to the need for constructing, widening and/or improving, to the standards of the Comprehensive Plan and this code, public streets, bicycle, pedestrian, and other ways in the area of the proposed development impacted by the proposed development. This shall include, but not be limited to, improvements to the right-of-way, such as installation of lighting, signalization, turn lanes, median and parking strips, traffic islands, paving, curbs and gutters, sidewalks, bikeways, transit facilities, street drainage facilities and other facilities needed because of anticipated vehicular, transit, bicycle, and pedestrian traffic generation. In lieu of actual construction of off-site improvements, the Committee may accept written waivers of remonstrance to the formation of local improvement districts for the purpose of providing the needed off-site improvements; [ORD 3965, October 1996],*

FINDING:

The applicant's response identifies the impact of the vacation of SW 2nd Street and the impacts associated with it. However, this criterion addresses more the design of the parking area, driveways and associated street improvements instead of the vacation of SW 2nd Street. The development of the parking lots and student drop off areas will provide all standard improvements including parking lot drainage and underground utilities on private property.

Facilities Review Section B and C contain requirements for public improvements necessary for new sidewalk, planter areas, and curb sections along SW Erickson and SW Stott Avenues. The current proposal does not include the design of SW Erickson meeting the City's Street Design Standards. If the applicant's proposal is to include modifications to these standards, then a request for design modifications will need to be included with this application.

On March 6, 2002, the applicant provided a letter requesting street design modifications to SW Stott and SW Erickson Avenues. The Facilities Review Committee at this time approves the street design modification request.

The applicant has also requested raised crosswalks and extended sidewalk corners connecting to some of the raised crosswalks. Staff acknowledges the intent of these features is to improve the safety of pedestrians crossing streets and driveways close to the BHS campus. The design of these raised crosswalks and corners have not been provided to staff for their review.

On March 6, 2002, the applicant provided staff with the design typical for the raised crosswalk and the extended corners. Staff have reviewed the design and find that the designs meet City standards.

The proposed development references the improvements to the bicycle and pedestrian connections from SW Stott to SW Erickson. A letter was submitted by the applicant indicating the BSD's intent to create a public easement to accommodate a multi-use path in front of the main high school building. An easement connecting SW Erickson and SW Stott will need to meet the requirements outlined in Section C of the Committee's Conditions of Approval.

Staff find that by satisfying the condition of approval, the proposal meets the criterion for approval.

- c. That adequate dedication or reservation of real property for public use, as well as easements and right of entry for construction, maintenance and future expansion of public facilities and services, shall be required to protect the public from any potentially deleterious effects resulting from the proposed use, to fulfill the need for additional, improved services, whether on or off site, created by the proposed use, and to effect the implementation of the standards and policies of the Comprehensive Plan*

FINDING:

The applicant states that all existing easements for the site are shown on the Existing Conditions Plan; however, the applicant does not address the need for additional easements and dedication with the proposed project. Dedication is necessary on SW Erickson and is required by Section C of the Committee's Conditions of Approval. Sections B and C of the Committee's Conditions of Approval outlines the specific requirements necessary to accommodate the proposed development including public utility and multi-use path easements in the area of SW 2nd Street connecting SW Erickson and SW Stott Avenues.

Staff find that by satisfying the condition of approval, the proposal meets the criterion for approval.

- d. That there is a safe and efficient circulation pattern within the boundaries of the site. Consideration shall include the layout of the site with respect to the location, number, design and dimensions of vehicular, transit, and pedestrian access, exits, drives, walkways, bikeways, transit stops and facilities, building location and entrances, emergency equipment ways and other related on-site or off-site facilities. That there are adequate off-street parking and loading-unloading facilities provided in a safe, well designed and efficient manner. Consideration shall include the layout of parking, storage of all types of vehicles and trailers, shared parking lots and common driveways, garbage collection and storage points, as well as the surfacing, lighting, screening, landscaping, concealing and other treatment of the same; [ORD 3965, October 1996]*

FINDING:

Parking is provided in paved and striped lots. The applicant's proposal includes new parking areas along SW Erickson, north of the main building, west of the proposed new building, and south of Merle Davies School building. The improvements are intended to address the current and forecast enrollment demands on the school; however with the forecast demand, the number of parking stall provided will not meet the minimum requirements. The applicant has therefore requested a 10% reduction in the minimum number required by proposing a transit facility adjacent to SW Farmington Road. The transit facility will need to meet the requirements of Tri-Met and those of the City identified in Section 60.60.60.1 of the Development Code. The applicant is currently working with Tri-Met on the design of the transit facility, but has not provided staff with the proposed design. The design of the proposed transit facility will need to meet the condition of approval identified in Section C of the Committee's Conditions of Approval.

The site plans show that a gate is proposed at the access of Parking Lot C potentially limiting vehicular circulation within the parking area at certain parts of the day. The applicant has stated in other application that the BHS campus is a closed campus requiring the school to close access to this portion of the site; however, other parking lots in close proximity to Parking Lot C are not gated off. Information on the use and design of the gate have not been provided.

In a letter dated March 5, 2002, the applicant provided information on the intent of the gate. Their letter states that the proposed gate across Parking Lot 'C', will be closed during school hours to maintain their closed campus policy and will be monitored during the closure to allow traffic in and out of the proposed gate. Since this area of the site was closed to vehicular traffic during school hours prior to this development. The proposed gate would not result in limiting circulation that does not already exist. Additionally the proposed driveway with the turn around area in Parking Lot 'C' does improve the circulation pattern from the existing configuration since there is no vehicular westbound access onto the campus from SW Stott Street. SW 2nd Street currently is a one-way street running eastbound.

The applicant states that the proposed development "encourages pedestrian and bicycle travel both within the site and as through traffic with the construction of an enhanced streetscape. With the establishment of a public easement providing sufficient width for a multi use path and if all the conditions identified in Section C of the Committee's Conditions of Approval, staff find that the design of the pedestrian path provides adequate circulation for pedestrians and bicyclists.

The applicant indicates that bus drop-off and pick-up will be located along SW Stott and SW Erickson and that the special needs buses will use the turn around area in front of the school accessing Erickson. Staff find that the applicant has provided sufficient circulation of the buses loading and unloading students at the BHS campus.

The proposed development is dependant on the vacation and closure of SW 2nd Street. The closure of this street will result in an increase in traffic along SW Stott, which includes additional buses. The plans shows 16 parking spaces located on both the BSD property and the public right-of-way east of Merle Davies School building. The additional traffic may cause a potential traffic hazard with cars backing onto SW Stott

Street. Staff recommend to the Committee that the parking stalls be removed and that the applicant provide a curb to demarcate the public right-of-way from the school property.

Staff find that by satisfying the condition of approval, the proposal meets the criterion for approval.

- e. That adequate means are provided to ensure continued maintenance and necessary normal replacement of private common facilities and areas, drainage ditches, streets and other ways, structures, recreation facilities, landscaping, fill and excavation areas, screening and fencing, ground cover, garbage storage areas and other facilities not subject to periodic maintenance by the City or other public agency;*

FINDING:

The applicant has stated that the BSD has provided an on-going maintenance program for the BHS campus that includes “periodic maintenance of the site’s landscaping, fencing, garbage storage areas, and other on-site facilities.” The applicant proposes a temporary irrigation system to be provided with the contractor installing the plant materials. The irrigation system to be provided will be for a two-year establishment period.

The design does not include any element where the owner could not accomplish necessary private maintenance. Parking Lot ‘D’ and ‘H’ contains water quality facilities, designed as swales. Garbage collection for the proposed new building is attached to the northeast corner of the building, in an area accessible from Parking Lot ‘C’.

The applicant is proposing to place public utilities currently located along the SW 2nd Street public right-of-way between the proposed new building and the main high school building. The utilities will be placed underground designed to meet Section B of the Committee’s conditions of approval. Overall, with the conditions of approval, the design indicates that the owner will be able to fully maintain the site and the design does not prevent maintenance of public facilities by the City.

Staff find that by satisfying the condition of approval, the proposal meets the criterion for approval.

- f. That the structures and public facilities and services serving the site are designed and constructed in accordance with adopted codes and/or City standards at a level which will provide adequate fire protection and protection from crime and accident, as well as protection from hazardous conditions due to inadequate, substandard or ill-designed development;*

FINDING:

The applicant has stated that proposed improvements will comply with the City’s building and structural codes and that the design of the school must meet BSD standards for safety and design quality. These design standards will also need to meet City requirements identified in all the sections of this report.

In evaluating, the Lighting Plan provided with this development, the pedestrian path connecting the Merle Davies School building with Parking Lot C does not appear lit. Staff is concern with the safety of those using this pedestrian path. Staff will recommend to the Committee that lighting be provided along the path.

On March 6, 2002, the applicant provided staff with a revised lighting and vegetation plan showing additional lighting on the path.

The public facilities and services serving the site have been designed to include a bioswale north of Parking Lot 'D' and west of Parking Lot 'H', and under grounding of utilities along SW 2nd Street. The Engineering Department has established necessary Conditions of Approval in Sections B and E to ensure the public facilities will meet city standard.

Staff find that by satisfying the condition of approval, the proposal meets the criterion for approval.

g. That the grading and contouring of the site takes place and site surface drainage and on-site storage of surface waters facilities are constructed so there is no adverse affect on neighboring properties, public right-of-way or the public storm drainage system; and that said site development work will take place in accordance with the City site development code;

FINDING:

The applicant states that the proposed grading and stormwater system plans have been designed to alleviate any adverse affects on the neighboring properties, public rights-of-way and the public storm drainage system. The existing and proposed parking lots will continue to provide for site drainage with stormwater catch basins. The design will connect the site to the stormwater system that will minimize the potential for minor flooding problems due to site drainage. Additionally the applicant is proposing to construct bioswales on Parking Lots D and H to mitigate for the stormwater runoff associated with the new impervious surfaces. The site has been previously graded, so that new grading will be minimal except for the construction of the water quality facility, parking areas, and the proposed building. The proposed grading is not expected to increase drainage crossing the property line, with exception to Parking Lot H. Additional contour lines need to be provided by the applicant to determine if the stormwater runoff from the parking lot will affect the neighboring parcel to the west. Modifications to the proposed grading will be required if the proposed grading result in runoff entering the adjacent property.

On March 6, 2002, the applicant provided staff with revised plans identifying the contour lines outside of Parking Lot 'H'. The topographical lines indicate that there will not be any significant adverse impacts with the grading proposed for Parking Lot 'H' or the water quality facility.

The Committee, in Section B, will adopt standard conditions of approval that require detailed grading and drainage information to be provided. This condition provides added insurance that there will be no adverse drainage and grading impacts.

The applicant further discusses the issues of under grounding the utility facilities. As the under grounding of the utilities do not affect the grading of the site, the information regarding the utility locations and installation are not pertinent to this application.

Staff find that by satisfying the condition of approval, the proposal meets the criterion for approval.

- h. That all existing and proposed private utility lines shall be placed underground, in accordance with the standards set forth in Chapter 60, Section 60.65, Utility Undergrounding. Payment of a utility undergrounding in-lieu fee may be granted in accordance with Section 60.65;*

FINDING:

The applicant states that the current locations of all utility lines have been identified on the existing plan and that the placement of the utility lines have been incorporated on the Grading, Utilities And Erosion Control Private Improvement Plan Sheets. The proposed plan shows the relocation of utilities along SW 2nd Street. Sheet 9 of 17 indicates that the existing overhead lines found along SW 2nd Street will be relocated underground. The existing waterline and overhead lines located in the area of the proposed two-story building will be relocated between the proposed building and the main building. The proposed development show these utilities placed within protective sleeves prior to under grounding and gate valves at each end of the proposed sky bridge will be added to the water line. The Engineering Department has established necessary Conditions of Approval in Sections B and E to ensure the public facilities will meet city standard.

Staff find that by satisfying the condition of approval, the proposal meets the criterion for approval.

- i. That the structural design and materials used for walls, fences, berms, traffic islands and median areas are such that they serve their intended purposes.*

FINDING:

The applicant has stated in their application that the structural design of the building walls, fences and traffic islands have been design so they serve their intended purposes. The proposed development includes the relocation and new installation of ornamental iron fencing around the buildings, a concrete retaining wall with a ramp along the northwest corner of the main building, a gate across the parking area accessing SW Stott, and raised crosswalks along SW Erickson with extended curbs connecting to the raised crosswalks.

The ornamental iron fencing is located around the athletic fields north of the main building and along the parking area adjacent to SW Stott. The fencing is to enclose a portion of the school with gates at certain areas to allow public access to the BHS campus. In evaluating the location of the fencing material, staff found that access to the pedestrian path connecting the Merle Davies School building to the Parking Lot D and the turn around has been blocked off. Staff recommend that a gate or access point be placed to improve access along this path.

A retaining wall along with a proposed ramp will be located along the northwest of the main building. Elevations of this retaining wall and ramp have not been provided to show how the proposed wall and ramp will be constructed. Staff is uncertain about the dimension of the retaining wall. If the proposed wall is expected to be higher than 4 feet, then building permits will be required and the evaluation of the structural design of the wall will be completed with the building permit.

On March 6, 2002, the applicant provided staff with the elevation plans for the proposed wall and ramp at the northwest corner of the main high school building. The wall area is part of the ramp. The proposed ramp has a 42" high guardrail with a 36" high handrail. The proposed ramp is to provide an ADA compliant ramp to an existing entrance. This ramp will require building permits to ensure that it meet all standard codes. The applicant has provided staff with a design of the ramp area and show no retaining walls are proposed in this area.

A gate system has been proposed across the Parking Lot C. Design plans have not been provided by the applicant on the proposed gate, and the applicant's narrative does not describe when the gates will be used.

In the letter dated March 5, 2002, the applicant identifies the use of a gate across Parking Lot 'C' during school hours in order to maintain the close campus policy at the school. The gate is to match the black ornamental fencing found on the school site.

The applicant has not provided details of the raised crosswalk and extended corners. In order for staff to complete its evaluation of these pedestrian improvements the applicant will need to provide specifications on design of the crosswalk and corners.

On March 6, 2002, the applicant provided staff with the design typical for the raised crosswalk and the extended corners. Staff have reviewed the design and find that the designs meet City standards.

Staff find that by satisfying the condition of approval, the proposal meets the criterion for approval.

- j. That access and facilities for physically handicapped people are incorporated into the site and building design, with particular attention to providing continuous, uninterrupted access routes.*

FINDING:

The applicant has stated in their narrative that the proposed cafeteria facility and associated development will meet federal ADA requirements. The proposed development includes the construction of parking stalls, ramps and pathways to enhance access and connectivity of the disabled on the BHS campus. The applicant will meet all applicable accessibility standards of the Building Code in the site and building design. Conformance with applicable requirements must be demonstrated prior to issuance of Site Development and Building permits.

Staff find that by satisfying the condition of approval, the proposal meets the criterion for approval.

- k. *[ORD 3965, October 1996] Where street improvements on arterials and collectors are required as a condition of development approval, they shall include bicycle lanes and sidewalks constructed in accordance with City standards.*

FINDING:

SW Erickson Avenue is identified in the City's Comprehensive Plan Functional Street Classification Plan map as a collector. The standard street design for collectors includes planter strip, sidewalks and bike lanes. The applicant is proposing to 8-foot sidewalks with tree wells along SW Erickson and no bike lanes. In order to obtain approval for the proposed design, a request for modification of the Street Design Standards must be addressed with this application.

On March 6, 2002, the applicant provided a letter requesting street design modifications to SW Stott and SW Erickson Avenues. The Facilities Review Committee at this time approves the street design modification request. Staff will remove Condition A.9, found in the February 27, 2002 Facilities Review Committee Conditions of Approval, in this report

Staff find that by satisfying the condition of approval, the proposal meets the criterion for approval.

CONCLUSION – Design Review Technical Standards

Based upon the information presented, the Facilities Review Committee finds that the proposal meets the Design Review Technical standards. The Board of Design Review will conduct a public hearing of only the Type 3 Design Review application and will make a decision. The Facilities Review Conditions of Approval for Design Review are adopted and recommended to the Board of Design Review. Such conditions will be applicable only if the application is ultimately approved. Staff will address the Design Review 'Design Standards' within the staff report prepared for the Board of Design Review later in the process.

RECOMMENDATION

The following Design Review conditions, adopted by the Facilities Review Committee in each section of the Conditions of Approval, are applicable only if the Design Review application is ultimately approved. The Committee recommends the following Conditions of Approval:

CONDITIONS OF APPROVAL

A. DEVELOPMENT SERVICES DIVISION –

Prepared by Sambo Kirkman - 503-350-4083

1. An ornamental gate to match the existing ornamental fence shall be located across the pedestrian path connecting the Merle Davies School building to Parking Lot D.

2. The applicant shall remove the 16 parking stalls located northeast of the Merle Davies School building and provide improvements demarcating the public right-of-way and the Beaverton School District property.
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**B. DEVELOPMENT SERVICES / SITE ENGINEERING –
Prepared by Jim Duggan – 503-526-2442**

1. The drainage plans for the site development permit application shall clearly show the area of new and existing impervious areas that will be tributary to the proposed vegetated swale(s) that receive a composite average of: A minimum hydraulic residence time of 9 minutes, and a minimum treatment length of 100 feet. Any connections to the vegetated swale that receive less than 20 feet of treatment length shall not count in the composite average calculation. The actual plumbed connection points into the vegetated swale(s) will be used for the calculated determination. This information shall be shown on the drainage plans both graphically (for area) and with calculations. A report that documents the final design shall include adequate documentation and summary sheets to allow City staff to easily follow the document. In addition to the drainage report and drainage plans criteria stated in USA R&O 2000-007, Appendix A, a flowchart type graphic shall be provided as part of the drainage report. The intent of this graphic is to communicate pertinent design details for the stormwater quality/quantity control facilities such as, but not limited to, stage/storage/discharge, references to plots of hydrographs, flow control structure elevations, drainage areas, etc. (Note: An excel spreadsheet showing as example of a flowchart type graphic is available from CDD. Contact Jennifer Kammerer at 526-2439 for more information.) The plan(s) for the stormwater facility shall have a minimum of 2 cross sections one north/south and the other east west. The cross sections shall show existing grades and proposed grades to match line or 10 feet outside the facility. The plans shall also show the water levels for each design event (quality, 2, 10, 25, 100 year) and a chart for the outflow for those events shall be placed next to the facility cross sections.
2. The design and construction of the project shall comply with all applicable requirements of Beaverton Municipal Code, Beaverton Development Code (Ordinance 2050 +rev.), the City of Beaverton Engineering Design Manual and Standard Drawings (Ordinance 4060), and the Unified Sewerage Agency Design and Construction Standards (February 2000, Ordinance 2000-007).
3. Prior to any work on the site governed by Beaverton Municipal Code 9.05.020, the project shall obtain a site development permit from the City Development Services Division. A separate application (with transmittal) shall be made to the Development Services Division for this permit. (Note: All applications and legal form submittals shall be on originals as provided by the City; no facsimiles, copies, or substitutes will be accepted). Site plans shall be submitted on 24 inch x 36 inch size sheets, and to engineer's scale. Each sheet shall be stamped and signed by a registered professional engineer or as otherwise determined by the City Engineer. After the site development permit is issued, all revisions shall be approved by the City Engineer and the Planning Director; any required land use action must be final prior to approval of the engineering revision and work commencing as revised.

4. The applicant shall contract with a professional engineer (or professional architect as allowed by the City Engineer) to design and monitor the construction as set forth in the City Standard Applicant/Engineer agreement. The applicant shall submit a completed City Standard Engineer/Applicant agreement prior to issuance of a site development permit.
5. All public improvements, site grading, private streets, and common driveway paving shall be guaranteed at 100 percent of cost. The security shall be approved by City Attorney prior to issuance of a site development permit. The location, design, size, and type of all public improvements shall be approved by the City Engineer
6. All existing overhead utilities, except high voltage lines (>57kV), within the project and along any existing street frontage shall be placed underground prior to the release of the site development performance security or as otherwise determined by the City Engineer and Planning Director.
7. All underground piping which is not public shall be installed in accordance with Uniform Plumbing Specialty Code including Oregon amendments (UPC). The private plumbing plan for this project shall be approved by the City Building Division prior to the issuance of the site development permit. All plumbing that serves more than one lot, or crosses onto another lot, shall be considered a public system and shall be constructed to the requirements of the City Engineer as required with a site development permit.
8. All easements necessary for public facilities (including slope easements, and surface drainage easements) shall appear on the final plans and/or plat and shall be to the standard specified by the City Engineer and Planning Director.
9. All required easements shall be submitted for recording to the City and approved by the City Engineer and City Attorney, prior to the issuance of the site development permit. . (*Beaverton Code 9.05.055C*)
10. All public utilities shall be installed and centered within a minimum fifteen foot wide easement. Easements for all public utilities including storm sewer, sanitary sewer, water, and illumination lines shall be of sufficient width to ensure that the foundation of any structure or parallel utility line shall be a minimum of 45 degree vertical angle from the invert elevation of the pipe measured from the trench wall in accordance with Section 315 of the Uniform Plumbing Code. The applicant's engineer or architect of record shall verify all existing and proposed easements are of sufficient width to ensure that structures and parallel utility lines will be outside the trench zone described above. If the existing easement or proposed new easement is insufficient to meet the criteria above, a revised or additional easement shall be provided prior to issuance of the site development permit or a building permit.
11. No tree (with a mature height greater than 12 feet) shall be allowed within 5 feet of a public utility line or publicly-owned structure. Trees greater than 12 feet in height at maturity that are proposed between the outside of the 5 foot zone and the edge of the required easement can be evaluated by City staff on a case by case basis, and if acceptable, allowed by the City Engineer.
12. A detailed grading plan shall be prepared by a professional engineer or surveyor, showing existing and proposed grading at two foot contour intervals. Grading plan topography shall extend a minimum of fifty feet onto adjacent properties, or as

otherwise approved by the City Engineer. The use of aerial photos, or the City's quarter-section grading plans will be allowed for preliminary design, however final plans shall be from on-site surveys. The applicant's engineer or surveyor shall submit to the City a copy of the field notes documenting the extent of the field survey with the site development permit application. No grading shall occur within 10 feet of a property line unless the requirements of Beaverton City Code sections 9.05.110 and 9.05.115 are met.

13. All existing wells, tanks, and septic drain fields shall be shown on the site development plans. These items, if proposed by the applicant or required by City Engineer to be abandoned, shall be removed during the site work in a manner approved by the governing authority.
14. The site development plans shall include erosion control measures that are designed to meet the requirements of Oregon Administrative Rule 340-41-455.
15. The applicant shall submit a completed 1200-C General Permit (Erosion Control Joint Permit) application to the City prior to the issuance of the site development permit.
16. The design and construction of private streets and parking lots along with drive access to public streets shall comply with City standards.
17. Sidewalks which are damaged, deteriorated, or removed by construction shall be replaced to City specifications.
18. The site development plans shall show water service, meter size, location and easements. All water services shall be installed and paid for by the applicant. The materials and workmanship shall conform to City standards and service line size shall match meter size, unless specifically approved by both the City Water Section Supervisor and the City Engineer.
19. The site may require a Clean Water Services Industrial Sewage Permit. If an Industrial Sewage Permit from CWS is required, this shall be obtained by the site owner. *ADVISORY NOTE: Contact Clayton Brown (503.844.8923) at CWS Source Control for more information. This is a condition required by CWS for all non-residential projects; CWS must be aware of any unusual chemicals will be used in new buildings that could end up being discharged to the sanitary sewer system. (Beaverton Code 9.05.035D, and Intergovernmental Agreement)*
20. The applicant shall submit a copy of issued permits or other approvals needed from Clean Water Services for storm system connections prior to the issuance of the site development permit. *ADVISORY NOTE: Contact Lee Walker (503.648.8621) at CWS for more information (Beaverton Code 9.05.035D USA Resolution and Order 2000-007, and Intergovernmental Agreement).*
21. The applicant's engineer shall provide a detailed drainage analysis of the subject site and prepare 24 x 36-inch sheet identifying all contributing drainage areas and plumbing systems on and adjacent to the site with the site development permit application. The analysis shall also delineate all areas on the site that are inundated during a 100 year storm event in addition to any mapped FEMA flood plains and flood ways.
22. This project shall provide on-site storm detention. Detention systems shall be designed for the 2, 10, and 25-year frequency storms to the technical requirements of the 1999 Engineering Design Manual, with provision for the safe overflow of the

100 year event. The applicant's engineer shall provide design computations with the site development permit application and field verification with submittal of "as-built" drawings that the detention volume and conveyance required by this condition has been provided. Prior to the installation of any asphalt or concrete pavement, the detention facility shall be completed and operational.

23. This project shall construct and maintain on-site storm water quality facilities meeting or exceeding the minimum requirements of the City of Beaverton and the Unified Sewerage Agency. Prior to the installation of any asphalt or concrete pavement, the storm water quality facility shall be completed and operational.
24. A storm water system development charge shall be assessed at time of building permit issuance. *ADVISORY NOTE: Currently per Ordinance 4195, this is \$726 per each Equivalent Dwelling Unit (EDU) (2,640 square feet of new impervious surface).*
25. The applicant's engineer, architect, or surveyor shall provide to the City a certified impervious surface determination of the proposed project. Preliminary calculations shall be submitted with the site development and building permit applications. The final certification shall be submitted to the City prior to final occupancy. The analysis and calculations shall include square footage of all impervious surfaces as a total. In addition, specific types of impervious area totals, in square feet, shall be given for roofs, parking lots and driveways, sidewalk and pedestrian areas, and any gravel surfaces. Calculations shall also indicate the square footage of pre-existing impervious surfaces, the new impervious surface area created, and total final impervious surfaces areas on the entire site or individual tax lots if applicable. (*Ordinance 4060 and Ordinance 3687*)
26. The landscape plans for the stormwater quality/quality control facilities shall be part of the plans submitted for the site development permit. Landscape plans scale for the landscape plans shall be 1-inch equals 20-feet and shall comply with the requirements (topsoil, plantings) shown in Appendix E of Unified Sewerage Agency Resolution and Order 2000-007.

C. TRANSPORTATION DIVISION -

Prepared by Don Gustafson - 503-350-4057

The proposal is to construct a new cafeteria building and add parking to the existing high school campus. The applicant has requested approval (Dev. Case SV2001-0003) of the vacation of SW 2nd Street, from SW Erickson Avenue to SW Stott Avenue, in front of the existing high school building to allow for this expansion. The applicant has also requested an amendment to the City's Comprehensive Plan (Dev. Case CPA2001-0022) to remove this section of SW 2nd Street, presently classified as Neighborhood Route, from the comprehensive plan.

The applicant submitted a traffic impact analysis report prepared by DKS Associates dated December 2001 to support the vacation request and this proposed building addition. The Transportation Division finds the report to be adequate. The applicant's traffic analysis assumes the new traffic from the possible addition of 400 students to the existing 1800 student population's traffic as the worst case. The report demonstrates that the transportation system in the area will continue to operate at

acceptable levels of service with the closure of SW 2nd Street. The School District has stated that pedestrian and bicycle access that is now available along SW 2nd Street will be maintained through this area of the campus with the proposed campus plan and an easement for it will be provided to ensure that the 10 foot wide unobstructed multi-use path and at least a 10 foot wide easement would exist through the proposed campus.

The Transportation Division has reviewed the applicant's request and has found that it meets the goals of the Transportation Element of the City's Comprehensive Plan and the requirements of the Development Code, subject to the following conditions of approval:

1. The applicant shall provide street right of way dedication to the Beaverton Collector Street Standard (31 ft from centerline) on SW Erickson Avenue for the frontage between SW 2nd Avenue to SW Farmington Road (Development Code 40.10.15.3.C.1.b&c, 60.60.45.1). This section is being improved to accommodate bus parking and a wider sidewalk for bus unloading and pedestrian access. SW Erickson Avenue south of SW 2nd Street is restricted by the location of the existing high school building, preventing street widening and additional street right of way dedication.
2. The Applicant shall improve the east side of SW Erickson Avenue, from SW Farmington Road to SW 2nd Street, to the Beaverton Collector Street Standard, including planter area, sidewalk, and street trees, for the frontage of the site (Development Code 40.10.15.3.C.1.a&b, 60.60.30) with the following modifications; sidewalk width increased from 6 ft to 8 ft with no planter area and trees located in tree wells on 30 foot centers within 6 feet of the curb and no provision for an on street bicycle lane. The applicant has received approval from the Facilities Review Committee to modifying the collector street standard as described above.
3. The Applicant shall improve the west side of SW Stott Avenue, from SW Farmington Road to approximately 120 feet south of SW 2nd Street, to the Beaverton Local Street Standard, including planter area, sidewalk, and street trees, for the frontage of the site (Development Code 40.10.15.3.C.1.a&b, 60.60.30) with the following modifications; increase the sidewalk width from 6 foot to 8 foot with no planter area and trees located in tree wells on 30 foot centers within 6 feet of the curb. The applicant has received approval from the Facilities Review Committee to modify the local street standard as described above.
4. The Development Code requires secure bicycle parking to accommodate long-term users (Development Code Section 60.60.65.4 and 60.20.10). Required long-term space bicycle parking for a high school is a minimum of 1 space per 18 students. The application indicates a shortage of 66 long-term bicycle parking spaces on the plan based on the projected student population of 2200 students. The applicant shall provide 122 bicycle parking spaces unless the requested variance (Dev. Case VAR2002-0002) to reduce the 122 required number of spaces to 56, a reduction of 66 spaces, is approved.
5. No obstructions shall be placed within the driveway intersection sight vision triangle except as provided by City Ordinance, including but not limited to

parking. (Development Code 60.60.50.1 and Engineering Design Manual Sec. 210.5).

6. The applicant has requested the option to utilize the City's 10% parking credit for construction of a pedestrian plaza next to the transit route on SW Farmington. The Facilities Review Committee approved this request. The proposed plaza and details of its construction are being finalized with Tri-Met and are subject to the approval of City staff and Tri-Met prior to issuance of the site development permit (Development Code 60.60.60.1). The Code requires that the pedestrian plaza be open to the public, be at least 300 square feet, exclusive of connecting walkways, and provide a transit shelter (if required by Tri-Met and the City), landscaping and trash receptacle as part of the pedestrian plaza. The Code requires that the property owner, prior to staff review, provide a parking analysis demonstrating to the City's satisfaction that the vehicle parking demand for the existing or proposed use will be met with the reduction in place (Development Code Sec. 60.20.10.A.2).
 7. That the applicant install signage reserving on street parking for school bus parking only on the west side of SW Stott Avenue and the east side of SW Erickson Avenue along the frontage of the site in the locations of the bus parking areas in accordance with a bus parking plan, including the limits of the hours of the day, approved by the City Transportation Engineer.
-

D. BUILDING DIVISION –

Prepared by Brad Roast – 503-526-2524

1. The proposed project shall comply with the State of Oregon Building Code in effect as of date of application for building permit. This currently includes: The 1998 edition of the Uniform Building Code and 1999 International Mechanical Code, published by the International Conference of Building Officials, including the State of Oregon Amendments; the 2000 edition of the Uniform Plumbing Code, published by the International Association of Plumbing and Mechanical Officials, including the State of Oregon Amendments, 2000 edition of the National Electrical Code published by the National Fire Protection Association, including the State of Oregon Amendments.
2. Applications for plans review must include the information outlined in the "Application Checklist" available at the Building Division Counter. Incomplete applications will not be accepted. [City policy.]
3. Building permits will not be issued until all related plans and permits have been reviewed, approved and issued (i.e., mechanical, plumbing, electrical, fire sprinkler systems, fire alarm systems, ...). [City Policy.]
4. The building code plan review can run concurrent with the BDR and Site development review.
5. A separate plumbing permit is required for installation of private on-site utilities (i.e., sanitary sewer, storm sewer, water service, catch basins, ...). If the applicant desires to install those types of private utilities during the same period as the "Site Development" work, a separate application and three sets of the private utility plans must be submitted to the building division for review and approval.

6. Disabled parking stalls shall be provided in accordance with ORS 447.233.
7. An accessible route shall be provided to persons with disabilities throughout the site. [SSC Section 1106]
8. The proposed addition shall be accessible to persons with disabilities. An accessible route shall be provided to the addition from the exterior or through the existing building.
9. [SSC Section 1111]
10. The applicant should be aware that food service operations are required to be reviewed and approved by the Washington County Health Department for applicable health regulations. For more information contact the Washington County Health Department 693-4402.

E. ENGINEERING DIVISION –

Prepared by Charlie Harrison - 503-526-2413

1. Any excavation must comply with the regulations of ORS 952-001-0010 to 952-001-0090 as pertains to locating and protecting underground utilities. The Tri-County Utility Notification Center at 246-6699 must be called a minimum of 48 hours prior to any excavation so underground utilities may be located.

(Commercial, Multi-family and other projects)

2. Following completion of construction, and prior to the City's release of the performance bond, the as-constructed drawings shall be provided to the City. Each sheet of the as-constructed drawings shall be stamped "As-Built", and signed and dated by the Engineer. As-Built shall be black India ink on originals or reverse reading, fixed-line, photographically reproduced 4-mil mylar, 24 by 36-inches in size and to engineering scale. Each sheet included in the construction plan shall be as-built. Sepia mylars or vellums will not be accepted. Contact Ed Parks for questions at 526-2441.
 - a. All public utility easements will be shown on the as-built.
 - b. Distance between main lines in shared easements will be shown.
 - c. Type of main line, size and material will be shown.
 - d. Public sidewalk detail will be included.
 - e. If project was designed on a CAD system, the City also shall receive a copy of all related drawings and documents (such as point files) in AutoCad format dxf or dwg, on disk.

[Res. 3240]

3. The Applicant shall have its registered engineer analyze all existing, proposed and planned uses of potable water, both for domestic and fire protection, to determine the ultimate water demand to be served by the resultant public waterline on the portion of public rights-of-way of SW Second Street, from Erickson Avenue to Stott Avenue. Using City of Beaverton engineering design standards, the Applicant's engineer shall calculate the required diameter of ductile iron waterline required to serve the Applicant's ultimate water uses.

4. From preliminary design plans of the proposed development, the Applicant proposes to re-locate portions of the existing waterline to construct substantial building and other improvements. The Applicant further proposes to re-locate the waterline between two buildings and under a proposed elevated "sky-bridge," which will provide access to a new cafeteria north of the main existing high school building. With the proposed vertical clearance above ground surface over the waterline, there is not sufficient room for maintenance equipment to maintain, repair or replace the waterline. To protect the waterline and allow repair and replacement of the waterline, the Applicant shall install the waterline inside a casing pipe (sleeve), as approved by the City Utilities Engineer, similar to the types of provisions for crossing of railroad tracks, State highways, and arterial concrete City streets. On each side of the cased waterline under the sky-bridge, the Applicant shall also install butterfly valves to provide a means of isolating the section of waterline with confined horizontal and vertical access in the event of a water main leak, rupture, or replacement of same.
5. It is the City's intent and desire to upgrade the size of the waterline that is calculated by the Applicant as the required size to serve all future uses, to a size of 12 inches in diameter, which is contemplated by the City as needed in the water system grid to serve the abutting areas to the high school. The City agrees to reimburse the Applicant for waterline betterments greater than the waterline size determined to be needed to serve the Applicants needs. If the Applicant agrees, the City requests that the Applicant act as the contracting agency for both design and construction of the waterline. The financial arrangements for this transaction and those needed to execute the work is to be set out in an intergovernmental agreement that will be prepared by the City and upon approval by both parties executed by the Mayor and authorized School District representative.
6. Development to comply with City of Beaverton's Cross Connection Control Ordinance 4.02.160 and 4.02.165. Backflow prevention assemblies for protecting the public water supply shall be installed at the property line in accordance with the City of Beaverton standards. All backflow prevention assemblies, and installation details shall be shown on site development plans. Contact Lyle Heilman at 503-350-4042
7. Any building in excess of 30 feet above the water main at the service tap is required to have an approved backflow prevention assembly installed on the domestic water service. Contact Lyle Heilman at 503-350-4042 for approved type and installation standards. All backflow prevention assemblies, and installation details shall be shown on site development plans.
[OAR 333 & Beaverton Development Code 4.02.160]

F. BEAVERTON OPERATIONS DEPARTMENT –
Prepared by Steve Brennan – 503-526-2206

No Comments Submitted

G. BEAVERTON POLICE DEPARTMENT –
Prepared by Mark Hyde – 503-526-2275

1. No comments.
-

H. BEAVERTON FINANCE DEPARTMENT –
Prepared by Kathy Gaona – 503-526-2255

1. There are no liens.
-

OTHER JURISDICTIONS AND SERVICE PROVIDERS

I. TUALATIN VALLEY FIRE DISTRICT –
Prepared by John K. Dalby – 503-356-4708

1. All gates obstructing fire department access must be equipped with "Knox" locks.
 2. Complete fire flow calculations for the proposed building must be submitted prior to the issuance of a site development permit.
 3. The minimum number of fire hydrants for the building will be based on the required fire flow prior to giving credit for fire protection systems, divided by 1500.
 4. The location of the Fire Department Connection for the automatic sprinkler system of the Cafeteria Building is not identified on the submitted plans. The FDC must be within 70 feet of a fire hydrant.
-

J. TUALATIN HILLS PARK & RECREATION DISTRICT –
Prepared by Stephen Bosak – 503-645-6433

No Comments Submitted

K. BEAVERTON SCHOOL DISTRICT –
Prepared by Jim Lynch & Jan Youngquist – 503-591-4310

1. There is no anticipated student impact on Beaverton School District.
-

L. TUALATIN VALLEY WATER DISTRICT –
Prepared by Stu Davis – 503-642-1511

No Comments Submitted

M. METRO AREA COMMUNICATIONS COMMISSION –
Prepared by Debbra Palmer – 503-645-7365

No Comments Submitted

N. OREGON STATE HIGHWAY DIVISION –
Prepared by Gail Curtis – 503-731-8206

No Comments Submitted

O. TRI CO. METROPOLITAN TRANSPORTATION DISTRICT –
Prepared by Ben Baldwin – 503-962-2140

No Comments Submitted

P. WASHINGTON COUNTY DEPT. OF LAND USE & TRANSPORTATION –
Prepared by Anne LaMountain – 503-844-8131

1. No comments.

Q. PORTLAND GENERAL ELECTRIC –
Prepared by Rock Sanders

No Comments Submitted

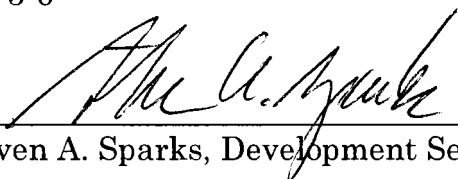
FACILITIES REVIEW COMMITTEE ORDER:

Approved ☒
Denied ☐

Motion: Don Gustafson

Seconded: Jim Duggan

Vote: 5-0



Steven A. Sparks, Development Services Manager

Dated: March 13, 2002

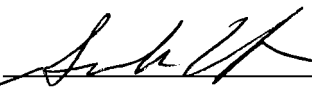
Staff Planner: 



EXHIBIT 3

CITY of BEAVERTON

4755 S.W. Griffith Drive, P.O. Box 4755, Beaverton, OR 97076 General Information (503) 526-2222 V/TDD

TECHNICAL AND ADVISORY NOTES

March 13, 2002

Beaverton High School Cafeteria and Parking Lot Expansion

The following land use applications have been submitted to construct a new two-level, 30,000-square foot cafeteria building located directly north of and connecting to the existing high school building. The development proposal is located at 13000 SW 2nd Street; Washington County Assessor's Map 1S1-16AD, on Tax Lots 11100, 11000, 02900, 07100 and 10900 and 1S116AC, on Tax Lots 02100 and 02500. The site is zoned Urban Low Density (R-10) and is approximately 27 acres in size.

BDR2001-0213: Type III Design Review

The applicant is requesting the Board of Design Review to approve construction of a new cafeteria building and parking area at the existing Beaverton High School location. The proposal includes construction of a new two-level, 30,000-square foot cafeteria building located directly north of and connecting to the existing high school building, new parking area, and associated landscaping. In taking action on the proposed development, the Board of Design Review shall base its decision on the approval criteria listed in Section 40.10.15.3.C.

CUP2001-0031: Conditional Use Permit

The applicant requests approval of a Conditional Use Permit (CUP) to build new cafeteria building and parking area at the existing Beaverton High School location. Educational institutions, including public, private or parochial academic schools are identified specifically as a conditional use within the R-10 zone. The proposed project is an expansion of an existing conditional use. The Planning Commission, during a public hearing, will review this request. In taking action on the proposed development, the Planning Commission shall base its decision on the approval criteria listed in Section 40.05.15.2.C.

TPP2001-0008: Tree Preservation Plan (Historic Trees)

Request for Historic Resource Review Committee approval for the removal of 20 trees the City of Beaverton has designated as Historical Trees. In taking action on the proposed development, the Historic Resource Review Committee shall base its decision on the approval criteria listed in Section 40.75.15.1.C.2.

A. DEVELOPMENT SERVICES DIVISION –

Prepared by Sambo Kirkman - 503-350-4083

1. The proposed two-story building is located in an area that will eliminate yards for both the Merle Davies and Beaverton High School, which will affect the allowable areas for each building. In addition, the proximity of the buildings to each other may require additional fire resistive wall and opening protection. The proposed location of the new building may result in the retrofitting of the Merle Davies School and the main High School building. Modifications of these building may result in the need for Design Review approval as well as approval from the Historic Resource Review Committee to modify the exterior of Merle Davies.
2. On the Dimensioned Plan Private Improvements (West), the following information requires some clarification.
 - a. Revisions have occurred to the courtyard leading to the main entrance of the school. Elevations of the courtyard should be provided to staff.
 - b. The plans show three flags within the center of the driveway round about and a flagpole (existing) at the southwest corner of the new building; however your narrative indicates a total of two flags will be placed on the site. The plans should be revised to show the accurate number and location of the flagpoles along with the dimension of the flagpoles.
 - c. It is unclear if the building footprint along the northern elevation includes the area for the ramp and stairwell shown on your elevation plan. Please revise your elevations to accurately show the footprint of the building. If the ramp and stairwell have not been incorporated with the building footprint, there may be spacing issues with the location of the ramp and stairwell in relation to the existing stairs and concrete retaining wall associated with the Merle Davies School.
 - d. Standard Board of Design Review Conditions of approval indicate a minimum of 8 feet be required for all landscape islands. The landscape island located along the northern portion of Parking Lot D narrows to less than 8 feet. Staff shall recommend to the committee that the landscape island be design to meet the minimum 8 feet.
 - e. In prior plan sets, a gate was identified across the driveway of Parking Lot D staff is unclear if the gate is being proposed with this application. Staff recommend that the applicant clarify where gates will be placed on the BHS campus.
3. The Dimensioned Plan Private Improvements (East) plans shows area between the Merle Davies School and the parking lot. Staff is unclear what improvements will be made in this area.

4. Sheet 14 of the plan set provided on February 20, 2002, shows that the ½ foot candle power along the south side of the parking lot crosses the property line. Staff will recommend to the Board of Design Review that shielding be provided to mitigate the impacts of the lighting on the adjacent property owner.
5. The colored rendering of the elevation does not match the colors identified in the materials board. Additionally the elevations provided do not include all dimensions found on the elevation. Staff request that this information be provided on the elevation plan and that if the color identified are correct, then the materials board should be revised to the colors identified on the plans.

B. DEVELOPMENT SERVICES / SITE ENGINEERING –
Prepared by Jim Duggan – 503-526-2442

No Technical and Advisory Notes submitted.

C. TRANSPORTATION DIVISION –
Prepared by Don Gustafson - 503-350-4057

No Technical and Advisory Notes submitted.

D. BUILDING DIVISION –
Prepared by Brad Roast – 503-526-2524

No Technical and Advisory Notes submitted.

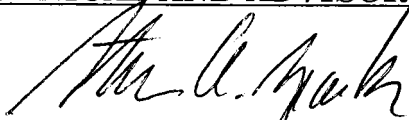
C. ENGINEERING DIVISION –
Prepared by Charlie Harrison - 503-526-2413

1. If there is a long-range master plan for this site, it would be beneficial to go over the water supply issues and upgrades that may be needed in the area due to increased fire flow demand.

E. OPERATIONS AND MAINTENANCE –
Prepared by Steve Brennan – 503-526-2206

- No information on existing H2O line that exist. Is it to be abandoned? Is it to be relayed? What about easement and access?

TECHNICAL AND ADVISORY COMMENTS:



Dated: March 13, 2002

Staff Planner: 

CONDITIONS OF APPROVAL

CU2007-0166

1. Obtain a Variance approving the setback of the building at the eastern property line is to be one foot. (Development Services Div. / SNK)

DR2007-0166

Prior to issuance of the site development permit, the applicant shall:

1. Obtain a Variance approving the setback of the building at the eastern property line is to be one foot. (Development Services Div. / SNK)
2. Obtain Conditional Use approval to expand the existing public high school facility with the addition of team locker rooms and storage area totaling approximately 3,600 square feet in size. (Development Services Div. / SNK)
3. Provide a revised Site Plan showing the direction of the 16 parking spaces shall be changed to accommodate the east to west pattern of the access point or provide verification that the vehicles are able to access the parking spaces from the existing driveway. (Development Services Div. / SNK)
4. Provide a revised Site Plan showing landscape islands are each of the new 16-space parking area. The islands shall be curbed; a minimum of 6 feet wide, a minimum area of 70 square feet, and each island shall contain a minimum of one tree. (Development Services Div. / SNK)
5. Provide Elevation Plans showing the design of the retaining walls for the walkway. The walls shall be architecturally treated using decorative materials, finishes or both. (SNK / Development Services Div.)
6. Provide a revised Lighting Plan showing a maximum illumination of 0.5 foot candle at the property line. The proposal shall include shielding to the light fixtures to ensure illumination at the property line is not exceeded. (Development Services Div. / SNK)
7. Submit the required plans, application form, fee, and other items needed for a complete site development permit application per the applicable review checklist. (Site Development Div./JJD)
8. Contract with a professional engineer to design and monitor the construction for any work governed by Beaverton Municipal Code 9.05.020, as set forth in Ordinance 4417 (City Engineering Design Manual and Standard Drawings), Beaverton Development Code (Ordinance 2050, 4010 +rev.), the Clean Water Services District Design and Construction Standards (June 2007, Resolution

and Ordinance 2007-020), and the City Standard Agreement to Construct and Retain Design Professionals in Oregon. (Site Development Div./JJD)

9. Submit a completed and executed City Standard Agreement to Construct Improvements and Retain Design Professional(s) Registered in Oregon. After the site development permit is issued, the City Engineer and the Planning Director must approve all revisions as set out in Ordinances 2050, 4010+rev., and 4417; however, any required land use action shall be final prior to City staff approval of the engineering plan revision and work commencing as revised. (Site Development Div./JJD)
10. Have the ownership of the subject property guarantee all public improvements, site grading, and fire access driveway paving by submittal of a City-approved security. The security approval by the City consists of a review by the City Attorney for form and the City Engineer for amount, equivalent to 100 percent or more of estimated construction costs. (Site Development Div./JJD)
11. Have obtained the Tualatin Valley Fire and Rescue District Fire Marshal's approval of the site development plans as part of the City's plan review process. (Site Development Div./JJD)
12. Submit a detailed water demand analysis (fire flow calculations) in accordance with the requirements of the Fire Code as adopted by the Tualatin Valley Fire and Rescue. If determined to be needed by the City Utilities Engineer, this analysis shall be supplemented by an actual flow test and evaluation by a professional engineer meeting the standards set by the City Engineer. The analysis shall provide the available water volume (GPM) at 20 psi residual pressure from the fire hydrant nearest to the proposed project. (Site Development Div./JJD)
13. Submit an available fire flow analysis including an actual flow test of the existing water system and evaluation by a professional engineer meeting the standards as specified in the Engineering Design Manual Chapter 6, 610.L, using the anticipated maximum fire demand. The analysis shall provide the available water volume (GPM) at 20 psi residual pressure from the fire hydrant nearest to the proposed project. (Site Development Div./JJD)
14. Provide a drainage analysis of the subject site and prepare a report prepared by a professional engineer meeting the standards set by the City Engineer. The analysis shall identify all contributing drainage areas and plumbing systems on and adjacent to the site with the site development permit application. (Site Development Div./JJD)

15. Submit to the City a certified impervious surface determination of the proposed project's net new impervious area proposed for any common areas and private streets prepared by the applicant's engineer, architect, or surveyor. The certification shall consist of an analysis and calculations determining the square footage of all impervious surfaces as a total. In addition, specific types of impervious area totals, in square feet, shall be given for parking lots and driveways, sidewalk and pedestrian areas, and any gravel surfaces within the project boundaries. Calculations shall also indicate the square footage of pre-existing impervious surface, the new impervious surface area created, and total final impervious surface area within the project boundaries. (Site Development Div./JJD)
16. Pay a storm water system development charge in-lieu of constructing an on-site storm water quantity (winter detention) and quality (summer treatment) facility, and for overall conveyance, for any net, new impervious area proposed. Additionally, the project shall pay a storm water quality (summer treatment) in-lieu of fee for the entire project area impervious surface as the proposal is defined as "redevelopment" under Clean Water Services standards. (Site Development Div./JJD)
17. Provide plans for street lights (Option C unless otherwise approved by the City Operations and Maintenance Director) and for the placement of underground utility lines along street frontages, within the site, and for services to the proposed new development. If existing utility poles along existing street frontages must be moved to accommodate the proposed improvements, the affected lines must be either undergrounded or a fee in lieu of undergrounding paid per Section 60.65 of the Development Code. (Site Development Div./JJD)
18. Provide plans showing a City standard commercial driveway apron at the intersection of any driveway and a public street. (Site Development Div./JJD)

Prior to building permit issuance, the applicant shall:

19. Submit a complete site development permit application and obtain the issuance of site development permit from the Site Development Division. (Site Development Div./JJD)
20. Make provisions for installation of all mandated erosion control measures to achieve City inspector approval at least 24 hours prior to call for foundation footing form inspection from the Building Division. (Site Development Div./JJD)

Prior to occupancy permit issuance, the applicant shall:

21. Show all site development and landscaping shall be carried out in accordance with the plan marked "Exhibit A". (On file at City Hall) (Development Services / SNK)
22. Show deciduous have straight trunks, be fully branched, have a minimum caliper of 1-1/4 inches and a minimum height of 8 feet at the time of planting. Deciduous trees can be supplied bare root provided the roots are protected against damage. Each tree is to be adequately staked. (Development Services / SNK)
23. Show evergreen trees are balled and burlapped or in suitable containers in which the tree has grown for one year. The ball of each tree shall be firm and the burlap sound; no loose ball or made ball will be accepted. Each tree shall be a minimum of 6 feet in height, fully branched, and adequately staked at the time of planting. (Development Services / SNK)
24. Show groundcover plantings shall be planted on a maximum of 30 inches on center and 30 inches between rows. Rows of plants are to be staggered for a more effective covering. Ground cover shall be supplied in a minimum 4 inch size container or a 2-1/4 inch container if planted 18 inches on center. (Development Services / SNK)
25. Show shrubs used are supplied as shown on the approved Landscape Plan or in minimum one-gallon containers or 8 inch burlap balls with a minimum spread of 12 inches to 15 inches whichever is greater. (Development Services / SNK)
26. Ensure that installation of an approved irrigation system has taken place providing for the longevity of all landscaping. Further, landscaping shall be maintained by weeding, pruning, and replacing as necessary. (Development Services / SNK)
27. Show all ground based equipment is screened from public view as approved by the Planning Director. (Development Services Div. / SNK)
28. Paint, to match the color of the building, all the utility and accessory equipment attached to or adjacent to the addition. (Development Services Div. / SNK)
29. Have substantially completed the site development improvements as determined by the City Engineer. (Site Development Div./JJD)

30. Have the landscaping completely installed or provide for erosion control measures around any disturbed or exposed areas per Clean Water Services standards. (Site Development Div./JJD)
31. Have placed underground all existing overhead utilities and any new utility service lines within the project and along any existing street frontage as determined at permit issuance. (Site Development Div./JJD)
32. Install or replace, to City specifications, all sidewalks which are missing, damaged, deteriorated, or removed by construction. (Site Development Div./JJD)
33. Have obtained an Industrial Sewage Permit from the Clean Water Services District (CWS, formerly USA) and submitted a copy to the City Building Official if an Industrial Sewage permit is required, as determined by CWS. (Site Development Div./JJD)

Prior to release of performance security, the applicant shall:

34. Have completed the site development improvements as determined by the City Engineer and met all outstanding conditions of approval as determined by the City Engineer and Planning Director. Additionally, the applicant and professional(s) of record shall have met all obligations under the City Standard Agreement to Construct Improvements and Retain Design Professional Registered in Oregon, as determined by the City Engineer. (Site Development Div./JJD)
35. Submit any required on-site easements, executed and ready for recording, to the City after approval by the City Engineer for area encumbered and City Attorney as to form. The applicant's engineer or surveyor shall verify all pre-existing and proposed easements are of sufficient width to meet City standards. (Site Development Div./JJD)

NOTICE OF APPROVAL DESIGN REVIEW COMPLIANCE LETTER

DATE: June 3, 2009

STAFF: Jason Turinsky, Assistant Planner

FILE NUMBER: DR2009-0028

FILE NAME: Merle Davies Building Exterior Mods

SITE ADDRESS: 13000 SW 2nd
Map 1S116AD, Tax Lot 10900

ZONING: R10 (Urban Low Density)

APPLICANT: Beaverton School District
16550 SW Merlo Road
Beaverton, OR 97006

REPRESENTATIVE: Katherine Prew
Angelo Planning Group
921 SW Washington St. STE 468
Portland, OR 97205

PROPERTY OWNER: Beaverton School District
16550 SW Merlo Road
Beaverton, OR 97006

PROJECT DESCRIPTION:

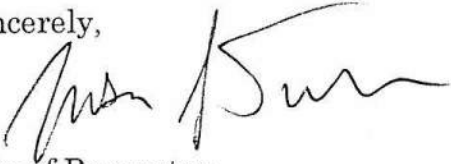
Modification existing sidewalks to improve pedestrian circulation and provide ADA access, relocation of the main entry point, addition of external ground and roof top mechanical equipment, replacement of some existing doors and windows, in-fill of some doors and windows, modification and addition of on-site landscaping, removal of an existing chimney, minor changes to exterior lighting.

Dear Ms. Prew,

Staff has reviewed the above referenced application and finds that the proposal meets the threshold(s) for a Design Review Compliance Letter. Further, by meeting the conditions of approval marked on the attached document, the proposal will meet the approval criteria associated with this application. Please review these conditions of approval.

There is a standard twelve (12) day appeal period following this approval. Attached to this letter is an appeal waiver form. Should the waiver form not be completed, this approval shall not be valid until the appeal period has ended and no appeal has been received.

Sincerely,



City of Beaverton
Development Services
Planning Staff

Reviewed by: Jason Turinsky, Assistant Planner_

Conditions of approval: ☒ Attached
☐ Not Attached

Date approval delivered _____
Hand Delivery Mail Fax

CONDITIONS OF APPROVAL

1. In accordance with Section 50.90.1 of the Development Code, Design Review approval shall expire after one year from the date of approval unless prior to that time a construction permit has been issued and substantial construction pursuant thereto has taken place, or an application for extension is filed pursuant to Section 50.93, or that authorized development has otherwise commenced in accordance with Section 50.90.3.B.
2. **All construction and landscaping shall be carried out in accordance with the site plan marked "Exhibit A", as approved by the Director. (On file at City Hall).**
3. Prior to building construction, the applicant must obtain a Building Permit through the City (please contact Lance Richardson, Building Division @ (503)526-2593 for further information).
1. Prior to any on-site excavation or concrete installation, a 48-hour minimum notice to the One Call Utility Locating Center (Ph. (503) 246-6699) shall be given. The applicant shall resolve any utility conflicts prior to work commencing as proposed.
2. Pedestrian walkways shall not be blocked during construction.
3. All window and door replacement must match the original architectural design (matching existing mullion patterns) as best as possible.
4. All window and door in-fill areas must match the original real brick exterior of the building.
5. Screening material used for ground mechanical equipment will be the louvered material shown in Exhibit G (On file at City Hall) which is similar to what is currently installed at Beaverton High School (on the same tax lot).
6. Install or replace, to State of Oregon specifications, all sidewalks, which are missing, damaged, deteriorated, or removed by construction. (Site Development Div)
7. **Prior to building permit issuance, the applicant shall obtain issuance of a City Facilities Permit for erosion control from the Site Development Division AND:**

Submit to the City a certified impervious surface determination of the proposed project prepared by the applicant's engineer, architect, or surveyor (this can be with or shown on the submitted building plans). The certification shall consist of an analysis and calculations determining the square footage of all impervious surfaces as a total. In addition, specific types of impervious area totals, in square feet, shall be given for roofs, equipment pads, parking, and any gravel or pervious pavement surfaces. Calculations shall also indicate the square footage of pre-existing impervious surfaces, the new impervious surface area created, and total final impervious surfaces areas on the entire site. Pervious pavement surfaces are considered equivalent to graveled surfaces.

Pay storm water system development charges (storm water quality, quantity, and overall system conveyance) for any net new impervious area proposed.

Submit plans to the City that include erosion control measures that are designed to meet the requirements of the Clean Water Services District and Oregon Department of Environmental Quality.

8. Prior to final permit inspection, the applicant shall:

- a. Have the landscaping completely installed or provide for long term erosion control measures around any disturbed or exposed areas per Clean Water Services standards. (Site Development Div./JJD)
- b. Have placed underground any new utility service lines within the project limits.
- c. Install or replace all sidewalks, curb, ramps, and bike paths which are missing, damaged, deteriorated, or removed by construction.



CITY OF BEAVERTON

Community Development Department
Development Services Division
4755 SW Griffith Drive
PO Box 4755
Beaverton, OR. 97076
Tel: (503) 526-2420
Fax: (503) 526-3720
www.beavertonoregon.gov

TYPE 1 APPLICATION – APPEAL WAIVER

Pursuant to Section 50.35.4 of the City of Beaverton Development Code, I, _____ (PRINT NAME), as the applicant for DR2009-0028 – MERLE DAVIES BUILDING EXTERIOR MODS hereby announce my intention to not appeal the decision issued by the City of Beaverton Development Services Division for my Type 1 Application. In announcing this intention, and affixing my signature below, I indicate my full awareness and agreement that I am foregoing my twelve (12) day appeal opportunity as specified in Section 50.35.3.E of the City of Beaverton Development Code.

(Signature)*

(Date)

*To be signed and dated in the presence of a Notary Public for the State of Oregon.

Subscribed and sworn to before me this ____ day of _____, _____.

Notary Public for the State of Oregon

My Commission expires: _____

Preliminary Geotechnical Investigation Beaverton High School Replacement

Beaverton, Oregon

February 4, 2022

Prepared for

Beaverton School District
16550 SW Merlo Road
Beaverton, OR 97003

Prepared by



9750 SW Nimbus Avenue
Beaverton, OR 97008-7172
(503) 641-3478 | www.gri.com

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Appendix A: Field Explorations and Laboratory Testing

FIGURES

Figure 1:	Vicinity Map
Figure 2:	Site Plan

1 INTRODUCTION

As requested, GRI completed a preliminary geotechnical site evaluation for the proposed Beaverton High School replacement located in Beaverton, Oregon. The Vicinity Map, Figure 1, shows the general location of the site. The purpose of the investigation was to provide a preliminary evaluation of the subsurface conditions at the site and develop preliminary recommendations regarding the general site suitability to assist the project team during the predesign stage and scoping phase of the project. GRI understands a full geotechnical investigation, including subsurface explorations, design-level engineering analysis, and report, will be completed at a later date. This phase consisted of limited subsurface explorations, limited laboratory testing and engineering analyses. This report describes the work accomplished and provides preliminary, concept-level conclusions and recommendations for use in the design and construction of the proposed improvements.

2 BACKGROUND

GRI reviewed the following geotechnical reports as a part of our geotechnical investigation:

“Draft Geotechnical Investigation for Beaverton High School Turf Field,” prepared by Foundation Engineering for Beaverton School District, dated February 20, 2013.

“Geotechnical Engineering Services for Aloha, Beaverton and Sunset High Schools, New Bleachers,” prepared by Geocon Northwest for Beaverton School District, dated April 3, 2012.

3 PROJECT DESCRIPTION

We understand the Beaverton School District proposes to design and construct new buildings at the existing high school campus to ultimately replace the existing high school building and associated structures, with the exception of the cafeteria. We understand the new building may be three stories with a possible basement for mechanical systems. The proposed building will be in the northern margins of the site within the existing athletic fields and Merle Davies building areas.

3 SITE DESCRIPTION

3.1 Topography

The Beaverton High School campus is bounded by SW Farmington Road to the north, SW Stott Avenue to the east, SW Fifth Street to the south, and residential development to the west. Buildings associated with the high school occupy the central portion of the property. The Merle Davies building is located in the northeast property corner. Athletic fields occupy the northern, southern, and western property margins.

3.2 Geology

Published geologic mapping indicates the site is mantled with Missoula flood deposits, locally referred to in the project area as the Willamette Silt Formation (Ma et al., 2009). In general, Willamette Silt is composed of beds and lenses of silt and sand. Stratification within this formation commonly consists of 4- to 6-inch-thick beds, although in some areas, the silt and sand are massive, and the bedding is indistinct or nonexistent. The Hillsboro Formation, which typically consists of stiff to very stiff, brown to gray clay, commonly underlies the Willamette Silt at depths of about 30 feet to 50 feet in this area. The depth to basalt bedrock at this site is estimated to be on the order of 600 feet (Schlicker and Deacon, 1967).

4 SUBSURFACE CONDITIONS

4.1 General

Subsurface materials and conditions at the site were investigated from December 20 through 22, 2021, with four borings, designated B-1 through B-4; and one cone penetration test (CPT) probe, designated CPT-1. The borings were advanced to depths ranging from 51.5 feet to 61.5 feet below existing site grades and the CPT probe was advanced to a depth of about 68.7 feet. The approximate location of the explorations completed for this investigation are shown on Figure 2. Logs of the borings are provided on Figures 1A through 4A and a log of the CPT exploration is provided on Figures 5A and 6A. The field and laboratory programs conducted to evaluate the physical engineering properties of the materials encountered in the borings are described in Appendix A. The terms and symbols used to describe the materials encountered in the borings and CPT probe are defined in Tables 1A and 2A, respectively, and on the attached legend.

4.2 Soils

For the purpose of discussion, the materials disclosed by our investigation have been grouped into the following categories based on their physical characteristics and engineering properties and listed as they were encountered below the ground surface:

- a. SILT (Fill)
- b. SILT (Willamette Silt)
- c. SILT and CLAY (Hillsboro Formation)

The following paragraphs provide a description of the soil units and a discussion of the groundwater conditions at the site.

a. SILT (Fill)

Silt fill was encountered at the ground surface in boring B-3. The silt fill is brown and contains a trace of fine- to coarse-grained sand and contains angular gravel. The relative

consistency of the silt fill is soft to medium stiff based on field and laboratory testing. Additional details regarding field and laboratory testing are available in Appendix A.

b. SILT (Willamette Silt)

Silt of the Willamette Silt Formation was encountered at the ground surface in borings B-1, B-2, B-4, CPT-1 and at a depth of approximately 6 feet in B-3. In general, the silt is brown with scattered rust mottling in the upper 20 feet and typically grades to gray below a depth of about 20 feet. In general, the silt ranges in clay content from up to a trace of clay to some clay and contains a trace to some fine-grained sand. Gray mottled black silty clay to clayey Silt of the Willamette Silt formation was encountered in boring B-3. The relative consistency of the silt ranges from very soft to stiff and is generally medium stiff. Additional details regarding field and laboratory testing are available in Appendix A.

One-dimensional consolidation testing was completed on two samples of silt obtained at depths of about 5.3 feet in boring B-1 and 16.5 feet in boring B-2. Test results indicate the silt is heavily overconsolidated and exhibits a relatively low compressibility in the preconsolidated range of pressures and moderate compressibility in the normally consolidated range of pressures, see Figures 8A and 9A.

c. SILT and CLAY (Hillsboro Formation)

Silt and Clay of the Hillsboro Formation were encountered beneath the Willamette Silt at a depth of about 40 feet in boring B-1, about 55 feet in boring B-2, and about 50 feet in borings B-3, B-4, and CPT-1. The silt and clay are typically gray to gray mottled rust in color. In general, the silt contains some clay to clayey and the clay contain some silt to silty. The silt and clay soils typically contain a trace of fine- to coarse-grained sand. The relative consistency of the clay ranges from stiff to hard. Additional details regarding field and laboratory testing are available in Appendix A.

All explorations were terminated in the Hillsboro Formation at depths ranging from about 51.5 feet to 68.7 feet.

4.3 Groundwater

Borings B-1 through B-4 were completed using mud-rotary drilling techniques, which do not allow direct measurement of groundwater levels at the time of drilling. CPT testing indicated groundwater was approximately 4.5 feet below the ground surface at the time of testing on December 21, 2021. To allow measurement and periodic monitoring of groundwater levels at the site, a vibrating-wire piezometer was installed at a depth of about 55 feet below the ground surface in boring B-2. Groundwater was measured in boring B-2 at a depth of about 5.4 feet below ground surface on December 29, 2021. We anticipate groundwater may approach the ground surface during the wet winter and spring months or following periods of heavy or prolonged rainfall.

4.4 On-Site Stormwater Infiltration

As noted in section 4.3, relatively shallow groundwater was encountered at the project site. Based on the groundwater and soil conditions disclosed by our explorations, we do not recommend considering on-site infiltration for stormwater disposal.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 General

Subsurface explorations completed for this investigation encountered up to 6 feet of fill, underlain by Willamette Silt extending to depths of about 40 to 55 ft below the ground surface. The relative consistency of the silt is generally medium stiff. The Willamette Silt is underlain by typically very stiff silt and clay soils of the Hillsboro Formation. The local groundwater level was estimated to be at a depth of about 5 feet below the ground surface at the time of the geotechnical investigation, but will fluctuate in response to seasonal rainfall. In addition, groundwater may approach the ground surface in localized areas during the wet winter and spring months or following periods of prolonged or intense precipitation.

In our opinion, foundation support for new structural loads can be provided by conventional spread and wall foundations established in firm, undisturbed, native soil or compacted structural fill. The primary geotechnical considerations associated with the construction of the proposed building include the presence of fine-grained soils at the ground surface that are moisture sensitive and the potential for shallow, perched groundwater conditions. The following sections of this report provide our conclusions and recommendations for use in the design and construction of the proposed new Beaverton High School.

5.2 Seismic Considerations

5.2.1 Design Acceleration Parameters

We understand seismic design for the project is being completed in accordance with the 2019 OSSC and ASCE 7-16. A site-specific seismic-hazard study was not completed for the project as a part of this preliminary consultation. It should be noted, however, that the study will be required at a later date to fulfill the requirements of amended Section 1803 of the 2019 OSSC for essential-facility structures.

Based on our review of available geologic and subsurface information for the project area and the results of subsurface explorations and the seismic CPT testing completed for this project, it is our opinion the site can generally be classified as Site Class D in accordance with Chapter 20 of ASCE 7-16. The recommended response spectra can be developed from the code-based parameters outlined in ASCE 7-16. Table 5-1 below summarizes the

recommended MCE_R - and design-level spectral response parameters for the Site Class D condition developed at the site.

Table 5-1: RECOMMENDED SEISMIC DESIGN PARAMETERS (2019 OSSC/ASCE 7-16)

Seismic Parameter	Recommended Value
Site Class	D
MCE_R Spectral Response Acceleration Parameter at Short Periods, S_{MS}	1.01 g
MCE_R Spectral Response Acceleration Parameter at 1.0-Sec Period, S_{M1}	0.77 g
Design Spectral Response Acceleration Parameter at Short Periods, S_{DS}	0.67 g
Design Spectral Response Acceleration Parameter at 1.0-Sec Period, S_{D1}	0.51 g

5.2.2 Liquefaction, Cyclic Softening, and Other Seismic Hazards

Due to the presence of shallow groundwater and soft to medium stiff silt soils that mantle the site, the behavior of soils subjected to cyclic loads, such as an earthquake is an important consideration for the project. The cyclic resistance of soils is dependent on several factors, including the number of loading cycles, relative density, confining stress, plasticity, natural water content, stress history, age, depositional environment (fabric), and composition. For sand-like soils, the cyclic resistance is typically evaluated using SPT N-values or CPT tip-resistance values normalized for overburden pressures and corrected for factors that influence cyclic resistance, such as fines content. For clay-like soils, the cyclic resistance is typically evaluated using estimates of the undrained shear strength, overconsolidation ratio, and sensitivity or directly from cyclic laboratory tests. In practice, the cyclic resistance of these soils is commonly evaluated using simplified correlations based on in-situ testing in conjunction with laboratory index testing. However, more advanced laboratory testing, such as cyclic direct simple shear (CDSS) programs, can be used to more accurately estimate cyclic resistance and site-specific soil behavior as well as calibrate the simplified methods for a specific soil deposit.

To supplement the practice-oriented approaches and better understand the seismic behavior of the silt soils mantling the project site, a laboratory-testing program was performed to evaluate the cyclic resistance, degradation potential, and post-cyclic behavior of the silt soils. The laboratory-testing program focused on a series of CDSS tests with supporting standard index and consolidation tests. The laboratory test results indicate the silt soils generally demonstrate a clay-like behavior in response to cyclic loading. In this regard, based on our analysis of the preliminary results of the CDSS testing, it is our opinion the surface manifestation of liquefaction, cyclic softening, and/or significant soil strength loss at the site will be less than about 1 inch to 2 inches during a code-based earthquake.

Based on the location of known and mapped faults in the area, the inferred location of the Beaverton Fault Zone, about 0.7 kilometers (km) from the site, is the closest dominant crustal fault identified as a hazard to the site. The 2014 iteration of the USGS National Seismic Hazard Maps (NSHM) does not consider the Beaverton Fault Zone to be seismogenically active, however, we understand it will be considered active in the forthcoming 2023 NSHM. We anticipate the potential for fault rupture or displacement at the site is absent unless occurring on a previously unknown or unmapped fault. The risk of damage by a tsunami and/or seiche at the site is absent.

5.3 Earthwork

5.3.1 General

The fine-grained soils that mantle the site are moisture sensitive, and perched groundwater may approach the ground surface during the wet winter months and following periods of sustained precipitation. Therefore, it is our opinion earthwork can be completed most economically during the dry summer months, typically extending from June to mid-October. It has been our experience the moisture content of the upper few feet of fine-grained soils will decrease during extended warm, dry weather. However, below this depth, the moisture content of the soil tends to remain relatively unchanged and well above the optimum moisture content for compaction. As a result, the contractor must use construction equipment and procedures that prevent disturbance and softening of the subgrade soils. To minimize disturbance of the moisture-sensitive fine-grained soils, site grading can be completed using track-mounted hydraulic excavators. The excavation should be finished using a smooth-edged bucket to produce a firm, undisturbed surface. It may also be necessary to construct granular haul roads and work pads concurrently with excavation to minimize subgrade disturbance. If the subgrade is disturbed during construction, soft, disturbed soils should be overexcavated to firm soil and backfilled with structural fill.

If construction occurs during wet ground conditions, granular work pads will be required to protect the underlying silt subgrade and provide a firm working surface for construction activities. In our opinion, an 18-inch-thick granular work pad should be sufficient to prevent disturbance of the subgrade by lighter construction equipment and limited traffic by dump trucks. Haul roads and other high-density traffic areas will require a minimum of 18 inches to 24 inches of fragmental rock, up to 6-inch nominal size, to reduce the risk of subgrade deterioration. The use of geotextile fabric over the subgrade may reduce the need for maintenance during construction.

As an alternative to the use of a thickened section of crushed rock to support construction activities and protect the subgrade, the subgrade soils can be treated with cement. It has been our experience in this area that treating the subgrade soils to a depth of 12 inches

to 16 inches with about a 6% to 8% admixture of cement overlain by 6 inches to 12 inches of crushed rock will support construction equipment and provide a good all-weather working surface. If cement treatment is being considered, GRI should be contacted prior to construction to assist with refining the preliminary cement admixture estimates noted above.

5.3.2 Site Preparation

The existing structures located within the extent of the proposed improvements, and associated foundations, if any, should be demolished as a part of site preparation activities. Any excavations necessary to remove the structures, soils disturbed during the removal of the foundations, and any soft or otherwise unsuitable soils in the footprint of the structures should be excavated and removed. The excavations should be backfilled in accordance with the Structural Fill section of this report.

The ground surface within all building areas, paved areas, walkways, and areas to receive structural fill should be stripped of existing vegetation, surface organics, and loose surface soils or fill. All trees, brush, and surficial organic material should be removed from within the limits of the proposed improvements. Excavations required to remove unsuitable soils, brush, and trees should be backfilled with structural fill. Organic strippings should be disposed of offsite or stockpiled on site for use in landscaped areas.

Following stripping or excavation to design elevation, the exposed subgrade should be evaluated by a qualified member of GRI's geotechnical engineering staff or an engineering geologist. Proof rolling with a loaded dump truck may be part of this evaluation. Any soft areas or areas of unsuitable material disclosed by the evaluation should be overexcavated to firm material and backfilled with structural fill.

5.3.3 Site Grading

Final site grades are not available at this preliminary stage. However, we anticipate fill for the project will generally be less than 1 foot to 2 feet. If planned fills exceed this thickness, GRI should be contacted to review site grading. In general, grading across the project site should also provide for positive drainage of surface water away from buildings, adjacent properties and slopes to reduce the potential for erosion and ponding.

5.3.4 Prior Site Development

Site improvements within previously developed areas include risk of encountering undocumented or poorly documented improvements and infrastructure. Although not encountered within the subsurface explorations completed at the site, the possibility does exist to encounter existing underground improvements.

5.4 Excavation

5.4.1 General

Based on our preliminary understanding of the project, we anticipate the maximum depth of cuts to establish final site grades will generally be less than 5 feet and the depth of utility excavations may be on the order of 5 feet to 10 feet. The method of excavation and design of excavation support are the responsibility of the contractor and are subject to applicable local, state, and federal safety regulations, including the current Occupational Safety and Health Administration (OSHA) excavation and trench safety standards. The means, methods, and sequencing of construction operations and site safety are also the contractor's responsibility. The information provided below is for the use of our client and should not be interpreted to imply we are assuming responsibility for the contractor's actions or site safety.

5.4.2 Utility Excavations

In our opinion, there are three major considerations associated with the design and construction of new utilities:

1. Provide stable excavation sideslopes or support for trench sidewalls to minimize loss of ground.
2. Provide a safe working environment during construction.
3. Minimize post-construction settlement of the utility and ground surface.

According to current OSHA regulations, the fine-grained soils encountered in the explorations may be classified as Type C. In our opinion, trench excavations should be laterally supported or alternatively provided with sideslopes of 1.5H:1V (Horizontal:Vertical) or flatter, provided static groundwater or seepage is not encountered. If groundwater is encountered, the sideslopes should be sloped at 2H:1V or flatter. In our opinion, adequate lateral support may be provided by common methods, such as the use of a trench shield or hydraulic shoring systems.

We anticipate the groundwater level will may conflict with deeper trench excavations and perched groundwater may develop in utility trenches and within the near surface fine-grained soils that mantle the site during periods of heavy or prolonged rainfall. Groundwater seepage, running-soil conditions, and unstable trench sidewalls or soft trench subgrades, if encountered during construction, will require dewatering of the excavation and trench sidewall support. The impact of these conditions can be reduced by completing trench excavation during the summer months when groundwater levels are lowest.

We anticipate groundwater inflow if encountered, can generally be controlled by pumping from sumps. To facilitate dewatering, it will be necessary to overexcavate the trench bottom to permit the installation of a granular working blanket. We estimate the required thickness of the granular working blanket will be on the order of 1 foot or as required to maintain a stable trench bottom. The actual required depth of overexcavation will depend on the conditions exposed in the trench and the effectiveness of the contractor's dewatering efforts. The thickness of the granular blanket must be evaluated based on field observations during construction. We recommend the use of relatively clean, free-draining material, such as 2-inch to 4-inch-minus crushed rock, for this purpose.

5.5 Structural Fill

In our opinion, the on-site, fine-grained soils that are free of organics and other deleterious materials and debris are suitable for use in structural fills. Fine-grained soils are moisture sensitive and can be placed and adequately compacted only during the dry summer months from June to mid-October. If silty fill soils are compacted at a moisture content that is higher than recommended, the specified densities cannot be achieved, and the fill material will be relatively weak and compressible.

On-site, fine-grained soil used as structural fill should be moisture conditioned to within 3% of optimum moisture content, as determined by ASTM International (ASTM) D698, prior to compaction. The moisture-conditioned, fine-grained soil should be placed in 9-inch-thick lifts (loose) and compacted with vibratory equipment to at least 95% of the maximum dry density determined in accordance with ASTM D698. For construction during the wet winter and spring months, fills should be constructed using imported granular materials that are relatively clean, which are discussed below.

As an alternative to the use of a thickened section of crushed rock to support construction activities and protect the subgrade, the subgrade soils can be treated with cement. It has been our experience in this area that treating the subgrade soils to a depth of about 12 inches to 16 inches with about a 6% to 8% admixture of cement overlain by 6 inches to 12 inches of crushed rock will support construction equipment and provide a good all-weather working surface. GRI should be contacted to review proposed cement treatment design if it is being considered.

Imported granular material would be most suitable for the construction of structural fills during wet weather. Granular material such as sand, sandy gravel, or crushed rock with a maximum size of 1.5 inches would be suitable structural fill material. Granular material that has less than 5% passing the No. 200 sieve (washed analysis) can usually be placed during periods of wet weather. Granular backfill should be placed in lifts and compacted with vibratory equipment to at least 95% of the maximum dry density determined in

accordance with ASTM D698. Appropriate lift thicknesses will depend on the type of compaction equipment used. For example, if hand-operated, vibratory-plate equipment is used, lift thicknesses should be limited to 6 inches to 8 inches. If smooth-drum vibratory rollers are used, lift thicknesses up to 12 inches are appropriate, and if backhoe- or excavator-mounted vibratory plates are used, lift thicknesses up to 2 feet may be acceptable. A minimum of four passes with the roller are generally required to achieve compaction. Hand-operated equipment should be used within 5 feet of building walls or retaining walls.

All utility trench excavations within building, pavement, and hardscape areas should be backfilled with relatively clean, granular material such as sand, sandy gravel, or crushed rock of up to 1½-inch maximum size and having less than 5% passing the No. 200 sieve (washed analysis). The bottom of the excavation should be thoroughly cleaned to remove loose materials and the utilities should be underlain by a minimum 6-inch thickness of bedding material. The granular backfill material should be compacted to at least 95% of the maximum dry density determined by ASTM D698 in the upper 5 feet of the trench and at least 92% of this density below a depth of 5 feet. The use of hoe-mounted, vibratory-plate compactors is usually the most efficient for this purpose. Flooding or jetting as a means of compacting the trench backfill should not be permitted.

Fill placed in landscaped areas should be compacted to a minimum of about 90% of the maximum dry density as determined by ASTM D698. The moisture content of soils placed in landscaped areas is not as critical, provided construction equipment can effectively handle the materials.

5.6 Foundation Support

5.6.1 General

Structural loads are currently unknown; however, we anticipate the maximum column loads will generally be less than about 300 kips. In our opinion, the proposed structural loads can be supported on conventional spread footings in accordance with the following design criteria.

5.6.2 Foundation Design Criteria

All footings should be established in firm, undisturbed, native soil or compacted structural fill at a minimum depth of 18 inches below the lowest adjacent finished grade. Excavations for all foundations should be made with a smooth-edged bucket to reduce subgrade disturbance and a qualified member of GRI geotechnical engineering staff should observe all footing excavations. Soft or otherwise unsuitable material encountered at the foundation subgrade level should be overexcavated and backfilled with granular structural fill. Our experience indicates fine-grained soils are easily disturbed by excavation and

construction activities. In this regard, we recommend installing a minimum 4-inch-thick layer of compacted crushed rock in the bottom of all footing excavations. Relatively clean, ¾-inch-minus crushed rock is suitable for this purpose and should be compacted with a lightweight vibratory compactor.

The table below includes an estimate of the nominal bearing pressure for the existing footings as well as recommended phi factors for the Strength and Extreme limit states.

Table 5-2: ESTIMATED NOMINAL COLUMN FOOTING RESISTANCES

Loading Type	Estimated Nominal Bearing Resistance, psf (Strength and Extreme Cases)	Service Limit Resistance, psf (Service Case)	Recommended Phi Factors	
			Strength Limit State	Extreme Limit State
Bearing Pressure	8,000	3,000	0.45	1.0

We estimate the total static settlement of spread footings designed in accordance with the recommendations presented above will be less than 1 inch for footings loaded to the service limit resistance supporting column loads of up to 300 kips. Differential static settlements between adjacent, comparably loaded footings on similar subgrade conditions are estimated to be less than half the total settlement.

Horizontal shear forces can be resisted partially or completely by frictional forces developed between the base of footings and the underlying soil and by soil passive resistance. The total frictional resistance between the footing and the soil is the normal force times the coefficient of friction between the soil and the base of the footing. We recommend an ultimate value of 0.40 for the coefficient of friction for footings cast on granular material. The normal force is the sum of the vertical forces, i.e., dead load plus real live load. If additional lateral resistance is required, passive earth pressures against embedded footings can be computed based on an equivalent fluid having a unit weight of 250 pounds per cubic foot. This design passive earth pressure would be applicable only if the footing is cast neat against undisturbed soil or if backfill for the footings is placed as granular structural fill. This design passive earth pressure also assumes up to 0.02*t of lateral movement of the structure will occur in order for the soil to develop this resistance, where "t" is the thickness of the footing. This value also assumes the ground surface in front of the foundation is horizontal, i.e., does not slope downward away from the toe of the footing.

6 DESIGN REVIEW AND CONSTRUCTION SERVICES

We welcome the opportunity to review and discuss construction plans and specifications for this project as they are being developed. In addition, GRI should be retained to review all geotechnical-related portions of the plans and specifications to evaluate whether they are in conformance with the recommendations provided in our report. To observe

compliance with the intent of our recommendations, the design concepts, and the plans and specifications, it is our opinion all construction operations pertaining to earthwork and foundation installation should be observed by a GRI representative. Our construction-phase services will allow for timely design changes if site conditions are encountered that are different from those described in our report. If we do not have the opportunity to confirm our interpretations, assumptions, and analyses during construction, we cannot be responsible for the application of our recommendations to subsurface conditions different from those described in this report.

7 LIMITATIONS

This report has been prepared to aid the project team in the preliminary design of this project. The scope is limited to the specific project and location described within this report, and our description of the project represents our concept-level, preliminary understanding of the significant aspects of the project relevant to earthwork, design and construction of the proposed improvements. If any changes in the design and location of the project elements as outlined in this report are planned, we should be given the opportunity to review the changes and modify or reaffirm the conclusions and recommendations of this report in writing.

The preliminary conclusions and recommendations in this report are based on the data obtained from the subsurface explorations at the locations shown on Figure 2 and other sources of information discussed in this report. In the performance of subsurface investigations, specific information is obtained at specific locations at specific times. However, it is acknowledged that variations in subsurface conditions may exist between exploration locations. This report does not reflect variations that may occur between these explorations. The nature and extent of variation may not become evident until construction. If during construction, subsurface conditions differ from those encountered in the explorations, we should be advised at once so we can observe and review these conditions and reconsider our recommendations where necessary.

DRAFT



Submitted for GRI,

Jason D. Bock, PE
Principal

Thomas J. O'Dell, PE
Senior Engineer

This document has been submitted electronically.

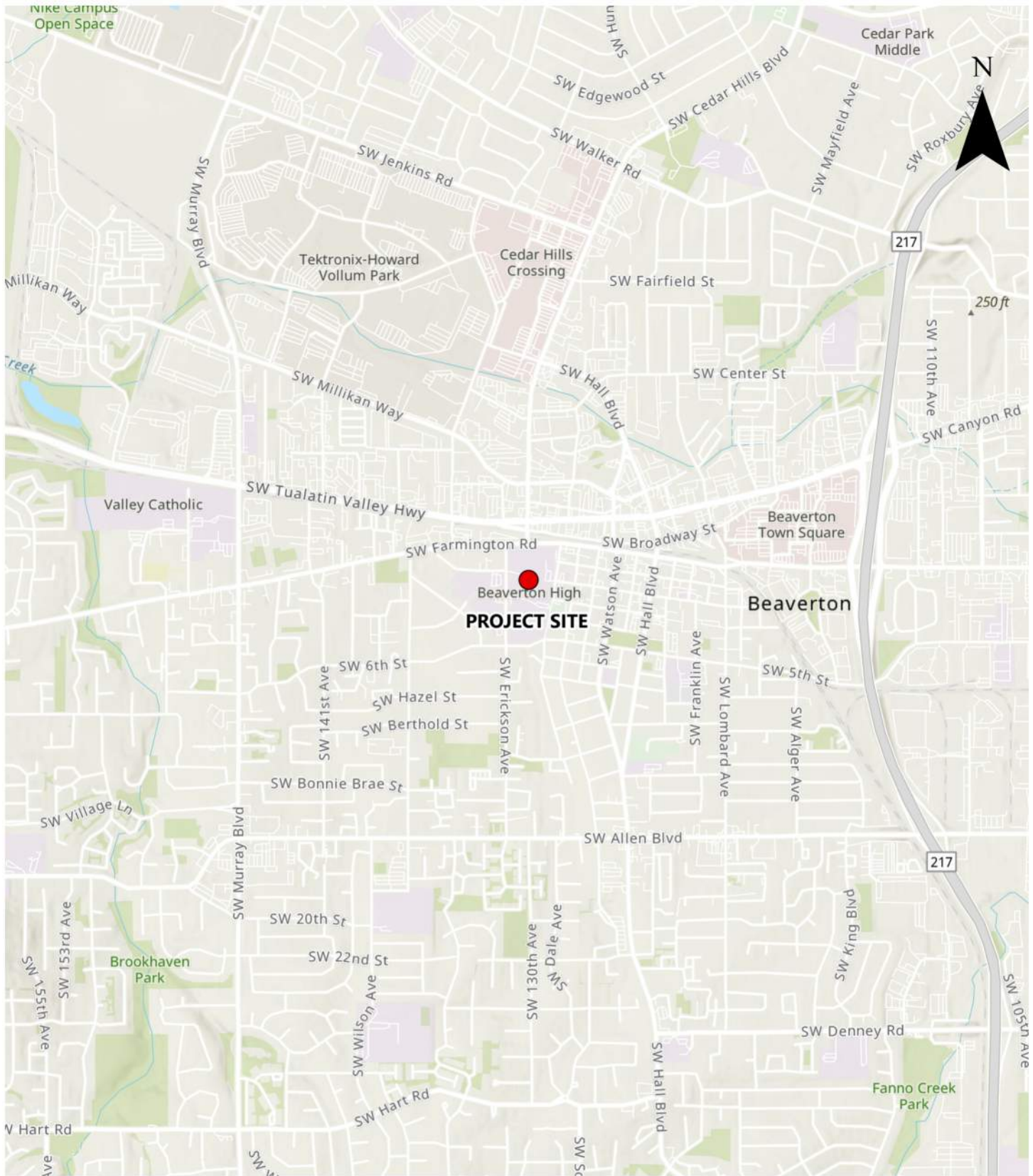
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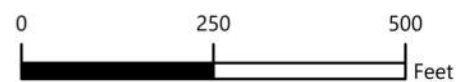


BEAVERTON SCHOOL DISTRICT
BEAVERTON HIGH SCHOOL REPLACEMENT

VICINITY MAP



-  BORINGS COMPLETED BY GRI
-  CONE PENETRATION TEST COMPLETED BY GRI



BEAVERTON SCHOOL DISTRICT
BEAVERTON HIGH SCHOOL REPLACEMENT

SITE PLAN

DRAFT



APPENDIX A

Field Explorations and Laboratory Testing

APPENDIX A**FIELD EXPLORATIONS AND LABORATORY TESTING****A.1 FIELD EXPLORATIONS****A.1.1 General**

Subsurface materials and conditions were investigated from December 20 through 22, 2021, with four borings, designated B-1 through B-4 and one cone penetration test (CPT) probe, designated CPT-1. The approximate locations of the explorations completed for this investigation are shown on the Site Plan, Figure 2. Logs of the explorations are provided on Figures 1A through 6A. The field exploration work was coordinated and documented by an experienced member of GRI's geotechnical engineering staff, who maintained a log of the materials and conditions disclosed during the course of work.

A.1.2 Borings

Borings B-1 through B-4 were advanced to depths of ranging from about 51.5 feet to 61.5 feet with mud-rotary drilling techniques using a track-mounted drill rig provided and operated by Western States Soil Conservation, Inc. of Hubbard, Oregon. Disturbed and undisturbed soil samples were obtained from the borings at 2.5-foot intervals of depth in the upper 15 feet and at 5-foot intervals below this depth. Disturbed soil samples were obtained using a standard split-spoon sampler. The standard penetration test (SPT) was completed while obtaining disturbed soil samples. This test is performed by driving a 2-inch-outside-diameter, split-spoon sampler into the soil a distance of 18 inches using the force of a 140-pound hammer dropped 30 inches. The number of blows required to drive the sampler the last 12 inches is known as the Standard Penetration Resistance, or SPT N-value. The SPT N-values provide a measure of the relative density of granular soils and the relative consistency of cohesive soils. Samples obtained from the borings were placed in airtight jars and returned to our laboratory for further classification and testing. In addition, relatively undisturbed samples were collected by pushing a 3-inch-outside-diameter Shelby tube into the undisturbed soil a maximum distance of 24 inches using the hydraulic ram of the drill rig. The soil exposed in the end of the Shelby tube was examined and classified in the field. After classification, the tubes were sealed with rubber caps and returned to our laboratory for further examination and testing.

Logs of the borings are provided on Figures 1A through 4A. The log presents a summary of the various types of materials encountered in the boring and notes the depth where the materials and/or characteristics of the materials change. To the right of the summary, the numbers and types of samples taken during the drilling operation are indicated. Farther to the right, SPT N-values, moisture contents, Atterberg limits, Torvane shear-strength values, dry unit weights, and percent material passing the No. 200 sieve are shown

graphically. The terms used to describe the materials encountered in the borings are defined in Table 1A and the attached legend.

A.1.3 Cone Penetrometer Test (CPT) Probe

One CPT probe, designated CPT-1, was advanced to a depth of about 68.7 feet using a track-mounted CPT rig provided and operated by Oregon Geotechnical Explorations, Inc., of Salem, Oregon. During a CPT, a steel cone is forced vertically into the soil at a constant rate of penetration. The force required to cause penetration at a constant rate can be related to the bearing capacity of the soil immediately surrounding the point of the penetrometer cone. This force is measured and recorded every 2 inches. In addition to the cone measurements, measurements are obtained of the magnitude of force required to force a friction sleeve attached above the cone through the soil. The force required to move the friction sleeve can be related to the undrained shear strength of fine-grained soils. The dimensionless ratio of sleeve friction to point-bearing capacity provides an indicator of the type of soil penetrated. The cone penetration resistance and sleeve friction can be used to evaluate the relative consistency of cohesionless and cohesive soils, respectively. In addition, a piezometer fitted between the cone and the sleeve measures changes in water pressure as the probe is advanced and can also be used to measure the depth of the top of the groundwater table. The probe was also operated using an accelerometer fitted to it, which allows measurement of the arrival time of shear waves from impulses generated at the ground surface. This allows the calculation of shear-wave velocities for the surrounding soil profile.

A log of the CPT probe is provided on Figure 5A, which presents a graphical summary of the tip resistance, local (sleeve) friction, friction ratio, pore pressure, and soil behavior type index. The terms used to describe the soils encountered in the probe are defined in Table 2A. Shear-wave velocity measurements recorded for the CPT probe are shown on Figure 6A.

A.2 LABORATORY TESTING

A.2.1 General

The samples obtained from the borings were examined in our laboratory, where the physical characteristics of the samples were noted and the field classifications modified where necessary. At the time of classification, the natural moisture content of each sample was determined. Additional testing included Torvane shear strength, dry unit weight, and grain-size analyses. A summary of the laboratory test results has been provided in Table 3A. The following sections describe the testing program in more detail.

A.2.2 Natural Moisture Contents

Natural moisture content determinations were made in conformance with ASTM D2216. The results are summarized on Figures 1A through 4A and in Table 3A.

A.2.3 Torvane Shear Strength

The approximate undrained shear strength of the fine-grained soils was determined using the Torvane shear device. The Torvane is a handheld apparatus with vanes that are inserted into the soil. The torque required to fail the soil in shear around the vanes is measured using a calibrated spring. The results of the Torvane shear-strength testing are summarized on Figures 1A through 4A.

A.2.4 Undisturbed Unit Weight

The unit weight, or density, of undisturbed soil samples was determined in the laboratory in substantial conformance with ASTM D2937. The results are summarized on Figures 1A through 4A and in Table 3A.

A.2.5 Atterberg Limits

Atterberg-limits testing was performed on five selected sample of silt and clay. The testing was completed in conformance with ASTM D4318. The test results are summarized on Figures 1A through 4A, 7A and in Table 3A.

A.2.6 Grain-Size Analysis

A.2.6.1 Washed-Sieve Method

To assist in classification of the soils, samples of known dry weight were washed over a No. 200 sieve. The material retained on the sieve is oven-dried and weighed. The percentage of material passing the No. 200 sieve is then calculated. The results are summarized on Figures 1A through 4A and in Table 3A.

A.2.7 One-Dimensional Consolidation

Two one-dimensional consolidation tests were performed in conformance with ASTM D2435 on relatively undisturbed soil samples extruded from Shelby tubes. This test provides data on the compressibility of underlying fine-grained soils, necessary for settlement studies. The test results are summarized on Figures 8A and 9A in the form of a curve showing percent strain versus applied effective stress. The initial dry unit weight and moisture content of the samples are also shown on the figure.

A.2.8 Cyclic Direct Simple Shear

Strain-controlled, CDSS tests are being performed in conformance with standard of practice and ASTM D6528 on relatively undisturbed soil samples extruded from a Shelby tube. The test provides data on the cyclic resistance, degradation potential, and post-cyclic behavior of the underlying fine-grained soils, necessary for seismic studies. The cyclic tests are being completed at a frequency of 0.1 Hertz. Testing is still ongoing, but the results of the CDSS will be included in the final version of this report.

Table 1A
GUIDELINES FOR CLASSIFICATION OF SOIL

Description of Relative Density for Granular Soil

Relative Density	Standard Penetration Resistance, (N-values) blows/ft	California-Modified Penetration Resistance (SPT N*-values), blows/ft
Very Loose	0 - 4	0 – 11
Loose	4 - 10	11 – 26
Medium Dense	10 - 30	26 – 74
Dense	30 - 50	74 – 120
Very Dense	over 50	more than 120

Description of Consistency for Fine-Grained (Cohesive) Soils

Consistency	Standard Penetration Resistance (N-values), blows/ft	Torvane or Undrained Shear Strength, tsf
Very Soft	0 - 2	less than 0.125
Soft	2 - 4	0.125 - 0.25
Medium Stiff	4 - 8	0.25 - 0.50
Stiff	8 - 15	0.50 - 1.0
Very Stiff	15 - 30	1.0 - 2.0
Hard	over 30	over 2.0

Grain-Size Classification	Modifier for Subclassification		
<i>Boulders:</i> > 12 in.		Primary Constituent SAND or GRAVEL	Primary Constituent SILT or CLAY
		Adjective	Percentage of Other Material (By Weight)
<i>Cobbles:</i> 3-12 in.			
<i>Gravel:</i> 1/4 - 3/4 in. (fine) 3/4 - 3 in. (coarse)	trace:	5 - 15 (sand, gravel)	5 - 15 (sand, gravel)
	some:	15 - 30 (sand, gravel)	15 - 30 (sand, gravel)
	sandy, gravelly:	30 - 50 (sand, gravel)	30 - 50 (sand, gravel)
<i>Sand:</i> No. 200 - No. 40 sieve (fine) No. 40 - No. 10 sieve (medium) No. 10 - No. 4 sieve (coarse)	trace:	<5 (silt, clay)	<i>Relationship of clay and silt determined by plasticity index test</i>
	some:	5 - 12 (silt, clay)	
	silty, clayey:	12 - 50 (silt, clay)	
<i>Silt/Clay:</i> Pass No. 200 sieve			

Table 2A**CONE PENETRATION TEST (CPT) CORRELATIONS****Cohesive Soils**

Cone Tip Resistance, tsf	Consistency
<5	Very Soft
5 to 15	Soft to Medium Stiff
15 to 30	Stiff
30 to 60	Very Stiff
>60	Hard

Cohesionless Soils

Cone Tip Resistance, tsf	Relative Density
<20	Very Loose
20 to 40	Loose
40 to 120	Medium
120 to 200	Dense
>200	Very Dense

Reference

Kulhawy, F. H., and Mayne, P. W., 1990, Manual on Estimating Soil Properties for Foundation Design, Electric Power Research Institute, EL-6800.

Table 3A
SUMMARY OF LABORATORY RESULTS

Sample Information				Atterberg Limits				Fines Content, %	Soil Type
Location	Sample	Depth, ft	Elevation, ft	Moisture Content, %	Dry Unit Weight, pcf	Liquid Limit, %	Plasticity Index, %		
B-1	S-1	2.5	--	39	--	--	--	--	SILT
	S-2	5.0	--	32	--	--	--	88	SILT
	S-2	6.0	--	32	--	30	6	--	SILT
	S-3	7.0	--	35	--	--	--	--	SILT
	S-4	10.0	--	35	--	--	--	--	SILT
	S-5	12.5	--	44	--	--	--	98	SILT
	S-6	15.0	--	38	--	--	--	--	SILT
	S-8	22.0	--	33	--	--	--	--	SILT
	S-9	25.0	--	36	--	--	--	--	SILT
	S-10	30.0	--	35	--	--	--	--	SILT
	S-11	35.0	--	35	--	--	--	--	SILT
	S-12	40.0	--	25	--	--	--	--	CLAY
	S-13	45.0	--	24	--	--	--	--	CLAY
	S-14	50.0	--	24	--	--	--	--	CLAY
B-2	S-2	5.0	--	40	--	--	--	84	SILT
	S-4	9.5	--	45	--	--	--	94	SILT
	S-5	12.5	--	36	--	30	3	--	SILT
	S-6	15.0	--	38	84	--	--	93	SILT
	S-7	17.0	--	35	--	--	--	--	SILT
	S-8	20.0	--	36	--	--	--	--	SILT
	S-9	25.0	--	41	--	--	--	--	SILT
	S-11	32.0	--	35	--	--	--	--	SILT
	S-12	35.0	--	37	--	34	8	--	SILT
	S-13	40.0	--	36	--	--	--	--	SILT
	S-14	45.0	--	35	--	--	--	--	SILT
	S-15	50.0	--	36	--	--	--	--	SILT
	S-16	55.0	--	26	--	--	--	--	SILT
	S-17	60.0	--	24	--	--	--	--	Clayey SILT
B-3	S-1	2.5	--	28	--	--	--	--	FILL
	S-2	5.0	--	29	--	--	--	--	FILL
	S-4	10.0	--	37	--	--	--	--	Silty CLAY
	S-6	14.5	--	32	--	--	--	76	SILT
	S-7	20.0	--	36	--	--	--	--	SILT
	S-9	27.0	--	39	--	--	--	--	SILT
	S-10	30.0	--	32	--	--	--	--	SILT
	S-11	35.0	--	38	--	--	--	--	SILT
	S-12	40.0	--	37	--	--	--	--	SILT
	S-13	45.0	--	33	--	--	--	--	SILT
	S-14	50.0	--	34	--	41	21	--	SILT
	S-15	55.0	--	25	--	--	--	--	CLAY

Table 3A
SUMMARY OF LABORATORY RESULTS

Sample Information				Atterberg Limits				Fines Content, %	Soil Type
Location	Sample	Depth, ft	Elevation, ft	Moisture Content, %	Dry Unit Weight, pcf	Liquid Limit, %	Plasticity Index, %		
B-4	S-1	2.5	--	39	--	--	--	--	SILT
	S-2	5.0	--	38	--	--	--	--	SILT
	S-4	9.5	--	40	--	--	--	--	SILT
	S-5	12.5	--	41	--	--	--	--	SILT
	S-6	15.0	--	40	--	--	--	99	SILT
	S-7	20.0	--	39	--	--	--	--	SILT
	S-9	27.0	--	36	--	--	--	--	SILT
	S-10	30.0	--	35	--	34	9	--	SILT
	S-11	35.0	--	33	--	--	--	--	SILT
	S-12	40.0	--	34	--	--	--	--	SILT
	S-13	45.0	--	26	--	--	--	--	SILT
	S-14	50.0	--	26	--	--	--	--	CLAY

BORING AND TEST PIT LOG LEGEND

SOIL SYMBOLS

Symbol	Typical Description
	LANDSCAPE MATERIALS
	FILL
	GRAVEL; clean to some silt, clay, and sand
	Sandy GRAVEL; clean to some silt and clay
	Silty GRAVEL; up to some clay and sand
	Clayey GRAVEL; up to some silt and sand
	SAND; clean to some silt, clay, and gravel
	Gravelly SAND; clean to some silt and clay
	Silty SAND; up to some clay and gravel
	Clayey SAND; up to some silt and gravel
	SILT; up to some clay, sand, and gravel
	Gravelly SILT; up to some clay and sand
	Sandy SILT; up to some clay and gravel
	Clayey SILT; up to some sand and gravel
	CLAY; up to some silt, sand, and gravel
	Gravelly CLAY; up to some silt and sand
	Sandy CLAY; up to some silt and gravel
	Silty CLAY; up to some sand and gravel
	PEAT

BEDROCK SYMBOLS

Symbol	Typical Description
	BASALT
	MUDSTONE
	SILTSTONE
	SANDSTONE

SURFACE MATERIAL SYMBOLS

Symbol	Typical Description
	Asphalt concrete PAVEMENT
	Portland cement concrete PAVEMENT
	Crushed rock BASE COURSE

SAMPLER SYMBOLS

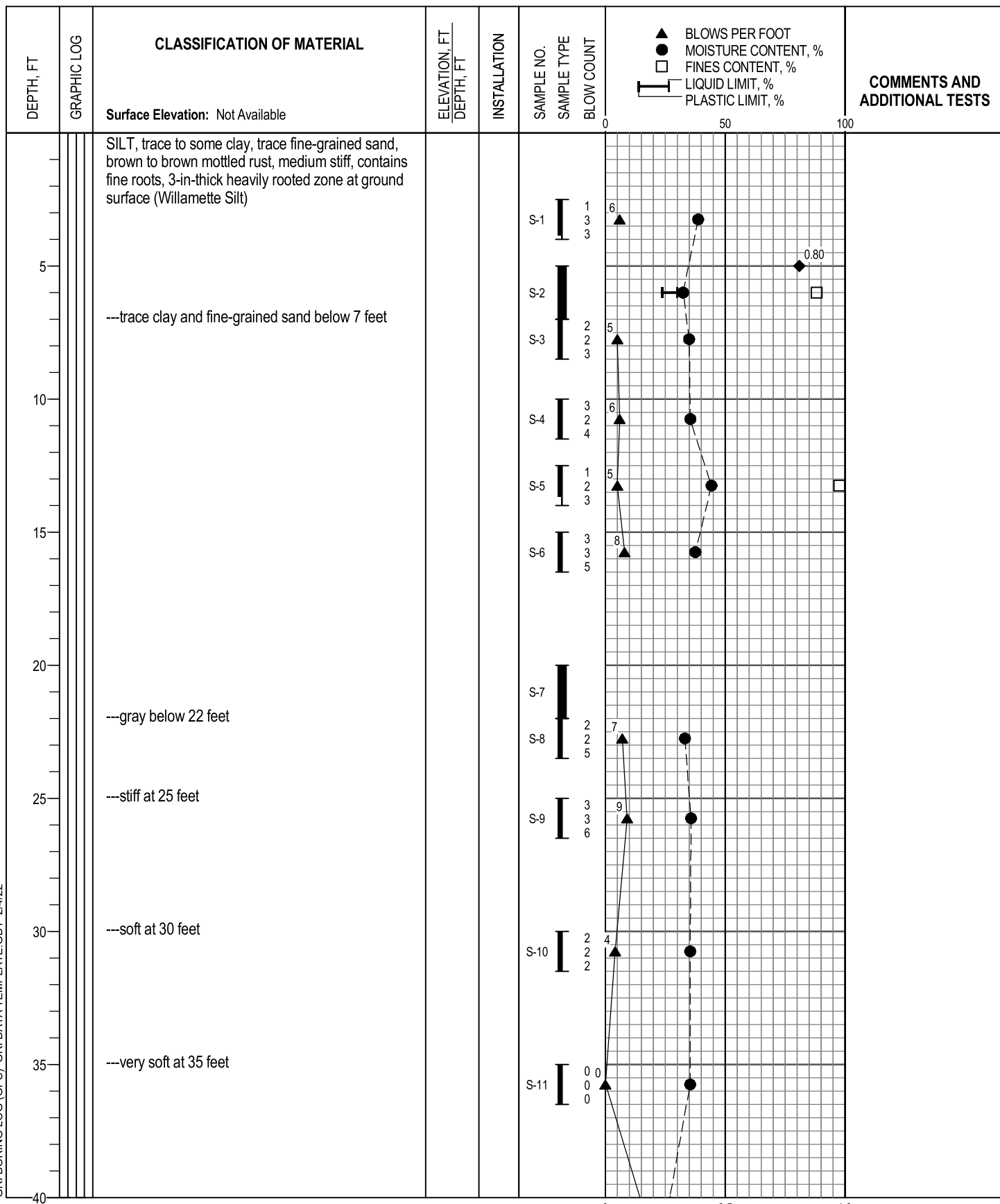
Symbol	Sampler Description
	2.0 in. O.D. split-spoon sampler and Standard Penetration Test with recovery (ASTM D1586)
	Shelby tube sampler with recovery (ASTM D1587)
	3.0 in. O.D. split-spoon sampler with recovery (ASTM D3550)
	Grab Sample
	Rock core sample interval
	Sonic core sample interval
	Push probe sample interval

INSTALLATION SYMBOLS

Symbol	Symbol Description
	Flush-mount monument set in concrete
	Concrete, well casing shown where applicable
	Bentonite seal, well casing shown if applicable
	Filter pack, machine-slotted well casing shown where applicable
	Grout, vibrating-wire transducer cable shown where applicable
	Vibrating-wire pressure transducer
	1-in.-diameter solid PVC
	1-in.-diameter hand-slotted PVC
	Grout, inclinometer casing shown where applicable

FIELD MEASUREMENTS

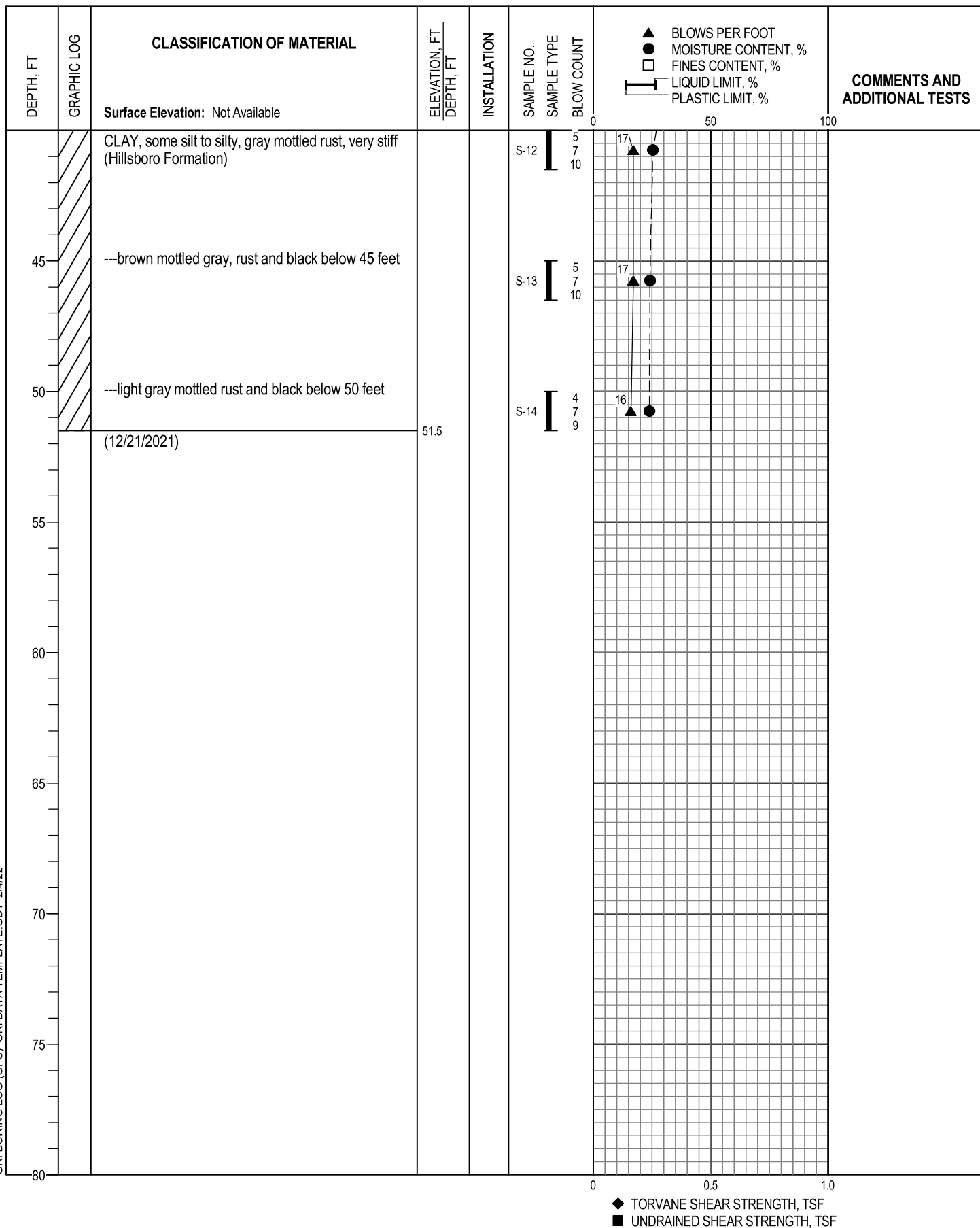
Symbol	Typical Description
	Groundwater level during drilling and date measured
	Groundwater level after drilling and date measured
	Rock/sonic core or push probe recovery (%)
	Rock quality designation (RQD, %)



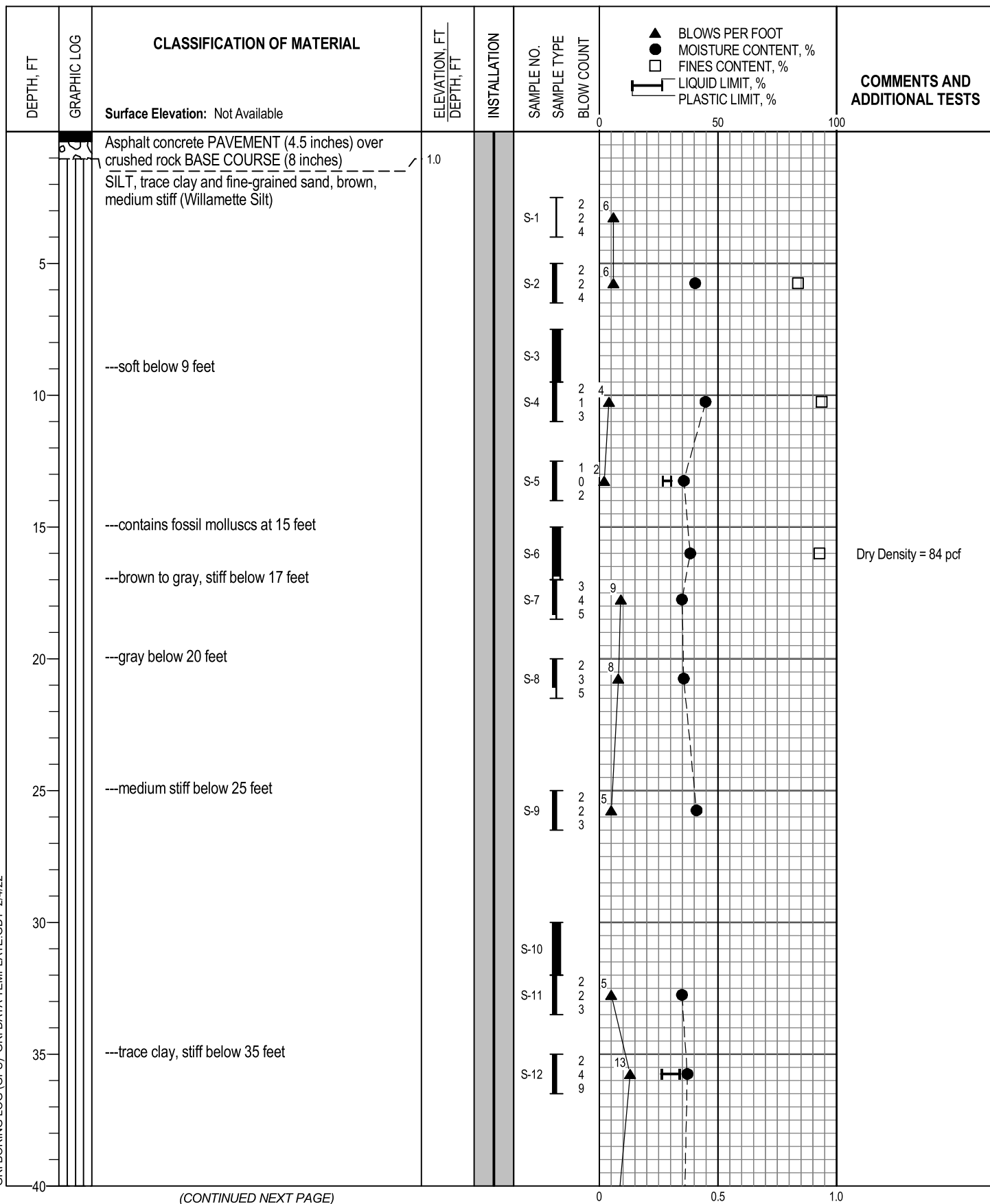
Logged By: S. Young	Drilled by: Western States Soil Conservation, Inc.
Date Started: 12/21/21	GPS Coordinates: 45.4866° N -122.8116° W (WGS84)
Drilling Method: Mud Rotary	Hammer Type: Auto Hammer
Equipment: CME 850 Track-Mounted Drill Rig	Weight: 140 lb
Hole Diameter: 5 in.	Drop: 30 in.
Note: See Legend for Explanation of Symbols	Energy Ratio: 80%



BORING B-1



BORING B-1



Logged By: S. Young

Drilled by: Western States Soil Conservation, Inc.

Date Started: 12/20/21

GPS Coordinates: 45.486° N -122.8125° W (WGS84)

Drilling Method: Mud Rotary

Hammer Type: Auto Hammer

Equipment: CME 850 Track-Mounted Drill Rig

Weight: 140 lb

Hole Diameter: 5 in.

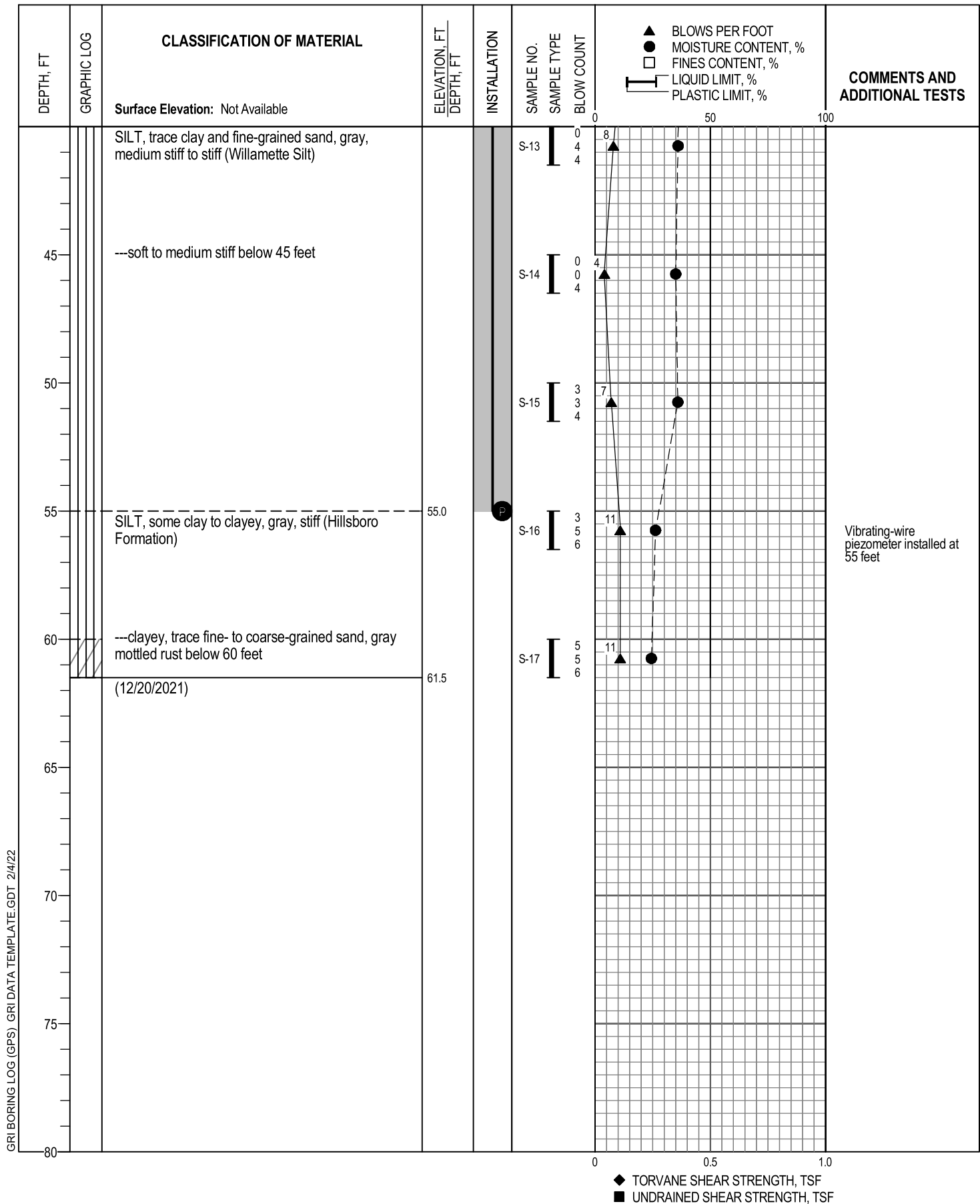
Drop: 30 in.

Note: See Legend for Explanation of Symbols

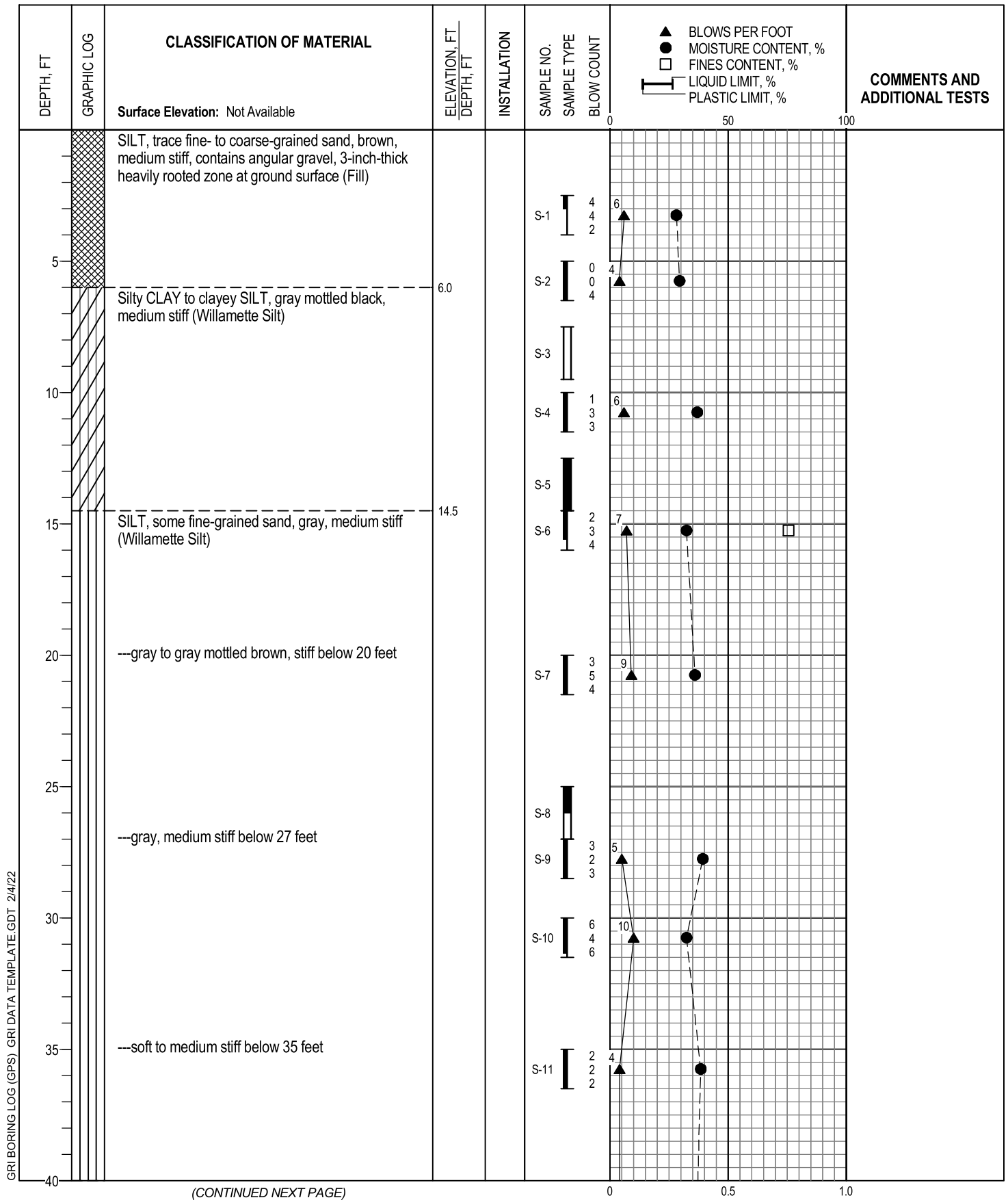
Energy Ratio: 80%

 ◆ TORVANE SHEAR STRENGTH, TSF
 ■ UNDRAINED SHEAR STRENGTH, TSF


BORING B-2



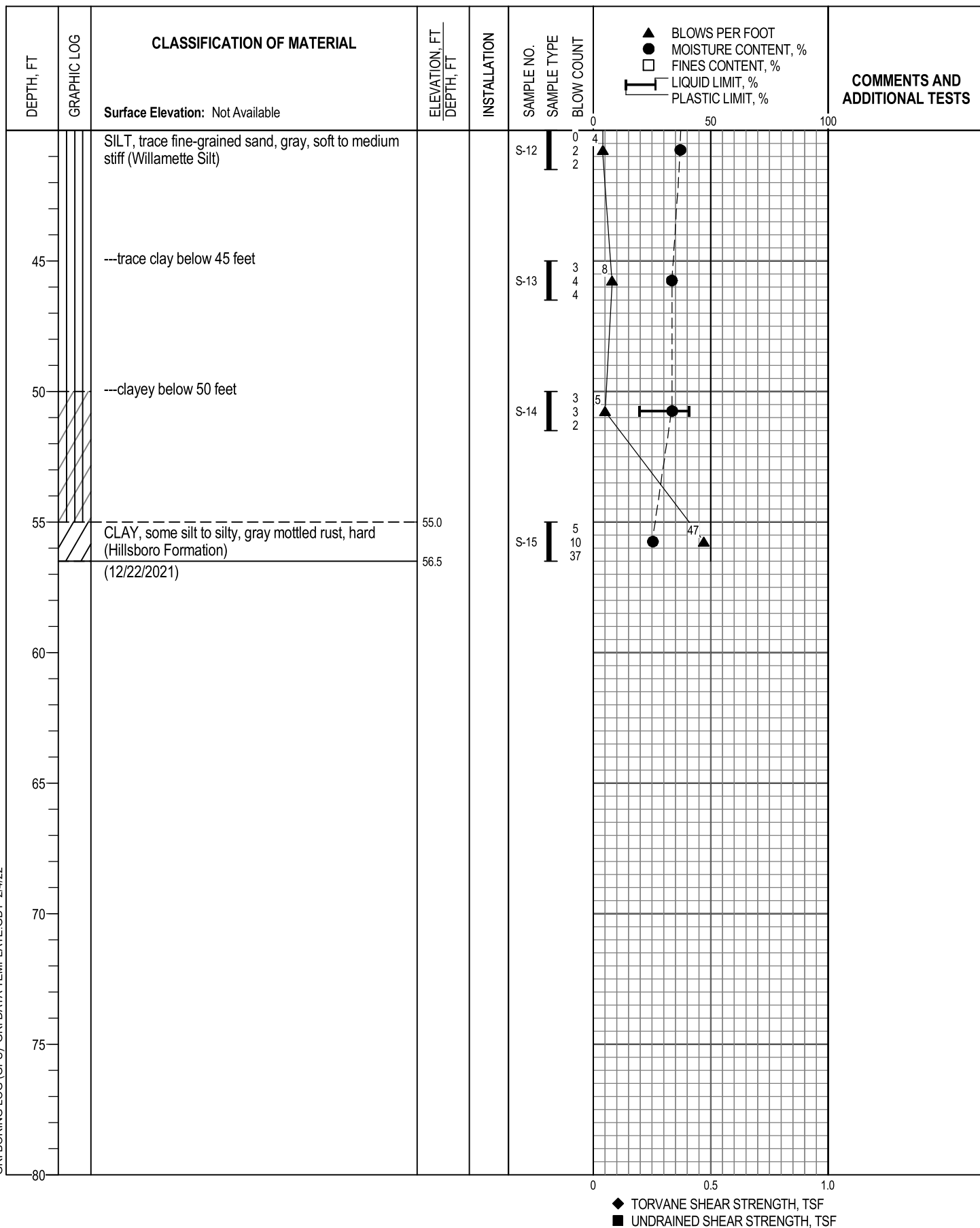
BORING B-2

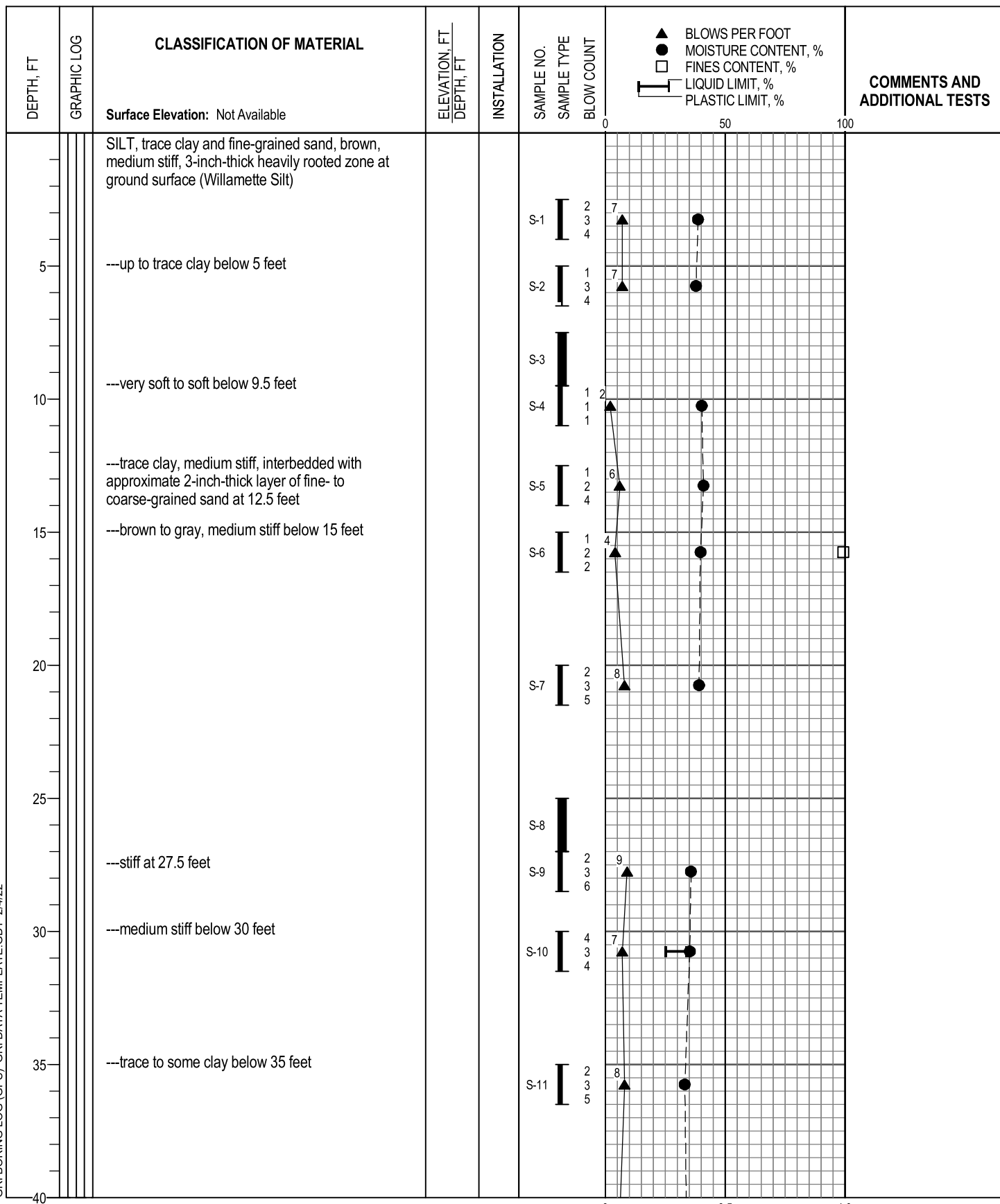


Logged By: S. Young	Drilled by: Western States Soil Conservation, Inc.
Date Started: 12/21/21	GPS Coordinates: 45.4857° N -122.814° W (WGS84)
Drilling Method: Mud Rotary	Hammer Type: Auto Hammer
Equipment: CME 850 Track-Mounted Drill Rig	Weight: 140 lb
Hole Diameter: 5 in.	Drop: 30 in.
Note: See Legend for Explanation of Symbols	Energy Ratio: 80%



BORING B-3





(CONTINUED NEXT PAGE)

Logged By: S. Young

Drilled by: Western States Soil Conservation, Inc.

Date Started: 12/20/21

GPS Coordinates: 45.4846° N -122.8103° W (WGS84)

Drilling Method: Mud Rotary

Hammer Type: Auto Hammer

Equipment: CME 850 Track-Mounted Drill Rig

Weight: 140 lb

Hole Diameter: 5 in.

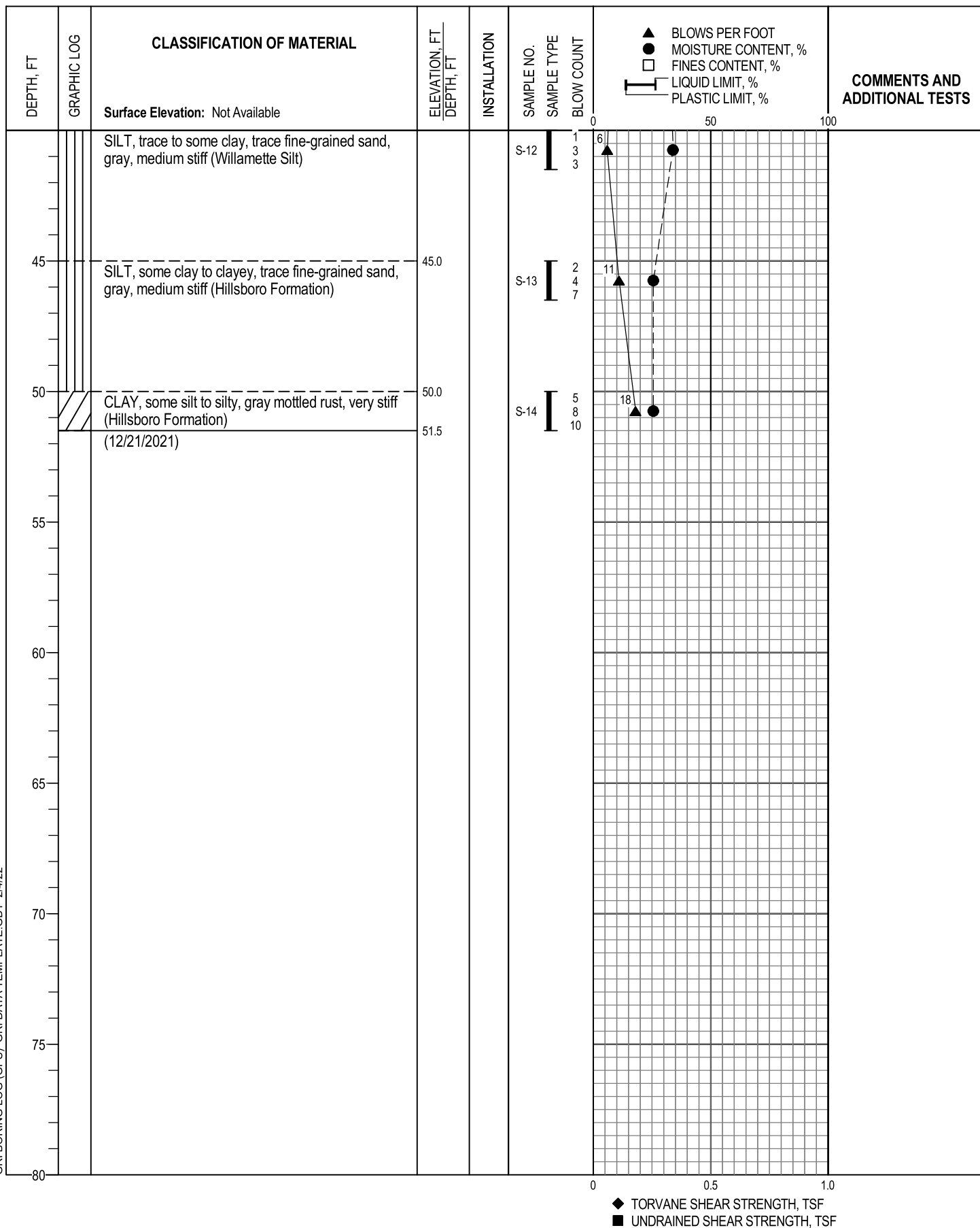
Drop: 30 in.

Note: See Legend for Explanation of Symbols

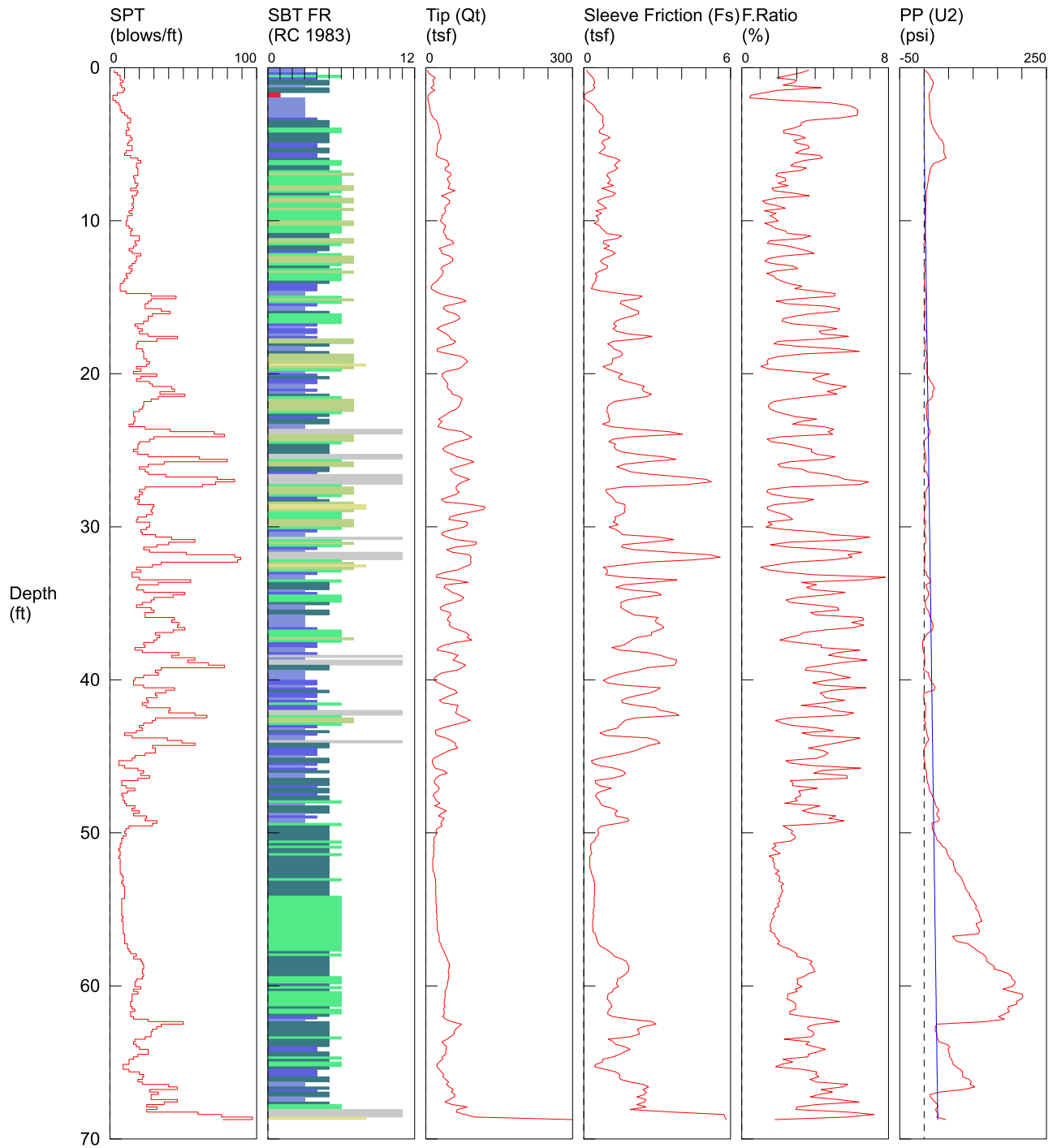
Energy Ratio: 80%

 ◆ TORVANE SHEAR STRENGTH, TSF
 ■ UNDRAINED SHEAR STRENGTH, TSF


BORING B-4



BORING B-4



- | | | | |
|--------------------------|-----------------------------|----------------------------|--------------------------------|
| 1 sensitive fine grained | 4 silty clay to clay | 7 silty sand to sandy silt | 10 gravelly sand to sand |
| 2 organic material | 5 clayey silt to silty clay | 8 sand to silty sand | 11 very stiff fine grained (*) |
| 3 clay | 6 sandy silt to clayey silt | 9 sand | 12 sand to clayey sand (*) |
- *SBT/SPT CORRELATION: UBC-1983



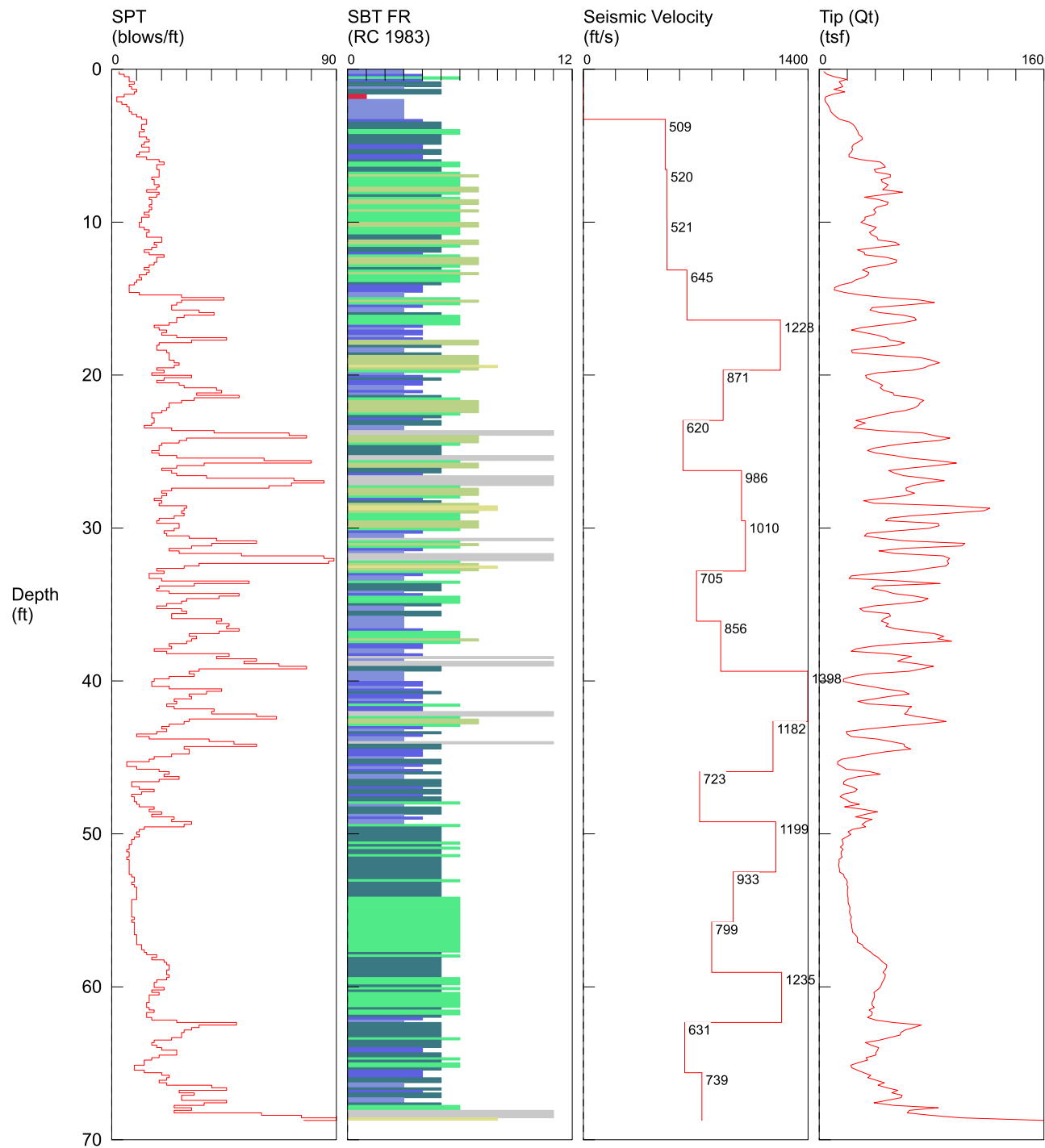
Observed By: S. Young	Advanced By: Oregon Geotechnical Explorations, Inc.
Date Started: 12/21/21	Ground Surface Elevation: Not Available
Coordinates: Not Available	

CONE PENETRATION TEST CPT-1

JAN. 2022

JOB NO. 6588-A

FIG. 5A



- | | | | |
|--------------------------|-----------------------------|----------------------------|--------------------------------|
| 1 sensitive fine grained | 4 silty clay to clay | 7 silty sand to sandy silt | 10 gravelly sand to sand |
| 2 organic material | 5 clayey silt to silty clay | 8 sand to silty sand | 11 very stiff fine grained (*) |
| 3 clay | 6 sandy silt to clayey silt | 9 sand | 12 sand to clayey sand (*) |
- *SBT/SPT CORRELATION: UBC-1983



CONE PENETRATION TEST

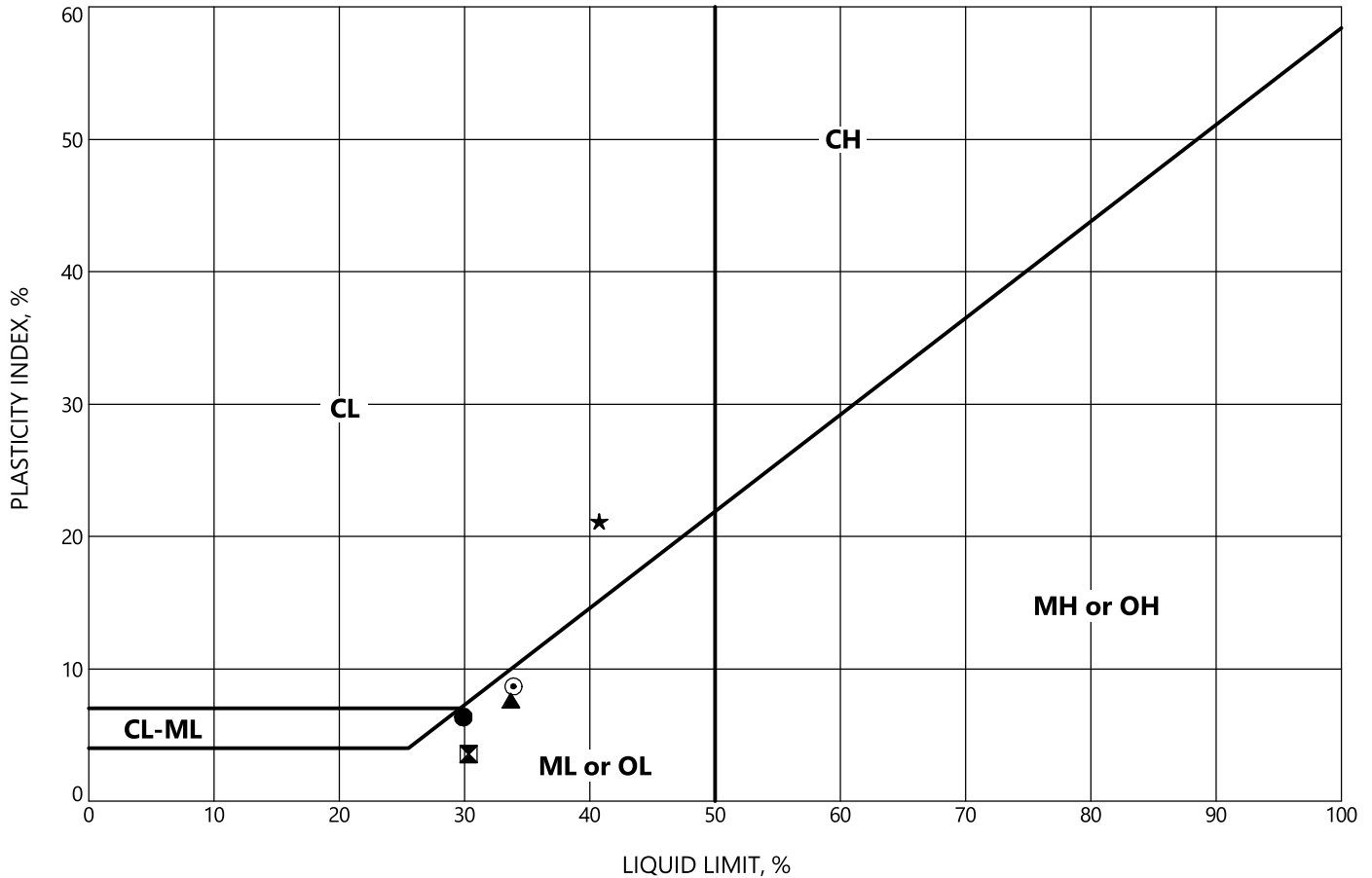
CPT-1

(SEISMIC VELOCITY PROFILE)

Observed By: S. Young	Advanced By: Oregon Geotechnical Explorations, Inc.
Date Started: 12/21/21	Ground Surface Elevation: Not Available
Coordinates: Not Available	

GROUP SYMBOL	UNIFIED SOIL CLASSIFICATION FINE-GRAINED SOIL GROUPS
OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
ML	INORGANIC CLAYEY SILTS TO VERY FINE SANDS OF SLIGHT PLASTICITY
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY

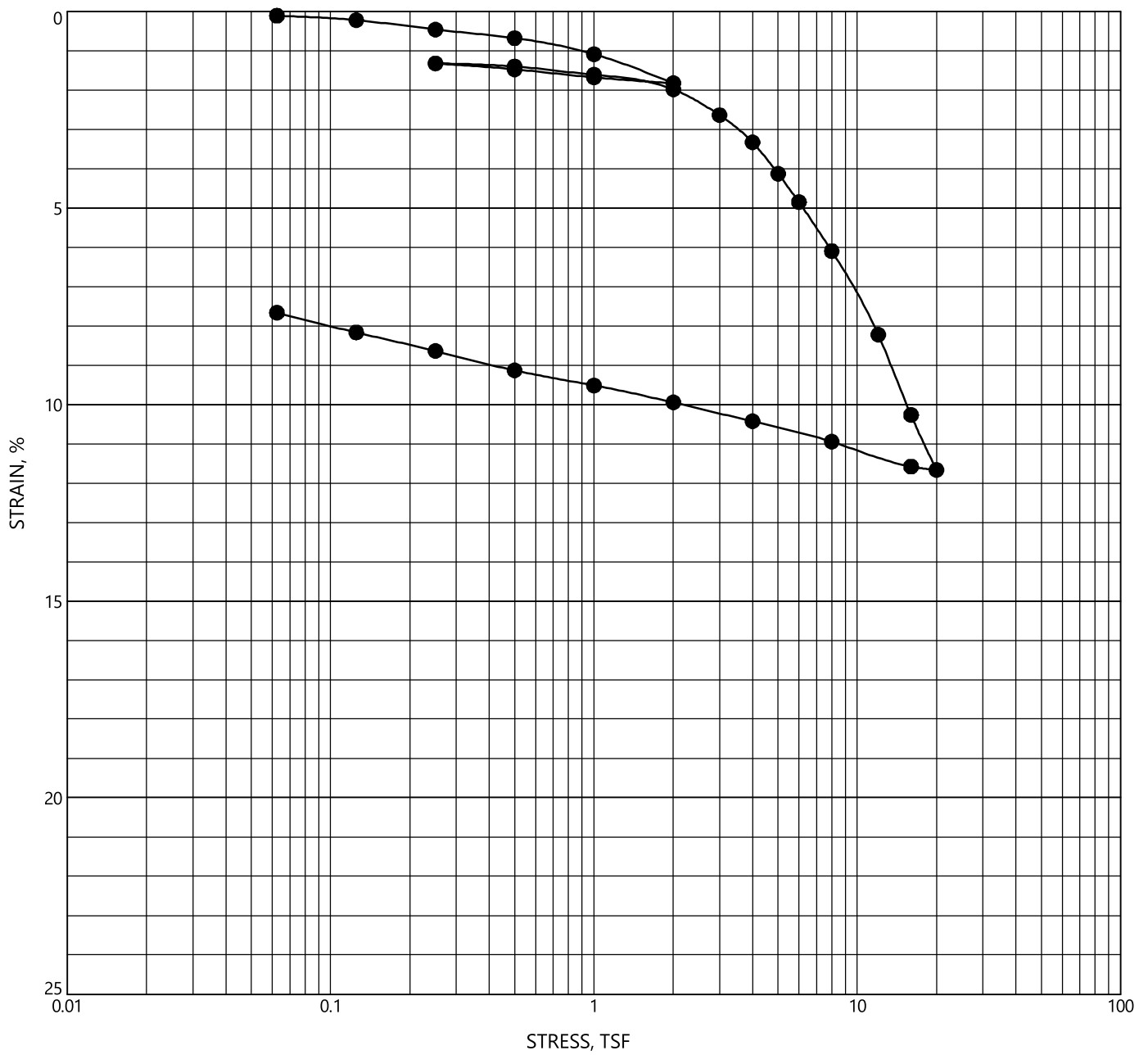
GROUP SYMBOL	UNIFIED SOIL CLASSIFICATION FINE-GRAINED SOIL GROUPS
OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
MH	INORGANIC SILTS AND CLAYEY SILT
CH	INORGANIC CLAYS OF HIGH PLASTICITY



	Location	Sample	Depth, ft	Classification	LL	PL	PI	MC, %
●	B-1	S-2	6.0	SILT, trace clay and fine-grained sand, brown mottled dark brown	30	24	6	32
⊠	B-2	S-5	12.5	SILT, trace fine-grained sand, up to trace clay, brown	30	27	3	36
▲	B-2	S-12	35.0	SILT, trace clay and fine-grained sand, gray	34	26	8	37
★	B-3	S-14	50.0	Clayey SILT, trace fine-grained sand, gray	41	20	21	34
⊙	B-4	S-10	30.0	SILT, trace clay and fine-grained sand, gray	34	25	9	35

GRI

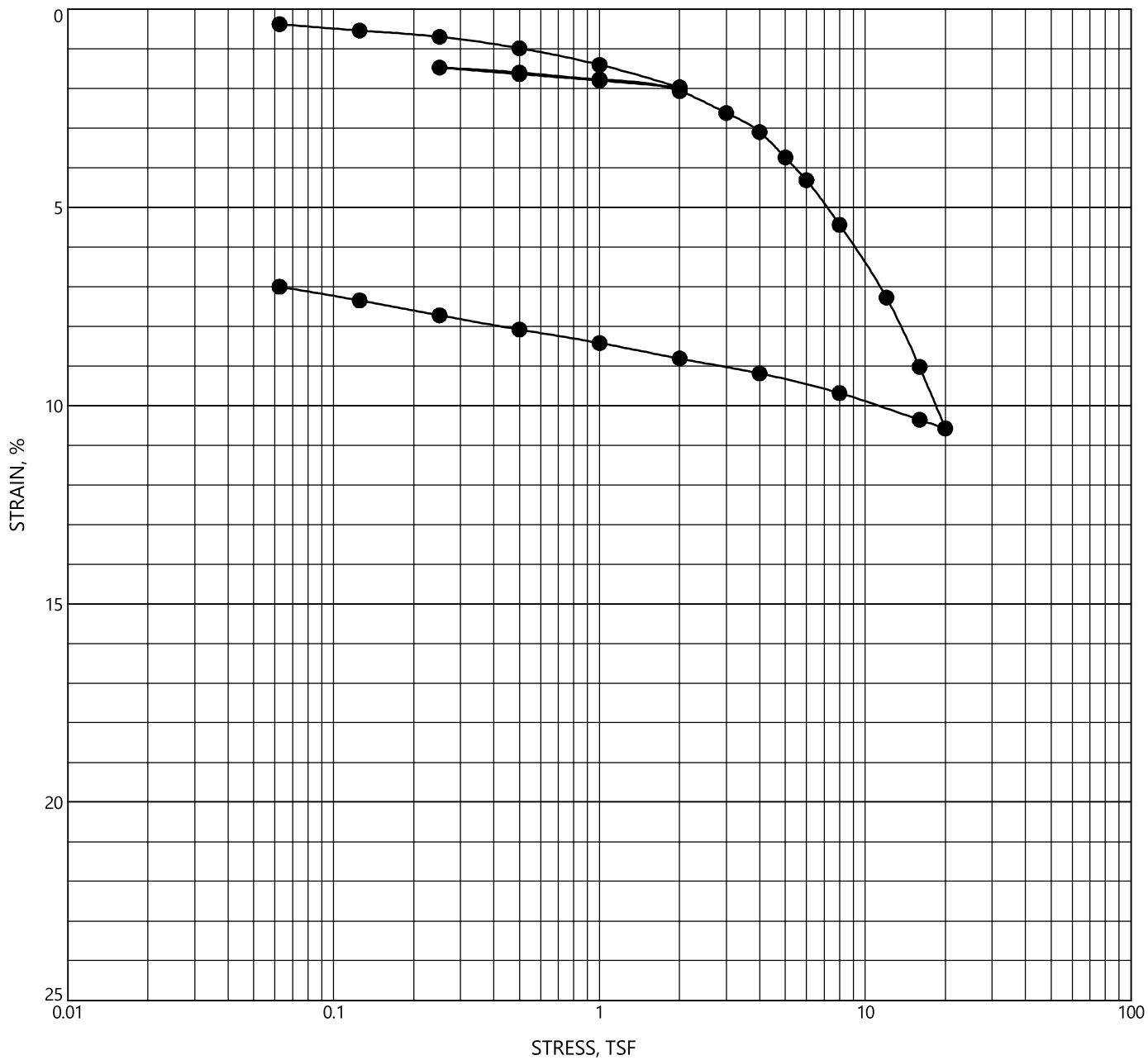
PLASTICITY CHART



					Initial	
	Location	Sample	Depth, ft	Classification	γ_d , pcf	MC, %
●	B-1	S-2	5.3	SILT, trace clay and fine-grained sand, brown mottled dark brown	88	34



CONSOLIDATION TEST



					Initial	
Location	Sample	Depth, ft	Classification		γ_d , pcf	MC, %
● B-2	S-6	16.5	SILT, trace clay and fine-grained sand, brown		82	38



CONSOLIDATION TEST



4105 SE International Way
Suite 505
Milwaukie, OR 97222

T 503.387.3251
TRCcompanies.com

January 7, 2022

Ms. Megan Finch
Construction Project Manager
Beaverton School District
16550 SW Merlo Road
Beaverton, OR 97003

RE: Asbestos Visual Assessment and ROM Abatement Cost Letter Report
Beaverton High School
13000 SW 2nd Street
Beaverton, OR 97005
TRC Project: #455206

Ms. Finch:

TRC Environmental Corporation (TRC) was retained by the Beaverton School District (hereafter referred to as the "Client") to perform a visual assessment and provide rough order of magnitude (ROM) asbestos abatement costs associated with the District's planned demolition project at the aforementioned school.

Visual assessment activities were performed between December 20th and December 23rd, 2021 and included review of prior asbestos documentation and visual confirmation of the building materials currently in place throughout the school. TRC utilized the visual assessment to estimate the quantities of known and assumed asbestos containing materials associated with the building and utilizing estimated unit costs to determine the ROM abatement costs for each identified material.

ROM COST TABLE

Below you will find a list of known and/ or assumed asbestos materials and the associated cost for removal:

ROM Abatement Costs – Beaverton High School					
Material	Estimated Quantity	Assumed	Confirmed	Unit Cost	Abatement Cost
9" x 9" Floor Tile and Mastic	1,000 SF	No	Yes	\$6.00	\$6,000.00
12" x 12" Floor Tile and Glue	80,000 SF	Yes	No	\$6.00	\$480,000.00
Sheet Flooring and Glue	6,500 SF	Yes	No	\$8.00	\$52,000.00
Window Glazing	1,000 LF	Yes	No	\$12.00	\$12,000.00
Tackboard/ Whiteboard/ Chalkboard Glue	20,000 SF	Yes	No	\$2.50	\$50,000.00
Mirror Glue	1,200 SF	Yes	No	\$2.50	\$3,000.00
Wallboard & JC - Walls/Ceilings	68,000 SF	No	Yes	\$2.50	\$170,000.00
Wainscoting	3,000 SF	Yes	No	\$2.50	\$7,500.00
Carpet Glue	12,000 SF	Yes	No	\$2.00	\$24,000.00
12" x 12" Ceiling Tile and Glue	18,000 SF	Yes	No	\$2.00	\$36,000.00
Window Block Glazing	400 LF	Yes	No	\$6.00	\$2,400.00
Fume Hoods	10 Each	Yes	No	\$2,500	\$25,000.00
Auditorium Curtain	2 Each	Yes	No	\$1,500	\$3,000.00



ROM Abatement Costs – Beaverton High School					
Material	Estimated Quantity	Assumed	Confirmed	Unit Cost	Abatement Cost
Sink Undercoat	40 Each	No	Yes	\$100	\$4,000.00
Fire Doors	400 Each	No	No	\$150	\$60,000.00
Gaskets	500 Each	Yes	No	\$30.00	\$15,000.00
Pipe Insulation - Tunnel System	12,000 LF	Yes	No	\$16.00	\$192,000.00
Pipe Insulation - Wall/Ceiling Cavities	8,000 LF	Yes	No	\$16.00	\$128,000.00
Ceramic Tile Wall/Floor Systems	18,000 SF	Yes	No	\$6.00	\$108,000.00
12" x 12" FT - Merle Davies	28,000 SF	Yes		\$6.00	\$168,000.00
Roofing/Material Debris	TBD	No	Yes	TBD	\$100,000.00
Abatement Oversight and Clearances	TBD	No	Yes	TBD	\$150,000.00
Total Estimated ROM Asbestos Abatement Cost					\$1,795,900.00

SF = Square Feet LF = Linear Feet TBD = To Be Determined

CONCLUSIONS AND RECOMMENDATIONS

Based on the visual observations conducted by TRC, all visible known and assumed asbestos containing materials impacting the demolition project were included in the above referenced table. However, TRC did not conduct any sampling activities or destructive investigation, therefore the possibility of hidden materials exists that are not included in the table above.

All identified or assumed asbestos containing materials from this investigation and previous investigations must be removed by a licensed asbestos abatement contractor prior to them being impacted by any demolition activities. Additionally, any materials uncovered during demolition activities that are not addressed in this report or prior reports for the building are considered presumed asbestos containing materials and must be sampled by an accredited asbestos inspector prior to disturbance, or they must be treated as asbestos containing.

DISCLAIMER

The content presented in this report is based on data collected during the site inspection and visual observations, review of pertinent regulations, requirements, guidelines and commonly followed industry standards, and information provided by Client, their clients, agents, and representatives.

The work has been conducted in an objective and unbiased manner and in accordance with generally accepted professional practice for this type of work. TRC believes the data and analysis to be accurate and relevant, but cannot accept responsibility for the accuracy or completeness of available documentation or possible withholding of information of other parties.

Sincerely,

TRC Environmental Corporation



Matthew Cuda
Project Manager



Ron Landolt, CAC
NW Region BSI Practice Manager





TECHNICAL MEMORANDUM (DRAFT)

DATE: October 12, 2021

TO: Megan Finch | Beaverton School District

FROM: Garth Appanaitis | DKS Associates

SUBJECT: BSD Beaverton High School Predesign
Site Transportation Context

Project #21205-000

The purpose of this memorandum is to provide an overview of the transportation system context and constraints to guide site planning and development for Beaverton High School (BHS).

SITE CONTEXT

The Beaverton High School site is located south of Farmington Road and is bisected by Erickson Avenue. TriMet currently provides bus service along Farmington Road (route 52).

TRANSPORTATION SYSTEM PLAN

Beaverton's Transportation System Plan (TSP)¹ was adopted in 2010 and identifies Farmington Road as an arterial and Erickson Avenue as a collector. These designations influence standards such as cross sections and access spacing. The minimum access spacing standard for a collector is 200 feet.

Farmington Road has a minimum access spacing standard of 600 feet. The public street intersections with Erickson Avenue and Cedar Hills Boulevard are separated by approximately 300 feet. The proximity of these intersections and back-to-back left turn storage limits the number of vehicles that can fit into the left turn lane. The left turn queues from these intersections have been observed to spill back into the travel lane. No project is identified in the TSP for this location, however past ideas have included realignment of the roadway(s) to align as a four-legged intersection and widening Farmington Road to allow side by side left turn lanes. Both of these treatments would require significant right of way and cost. Any modification to the

¹ <https://www.beavertonoregon.gov/315/Plans>

Farmington/Cedar Hills Boulevard intersection would also require coordination and approval from ODOT Rail due to the proximity to the rail crossing on Cedar Hills Boulevard.

The TSP identifies the following future transportation projects planned near the site:

- Project 259b: Canyon/Cedar Hills – Add northbound left turn lane and southbound left turn lane.
- Project 570: Erickson Avenue (6th Street to Farmington Road) – Add signing and pavement marking for shared bike lane.
- Project 603: Farmington Road (Murray Boulevard to Scholls Ferry Road) – Access management strategies and Adaptive Signal systems

ACTIVE TRANSPORTATION PLAN

The 2017 Beaverton Active Transportation Plan (ATP)²² identifies additional planned pedestrian and bicycle treatments. The city is currently working to incorporate these elements into the TSP. Farmington Road is identified as a pedestrian parkway since it is major street with transit service. Erickson Avenue does not have an additional pedestrian designation. Both Farmington Road and Erickson Avenue are designated as major bikeways. The ATP identifies a project to add bicycle lanes or buffered bicycle lanes on Farmington Road. No future projects are identified in the ATP for Erickson Avenue.

PRIOR LAND USE PLANNING AND APPROVALS

A 2002 conditional use application for the BHS site included a potential capacity of 2,200 students and 200 staff. Depending on the characteristics of the site rebuild, additional traffic study may be required with a land use application even if the prior capacity is not exceeded.

SUMMARY OF TRANSPORTATION PRINCIPLES

The following transportation considerations should guide future site planning.

- The site is bisected by Erickson Avenue and design will need to consider treatments to provide safe crossing opportunities for pedestrians.

²² <https://www.beavertonoregon.gov/DocumentCenter/View/21012/Recommended-Beaverton-Active-Transportation-Plan---11302017?bidId=>

- Erickson Avenue is designated as a collector roadway and crossing treatments should be coordinated with TVF&R to ensure that they do not impede emergency vehicle response.
- Frontage improvements along Erickson Avenue will need to incorporate bicycle treatments and may require additional design elements to be consistent with current cross section standards. The nature of these treatments will require coordination with City staff.
- Modifications to Farmington Road may be triggered through future study or requested to address existing traffic needs. Due to the proximity to rail and other built constraints, any modifications here may have significant right of way and/or cost impacts.
- Site access to Erickson Avenue will need to address the 200 foot minimum access spacing standard.

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