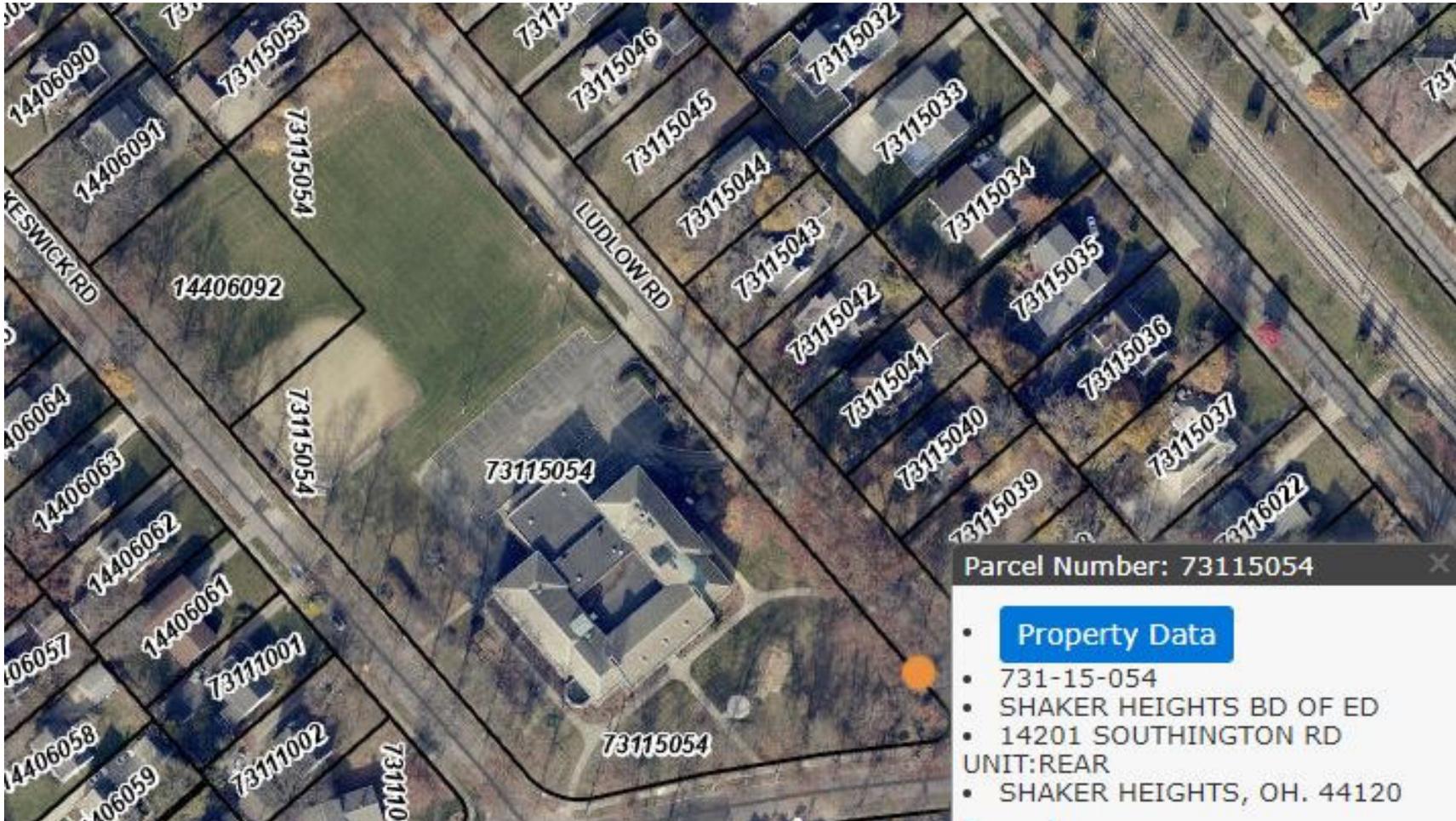


14201 Southington Road

For variances to replace the parking lot, relocate and expand the playground, and enclose the dumpsters and generator.



Parcel Number: 73115054

Property Data

- 731-15-054
- SHAKER HEIGHTS BD OF ED
- 14201 SOUTHINGTON RD
- UNIT:REAR
- SHAKER HEIGHTS, OH. 44120















Applicant's Name: Aaron Rodebaugh Application No: 2261

Property Address: 14201 Southington Road, Shaker Heights, Ohio 44120 Parcel No: 731-15-054

City: Shaker Heights State: Ohio Zip: 44120

Applicant's Address 520 S. Main Street STE 2531 Phone No: 330-572-3520

City: Akron State: Ohio Zip: 44311

Property Owner (if other than applicant) Shaker Heights City School District

Property Owner's Address (if different) 15600 Parkland Drive

City: Shaker Heights State: Ohio Zip: 44120

Zoning District: I - Institutions Present Use: Educational Use: Primary Schools (K-8th grades)

Proposed Use: Educational Use: Primary Schools (K-8th grades)

E-Mail Address: arodebaugh@gpdgroup.com

CHECK INFORMATION ACCOMPANYING THIS APPLICATION

- Site Plan (to scale)
Detail Drawings
Landscape Plan
Narrative Description
Proof of Control (Option Lease Ownership)
Product Information, etc.
Other Descriptions or Materials as Appropriate
Photographs

CHECK SPECIFIC ACTION REQUIRED

BZA

- VARIANCE (requires public hearing)
Sign regulations
Fence Regulations
Height Regulations
Area and Yard Regulations
Off-street Parking

CPC

- Conditional Use Permit (requires public hearing)
Planned Unit Development
Site Plan Review
Resubdivision of Land
Amendment to Zoning Map or Ordinance
Improvements to Public Land
Other:

OTHER APPROVALS

- Appeal
Other:

Summarize special conditions, practical difficulty or hardships imposed on the owner of the premises if strict letter of the ordinance were to be enforced:

See attached letter.

To the best of my knowledge, the foregoing statements in this application are true and correct.

SIGNATURE: [Handwritten Signature]

DATE: 06/13/2024



NOTICE OF PUBLIC HEARING

Notice is hereby given that application is being made by Aaron Rodebaugh, GPD Group, on behalf of the Shaker Heights City School District, Ludlow School, 14201 Southington Road, to the Board of Zoning Appeals for variances in order to replace the parking lot, relocate and expand the playground, and enclose the dumpsters and generator as part of the renovation of the building into a district-wide pre-school. The site work includes expansion of the parking lot and relocation of the playground to the Keswick Road front yard. The applicant proposes to locate two playground structures in the Keswick Road front yard, set back 17 feet from the sidewalk. Code allows recreational structures in the rear yard only set back 25 feet. A brick retaining wall between 2 and 3.5 feet tall with a 3-foot tall aluminum ornamental fence on top of it will border the playground along the Keswick sidewalk. The wall plus the fence is 5 and 6.5 ft above the sidewalk level. The fence and wall are proposed to be set back between 3 and 8 feet from the Keswick Road sidewalk at its closest. Code requires a 33-foot front yard setback for a fence and a maximum 4-foot high fence. The parking lot is proposed with two interior landscape islands that are 4 feet wide with low grow sumac bushes. Code requires interior parking lot landscape islands to be at least 7 feet wide and contain a shade tree. Dumpsters and a generator are proposed to be enclosed with an 8-foot tall brick screen wall and located in the Ludlow front yard setback 20 feet from the Ludlow Road sidewalk. Code allows dumpsters and generators only in the rear yard. Walls are not allowed to be over 4 feet tall and must be set back 33 feet in the front yard.

The Board of Zoning Appeals will hold a Public Hearing on said application on **Tuesday, July 2, 2024 at 7:00 p.m.** in City Hall, 3400 Lee Road, Council Chambers, with an option to attend virtually. Please see the note below in regard to being heard with respect to this application.

Plans are available for public review online at <https://www.shakerheightsoh.gov/AgendaCenter>. In addition, a complete meeting packet is posted at the latest the Friday before the meeting date.

Dan Feinstein
Secretary
Board of Zoning Appeals

To request an accommodation for a person with disability, call the City's ADA Coordinator at 216/491-1440, or Ohio Relay Service at 711 for TTY users.

Join the Zoom meeting from a PC, Mac, iPad, iPhone or Android device. Join online to listen and watch at <https://zoom.us/j/99656786876?pwd=OU53V016QnNpeVFYR1k0aHQxc0pMQT09>, Password: 33553400; or join by phone to listen at 833-548-0282 (toll free); Webinar ID: 996 5678 6876, Password: 33553400.

This meeting will be held in-person at City Hall, Council Chambers, with an option to attend virtually, pursuant to Chapters 113 and 115 of the Codified Ordinances.

CITY OF SHAKER HEIGHTS | *Planning*

3400 Lee Road Shaker Heights, Ohio 44120 P 216.491.1430 F 216.491.1431 Ohio Relay Service 711

www.shakerheightsoh.gov www.shaker.life



Public comment will be taken during the meeting and residents may submit comments/questions regarding items on the agenda at least 6 hours in advance of the meeting by emailing Daniel Feinstein at daniel.feinstein@shakerheightsoh.gov; or by calling (216) 491-1435. Any comments, or a summary of the comments if lengthy, or questions received before the meeting will be entered into the record at the meeting. The video of the meeting will be available on the City's [website](#).

**The City of Shaker Heights
Board of Zoning Appeals and City Planning Commission**

STAFF REPORT

ADDRESS:

14201 Southington Road
Ludlow School
Case#: 2261

HEARING DATE:

July 2, 2024

SUMMARY:

Variations in order to relocate the playground and consolidate the trash and utilities as part of the renovation of the school into a district wide pre-school.

STAFF POSITION:

- Staff suggests continuation with the following comments:
 - Relocate and redesign the playground, grade and retaining walls due to impact on the mature Keswick Road street trees.
 - Confirm the critical root zone location for the Keswick street trees. Provide an independent arborist report of the street tree impact.
 - The tree preservation plan does not adequately show tree preservation fencing, practices or other techniques to save the mature street trees from construction impact.
 - Add tree protection fencing to be erected on site to protect any street trees prior to construction.

ACTION:

- Variance to the location and front yard setback for recreational playground structures in the Keswick Road front yard to allow a playground located 17 feet behind the sidewalk, when 25 feet is required and rear yard locations are required.
- Variance to the height and location of walls and fences for a retaining wall and fence in the Keswick Road front yard to allow a maximum height of 6.5 feet where 4 feet in allowed and to allow a setback of 3 feet at the closest location where a 33 foot setback is required.
- Variance to the location of dumpsters and a generator to be in the Ludlow Road front yard, where a rear yard location is required.
- Variance to the wall height and location for an 8-foot tall brick wall around the dumpsters and generator, where a 4 foot tall wall and a 33 foot setback is required.

FACTS:

1. The applicant proposes to locate two playground structures in the Keswick Road front yard set back 17 feet from the sidewalk.
2. Code allows recreational structures in the rear yard only set back 25 feet.
3. A brick retaining wall between 2 and 3.5 feet tall with a 3-foot tall aluminum ornamental fence on top of it will border the playground along the Keswick sidewalk.
4. The wall plus the fence is 5 and 6.5 ft above the sidewalk level. The fence and wall are proposed to be set back between 3 and 8 feet from the Keswick Road sidewalk at its closest.
5. Code requires a 33-foot front yard setback for a fence and a maximum 4 foot high fence.

**The City of Shaker Heights
Board of Zoning Appeals and City Planning Commission**

STAFF REPORT

**Continued
ADDRESS:**

14201 Southington Road
Ludlow School
Case#: 2261

HEARING DATE:

July 2, 2024

FACTS (continued):

6. Dumpsters and a generator are proposed to be enclosed with an 8 foot tall brick screen wall and located in the Ludlow front yard setback 20 feet from the Ludlow Road sidewalk.
7. Code allows dumpsters and generators only in the rear yard.
8. Walls are not allowed to be over 4 feet tall and must be set back 33 feet in the front yard.

CODE SECTIONS:

1. 1262.01 C – Accessory structures are allowed in the rear yard only.
2. 1240.08 – The front yard building setback is 50 feet on Ludlow and Keswick Roads.
3. 1262.05 D – Front yard fences and walls must be set back two thirds of the front yard (33 feet) and no taller than 4 feet tall.
4. 1262.05D – Fence height is measured from finished grade.
5. 1211.01 – Finished and average grade is the average of the high and lot final grade on site.
6. 1240.08 – A minimum 25 foot landscape yard is required around an institutional use.
7. 1253.08 C – Two interior parking lot islands with landscaping and trees are required in this case.
8. 1253.09 – Dumpsters and generators can only be in the rear yard and screened by a solid brick wall if visible.
9. 1253.04B – Tree preservation plan to preserve existing trees and replace any removed trees. A plan has been submitted to replace removed trees.
10. 1253.07 D – Street trees should be provided every 40 feet.
11. 1213.06E – Site plan review standards including relation to plans, parking, landscaping, buffering, location of uses.

OTHER ISSUES:

1. Formal site plan review by the CPC is not required for this project since the entry additions equal less than 1,000 sq ft and 2,500 sq ft is required for formal review.
2. That said, the site plan review standards in Section 1213.06E can be considered during the review of the site as it relates to the various variances being requested.
3. Those site plan review standards include:
 - a. Relationship to the site plan and adopted land use policy;
 - b. Parking layout including sufficient parking including on street parking, minimizing dangerous traffic, appropriate driveways while maintaining city design standards;
 - c. Landscaping including maintaining existing trees, screening unsightly activities, breaking up large expanses of asphalt, aesthetically pleasing landscape that can survive the site climate conditions.
4. A tree preservation plan has been submitted that replaces the several one site trees that are proposed to be removed. That plan does not adequately show tree preservation fencing, practices or other techniques to save the mature street trees from construction impact.

**The City of Shaker Heights
Board of Zoning Appeals and City Planning Commission**

STAFF REPORT

**Continued
ADDRESS:**

14201 Southington Road
Ludlow School
Case#: 2261

HEARING DATE:

July 2, 2024

OTHER ISSUES: (continued)

5. The City's Forester has evaluated the street tree impacts and determines the playground and retaining wall will significantly impact the street trees. See comments in the packet.
6. The holly shrubs proposed in the plan need to be evaluated for potential berry production as the fruits can be harmful if ingested.
7. Site plan review by the City Planning Commission is required for new buildings or additions of 2,500 sq ft or more. The proposed entry additions are less than 1,000 sq ft combined so site plan review is reviewed by the zoning administrator.
8. The existing smaller playground area is proposed to be replaced and relocated to the Keswick Road yard with a pre-school size playground and a neighborhood playground sized for 5 to 12 year olds.
9. The playground is proposed to be at the upper lawn level for most of the Keswick Road yard. This necessitates a 2-3.5 foot tall brick retaining wall around the playground that is 3 to 8 feet from the Keswick Road sidewalk. The wall and foundation will impact the Keswick mature street trees critical root zone.
10. Questions and corrections have been raised of the street tree sizes and the appropriate critical root zone calculation.
11. The brick wall around the dumpster and generator is 8-feet tall in order to hide an estimated 9 foot tall generator.
12. The existing brick gas house is set back 30 feet from Ludlow and is 8-9 feet tall with landscaping softening it from the street view.
13. The parking lot entries will remain in the same location and width in order to minimize street tree disturbance along Ludlow Road.
14. The proposed 27 parking spaces on site in addition to abundant on-street parking spaces meets code. The number of on-site paces is reduced from 33 to 27.
15. The parking lot interior landscape islands have been revised to be code conforming width and have shade trees.
16. A new accessible and secure entry addition is proposed on the northeast corner of the building facing the parking lot.
17. The Architectural Board of Review reviewed two entry additions at their June 3, 2024 meeting with several comments and continued the case. Revised plans will be reviewed at their July 1, 2024 meeting.

PRECEDENT:

1. Ludlow School – Existing playground variance to be 47 feet behind the Keswick sidewalk.
2. Ludlow School – Learning Garden with fence variance to be setback 25 feet from the Keswick sidewalk.
3. Fernway School – 17420 Fernway Road – Playground and parking lot and dumpster location variances.
4. Lomond School – Learning garden including a shade structure variance to be in the Strandhill front yard 9 feet off the sidewalk.

**The City of Shaker Heights
Board of Zoning Appeals and City Planning Commission**

STAFF REPORT

**Continued
ADDRESS:**

14201 Southington Road
Ludlow School
Case#: 2261

HEARING DATE:

July 2, 2024

PRECEDENT:

5. Shaker Heights High School – 15911 Aldersyde Driver – Front entry addition and parking lot with landscaping.
6. Hathaway Brown – 19600 North Park Boulevard – Parking lot expansions, an accessory building, classroom and natatorium additions, plus new fencing over the last several years.
7. Shaker Heights High School – 15911 Aldersyde Drive – North gymnasium addition with parking, landscaping and setback variances.
8. University School – 20701 Brantley Road – New tennis courts, a storage structure, parking lot and landscape changes.
9. Laurel School – 1 Lyman Circle – Library, classroom additions, and playground over several years.
10. South Park Row – South Park Boulevard – development does not have a S Park sidewalk in order to protect existing street trees.

Dan,

I measured to the trees to verify the sizes and Mr. Dryfess Wells measurements are accurate. The next step I took was to assess the trees. Most are in very good condition and require some minor pruning to remove dead limbs. I did note that tree J, Y and AA are declining. Tree J may be removed later this year while trees Y and AA are nearly half dead and will be scheduled for removal within the next few weeks. Knowing that the intent of this project is to install a footer and a masonry wall along the right of way I looked at what the impact would be to the tree lawn trees.

The trees along Keswick Road have an average diameter of +/- 30 inches at 4.5 feet. This the standard measurement height above the ground. Dr. Kim D. Coder has researched and published papers identifying two important areas when assessing tree root damage and construction. The first is "Critical Rooting Distance to Minimize Tree Damage" and the second is "Structural Critical Rooting Distance to Minimize Catastrophic Tree Failure". The following is a summary of what these terms mean.

Critical Rooting Distance to Minimize Tree Damage: The average size of the trees along Keswick are 30 inch diameter. Dr. Coder's research indicates that a tree that size should not have work take place within a 38 foot radius of the trees trunk. Work within this area will impact the trees health.

Structural Critical Rooting Distance to Minimize Catastrophic Tree Failure: Again, the average tree size is 30 inch diameter and I referred to Dr. Coder's research for catastrophic tree failure. Catastrophic tree failure means the probability of a tree uprooting due to construction damage. Based upon research Dr. Coder completed, digging within ten feet of a 30 inch diameter tree can destroy or damage structural roots. It is a fact that the bulk of tree roots are within the first 18 inches of soil and excavating a trench parallel with the trees to create a footer would sever or damage many of the roots supporting these trees.

The creation of this playground area will disrupt an estimated +/- 40% of each trees roots system and adversely affect the oak trees along Keswick. In my experience, I would expect the trees to fail within one to three years and there would be a strong possibility of tree uprooting.

Feel free to contact me with any other questions.

Thanks,

Please note: The City of Shaker Heights is changing its website and email addresses effective December 31. My new email is charles.orkowski@shakerheightsoh.gov and the website address is shakerheightsoh.gov.

Charles Orłowski
Assistant Director of Public Works
City of Shaker Heights
15600 Chagrin Boulevard
Shaker Heights, OH 44120
O 216.491.1490
shakerheightsoh.gov
[Stay Connected to the City of Shaker Heights](#)

TOOL #3:

CRITICAL ROOTING DISTANCE TO MINIMIZE TREE DAMAGE

Root colonization area and limit of disruption based upon tree diameter at 4.5 feet above the ground (DBH). Do not trespass or work closer to the tree trunk than the critical rooting distance. (Table values calculated using 920ft² of biologically healthy soil area per square foot of tree cross-section).

TREE DIAMETER (inches)	CRITICAL ROOTING DISTANCE (feet of radius)	TREE DIAMETER (inches)	CRITICAL ROOTING DISTANCE (feet of radius)
1	1.25	26	33
2	2.5	27	34
3	4	28	35
4	5	29	36
5	6	30	38
6	9		
7	9	31	39
8	10	32	40
9	11	33	41
10	13	34	43
		35	44
11	14	36	45
12	15	37	46
13	16	38	48
14	18	39	49
15	19	40	50
16	20		
17	21	45	56
18	23	50	63
19	24	55	69
20	25	60	75
		65	81
21	26	70	88
22	28	75	94
23	29	80	100
24	30	85	106
25	31	90	113
		95	119
		100	125

TOOL #8: STRUCTURAL CRITICAL ROOTING DISTANCE TO MINIMIZE CATASTROPHIC TREE FAILURE

Root plate size (i.e. pedestal roots, zone of rapid taper area, and roots under compression) and limit of disruption based upon tree diameter at 4.5 feet above the ground (DBH). Significant risk of catastrophic tree failure exists if structural roots within this given radius are destroyed or severely damaged.

TREE DIAMETER (inches)	STRUCTURAL CRITICAL ROOTING DISTANCE (feet of radius)	TREE DIAMETER (inches)	STRUCTURAL CRITICAL ROOTING DISTANCE (feet of radius)
1	1	26	10
2	2	27	10
3	2	28	10
4	3	29	10
5	3	30	10
6	4		
7	4	31	10
8	5	32	10
9	5	33	10
10	6	34	10
		35	10
11	6	36	10
12	7	37	11
13	7	38	11
14	7	39	11
15	8	40	11
16	8		
17	8	45	11
18	8	50	12
19	9	55	12
20	9	60	13
		65	13
21	9	70	14
22	9	75	14
23	9	80	15
24	10	85	15
25	10	90	16
		95	16
		100	16

Architectural Board of Review Minutes
Monday, June 3, 2024
8 A.M.
Via Conference - Zoom

Members Present: Sandra Madison, Chair
Hans Walter, Vice-Chair
James Neville, Member
Kevin Kennedy, Alternate Member

ABR24-000052 – 14201 Southington Road – Preliminary Review: Ludlow School Entrance.

Aaron Rodebaugh, GPD Group, described the renovation and entry addition project at Ludlow School to enable its conversion into the District's pre-school building. The site plan and parking lot are designed to accommodate parent drop off. There are two playgrounds proposed. The ballfields remain. A new entry on the north corner of the building is proposed. They need to create an accessible, secure main entry at this location. The front entry of the building was considered to be redesigned. The proposed new entry is much more feasible and the best option. He described the entry design and entry into the building and gym on the inside. Another small storage addition and accessible entry are proposed on the other side of the gym.

Mr. Neville said the overall school building's existing architectural features were to be included in the design plans. The correct brick, trim, and window details should inform the addition design and allow appropriate design review. He questioned the exterior stair location and suggested interior stairs.

Mr. Rodebaugh said there is not enough space inside the entry to provide interior stairs and a ramp, especially with the existing multiple interior doorways.

Mr. Kennedy said the window size, location, architectural design and mullion patterns do not go with the existing building design. The canopy design looks retail, not institutional and needs to be restudied. The stairs should be less steep especially for preschoolers.

Mr. Neville said the entry design needs additional study. The existing front entry design could inform the design of this entry.

Mr. Kennedy agreed with the direction. The storage addition entry door needs to be de-emphasized.

Mr. Neville said the proportions and details of the entry need to work with the building. There was general discussion of the steps, ramp and walls.

Mr. Kennedy and Mr. Neville agreed the ramp wall was imposing and could be reduced in massing. The window removal in the front, in classroom 105 was discussed. It was suggested to replace these small windows and that this window size might inform the new window size and design proposed for the office wall.

A preliminary review was held with the following comments: 1) The new entry addition facade should be studied to better relate to the existing building. The existing front entry verticality and stone trim should inform the redesign; 2) The entry addition feels shoved into the corner of the building. Understanding it needs to be there, study how to successfully locate the form and design into the building architecture; 3) The entry addition should be studied to create a separation to the existing building; 4) The entry canopy looks like a retail solution. Study another canopy design; 5) The steps should be studied and maybe reconfigured to allow more space to lower the rise and lengthen the step tread to better accommodate pre-school age children; 6) The Ludlow facing window in the entry addition should relate to the other fenestration on the building; 7) Any arch top forms used in the design should match the existing arch top form design on the building; 8) The small windows on the front elevation that are proposed to be infilled should be studied, suggestion to replace the windows; 9) The storage room addition entrance should be de-emphasized; 10) The masonry wall around the ramp is large and tall. Redesign it to be at least partially, a more open view to the street; 11) The existing building elevation plans need to include the accurate brick and window details on the building to better enable a full design review; 12) The proposed window grid pattern should coordinate with the existing building fenestration.



June 26, 2024
2023197.01

Dan Feinstein
Senior Planner, Zoning Administrator
Shaker Heights Board of Zoning Appeals and City Planning Commission
3400 Lee Road
Shaker Heights, Ohio 44120

Shaker Heights Ludlow School – Pre K Renovation Variance Request

Dear Mr. Feinstein,

I am writing to submit an application and variance request for the renovation project at Ludlow School, situated at 14201 Southington Road, Shaker Heights, Ohio 44120. Our proposal includes mechanical, electrical, and interior renovations to the interior of the existing Ludlow School Building.

Central to our plan is a new ADA compliant 400 sf entry addition proposed at the northwest corner of the existing façade. This new entry addition will re-orient the main entry of the building adjacent to the rear parking lot and provide a safe and secure single access point into the building for students, parents and visitors. Facing the new entry in this location enables parents to loop the parking lot and safely drop off their children at the front door, preventing the need for 3–5-year-olds to pass thru traffic.

Additionally, a new 366 sf ramp and outdoor storage addition is proposed for the southwest corner of the building. The ramp is designed to allow access for deliveries, provide another ADA accessible egress point, and provide direct access for children to the fenced playground. Due to height limitations within the existing building both of these additions require exterior ramps to access the building.

Working with the school district to understand the needs of the PreK program, meeting with various Shaker groups such as the School Board, school staff, the Ludlow Community Association, and Facility Advisory Committee as well as conducting an eco-charette and landscape-charette, formed specific design decisions for the site. A few of these decisions, resultant from this collaboration, have been listed below.

-Maintain the existing baseball field and soccer field: The Ludlow Community Association expressed desire to maintain the existing baseball and soccer fields located behind the school. These fields are used and heavily dependent upon by the neighbors. It was decided early in the project that these fields would not be disturbed.

-Community Playground: The Ludlow Community uses the existing playground and would like to continue to use this feature after the building renovations. Since the needs of a PreK playground are specific to small children between the ages of 3-5, a second playground to accommodate the size of older children is proposed. This older playground is best suited closer to the ballfields so that parents can monitor children while on the fields.

-On site parking: The district has expressed the need to make sure that staff and visitors have direct access to the building from the parking lot. The building will have approximately 24 staff members that will utilize the parking lot. 27 parking spaces were calculated as required per the zoning code, 2 of which will be handicap accessible. Also, on-street parking could cause constriction on the street during pick-up and drop-off times.

-Native and maintainable vegetation: Plants were selected to fulfill the community's desire for a native landscape, while choosing resilient and low-maintenance species to facilitate easy upkeep by the school district. During a community charette, criteria for plant selection was presented, and feedback was sought regarding species that will thrive in the Shaker Heights microclimate. Criteria included fruitless and thornless plants, plants that had multi-seasonal qualities as schools are only in session from Aug-May, and plants that are slow growing or required less maintenance. This input was then analyzed and utilized in the selection of plant materials for the site.

-Dumpster/Utility Enclosure Location: An enclosure for the dumpster, transformer, and generator is proposed on the Ludlow lawn. This enclosure will replace the existing gas house which is being demolished. The enclosure was proposed closer to the playgrounds initially but was moved due to the risk of drawing bees near the play areas. The current location gives immediate access to the existing parking lot for trash pickup plus provides direct access to the main electrical room for the generator and transformer. The size and height of the enclosure has been determined by the clearances required for the dumpster, transformer and generator. The height of the enclosure will be 8'-0" tall to shield the height of the transformer.

GPD would like to seek the following variances on behalf of the Shaker Heights City School district:

1262.01C.1 Setbacks for Accessory Structures/Accessory Structures Permitted in the Rear Yard Only

The Ludlow School Building is surrounded on three sides by Ludlow Rd (north), Southington Road (east) and Keswick Road (south). The west end of the site abuts residences. Each side of the building is considered a front yard and there is no rear yard in which to place the play structures.

Due to these restrictions, we are requesting that the play structures be located as shown per the civil drawings, on the Keswick side of the building.

1262.13 Recreational Structures: Recreational Structures such as children's play equipment, tennis courts and other recreational facilities requiring special fencing or playing courts shall be located no closer than ten (10) feet to a property line, or twenty-five (25) feet for playground equipment accessory to a school or located in the I Institutional District or PR Park and Recreation District. Such setback shall consist of landscaping pursuant to Chapter 1253, Landscaping and Screening Regulations, and to be approved by the Zoning Administrator. Such uses shall have a maximum height of fifteen (15) feet.

Due to the required clearances around the play structures, plus the desire of the Ludlow Community to have a separate playground that meets the needs of older children, meeting the required setback of 25' is not obtainable with the space available in this area. Proper clearances around the play structures provide adequate fall protection and can not be restricted. The district has also asked that there be substantial free space for the children to run while safely enclosed by the building and fencing. The playground structures have been set as close to the building as feasible. Per Site Plan C-111, the playground structures as designed are 17.8' away from the R/W.

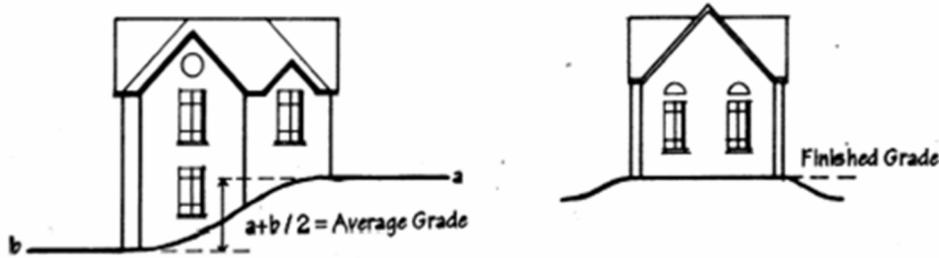
In light of the required playground clearances, we are requesting that the play structures be located per the civil drawings.

Table 1262.05D Summary of Fence Regulation:

This chart requires that fences in front yards can be 4 feet tall and must set back 2/3 of the required front yard setback. This means that the playground fence and retaining wall located on Keswick would need to set back 33 ft from the R/W.

The retaining wall will be composed of masonry and clad with brick to match the facade of the existing Ludlow Building. A 3'-6" ornamental fence will sit on top of the retaining wall to provide fall protection as required per the Ohio Building Code. The retaining wall height, which comprises of the masonry wall plus the ornamental fence, will have maximum elevations as shown on sheet C-121. These heights have been determined using the formula provided under the definition of Finished Grade (1211.02).

Grade, Finished The elevation of the finished surface of the ground adjoining the Building after final grading and normal settlement.



As noted previously, the size requirements necessary for the playground structures encroach on the required setbacks for play structures as well as the fencing required for the playgrounds. We are requesting that the fence and retaining wall height and location be as noted per the civil drawings.

1253.09A4 Screening of Outdoor Storage and Waste Disposal Facilities

Except as otherwise provided below, permitted outdoor storage and waste disposal facilities shall be located in the rear yard only and shall require screening when adjacent to a residential lot or visible from a public street. Such uses shall be completely surrounded by a solid brick wall, with a solid gate, that is a minimum of six (6) feet in height.

Currently, the dumpster at Ludlow is located on the north side of the building along Ludlow Rd. It is not enclosed but has some vegetation surrounding it to conceal it from Ludlow Road. The proposed trash/utility enclosure will be placed in the same location as the existing on-site dumpster and gas house. Because the Ludlow School Building is surrounded on three sides by Ludlow Rd (north), Southington Road (east) and Keswick Road (south), there is no rear yard to place this structure. The west end of the site abuts residences. Each side of the building is considered a front yard.

The generator and transformer required for the renovation work will be housed in the same enclosure as the dumpster to economize the use of this space. This location is also ideal for the generator and transformer because it places them near the Main Electrical Room inside the building.

The walls of the enclosure will be constructed out of masonry with solid gates. The brick walls will match the brick of the existing building and will be capped with limestone. The walls will extend 8'-0" above grade in order to hide the transformer and generator. See attached section provided on sheet A-304.

The enclosure will be screened by columnar Canadian hemlock, yellow-twig dogwood and inkberry shrubs.

We are requesting that the dumpster/equipment enclosure be located in the front yard on the Ludlow side of the building, as shown on the civil plans.

Tree Preservation Plan:

A tree preservation plan has been provided on L-101. Two trees in the playground area and 1 tree near the dumpster/utility enclosure are to be removed. Replacement trees (4" cal.) are provided.

Generally, impact to a tree’s critical root zone (CRZ) shall be 25 percent or less to reduce the chance of loss. The commonly accepted method to calculate CRZ is the radius equal to one foot for every inch of diameter breast height. This definition is typical among most municipalities such as Copley Township and Dublin, Ohio, jurisdictions we currently have projects in. Additionally, the presence of a sidewalk to the east of the trees has likely hindered the root growth on this side compared to an open lawn area. We assume the following impact to each tree’s CRZ:

- Tree A, 2%
- Tree B, 14%
- Tree C, 17%
- Tree D, 23%
- Tree E, 24%
- Tree F, 14%
- Tree I, 5%
- Tree J, 20%
- Tree K, 19%

Parking Counts:

Table 1251.02. Schedule of Off-Street Parking Requirements

EDUCATIONAL USES

A. Primary Schools (K-8th grades)

1. One (1) space per employee plus one (1) visitor’s space per each seventy-five (75) students.

REQUIRED PARKING

of Staff + # of Students/75

24 + [216/75]=27 required parking

1251.07 MOBILITY IMPAIRED ACCESSIBLE SPACES.

Total Off-Street Parking Req.	Min. Accessible Parking Spaces
26 to 50	<u>2</u>

Accessible Spaces Required	Van Accessible Spaces Req.
1 to 8	<u>1</u>

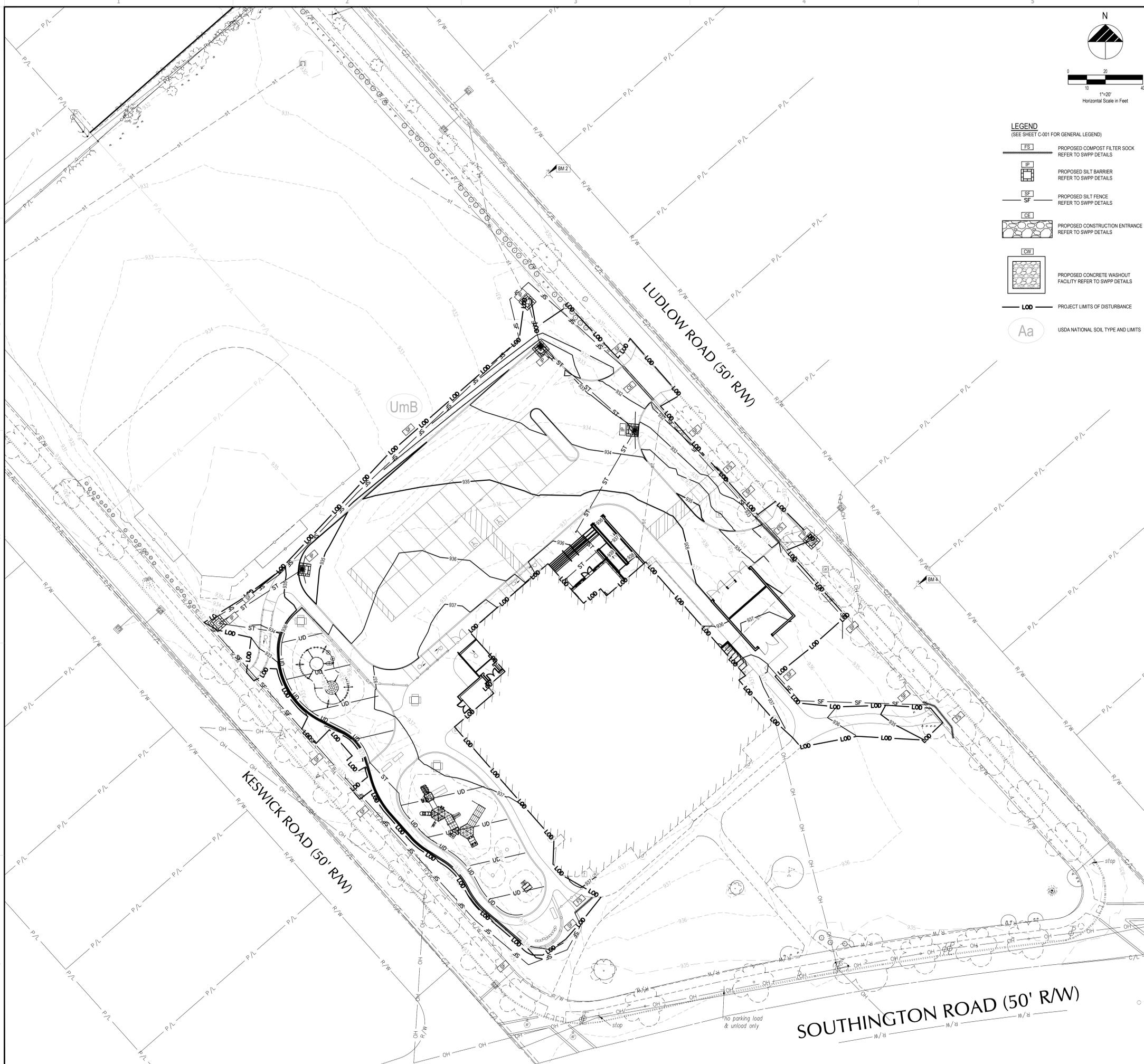
We are confident that implementing these design choices will result in a renovation project that fosters a rich education experience for students and strengthens the community’s connection with the site.

Sincerely,

GPD Group

Tamisha Lawson
Assoc. Design Manager

Drawing Name: C:\2023\2023197 Shaker Hgts01 Ludlow PKA_Working Files\00_ (software Version Year)
 CAD/CADD/Sheet/2023197 SWPP Plan.dwg
 Date: 6/1/2023 12:29:41 PM
 Author: [redacted]



- ### CONSTRUCTION SEQUENCE
- DURING PRECONSTRUCTION MEETING ALL EROSION & SEDIMENT CONTROL FACILITIES & PROCEDURES SHALL BE DISCUSSED. A GENERAL CONSTRUCTION SEQUENCE FOLLOWS AND MAY NEED TO BE UPDATED BY THE CONTRACTOR TO SUIT THE SPECIFICS OF THE SITE AND INTENDED CONTRACTOR SPECIFIC SEQUENCING.
 - INSTALL CONSTRUCTION ENTRANCE AS DETAILED ON PLANS. TEMPORARY CONSTRUCTION FENCING SHALL BE INSTALLED AROUND PERIMETER OF CONSTRUCTION SITE. WHERE THERE IS EXISTING FENCE ALONG THE PERIMETER OF THE SITE, IT CAN BE UTILIZED. FENCING SHALL BE USED TO RESTRICT OUTSIDE TRAFFIC TO SITE. DELIVER CONSTRUCTION TRAILER TO SITE AND INSTALL TEMPORARY POWER AND TELEPHONE, IF REQUIRED. TEMPORARY UTILITY SERVICES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
 - STAKE AND/OR FLAG LIMITS OF CLEARING.
 - INSTALL SILT PERIMETER CONTROLS AS SHOWN ON PLANS. SILT PERIMETER CONTROLS SHALL BE INSTALLED LEVEL, ALONG THE CONTOURS, WITH ENDS TURNED UPSLOPE TO PREVENT CONCENTRATED FLOW AT THE SILT PERIMETER CONTROLS.
 - INSTALL TEMPORARY SILT INLET PROTECTION ON ALL EXISTING CATCH BASINS AND INLETS AS DESIGNATED IN THE PLANS. REMOVAL OF SILT INLET PROTECTION FROM DESIGNATED INLETS CAN ONLY OCCUR WHEN A STRUCTURE IS REMOVED, AND AS REQUIRED BY THE PROGRESSION OF THE DEMOLITION AND CONSTRUCTION.
 - CLEAR & GRUB THE REMAINING SITE AS NECESSARY. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR REUSE, OR REMOVED TO AN APPROVED OFFSITE SPOIL AREA. UTILIZE DUST CONTROL MEASURES AS REQUIRED TO MINIMIZE AIR-BORNE POLLUTION, BY METHODS APPROVED BY THE AUTHORIZING EPA OFFICE.
 - BEGIN FILLING & GRADING AS REQUIRED TO REACH SUBGRADE.
 - ONCE PAVEMENT GRADES HAVE BEEN ESTABLISHED, AS DESIGNATED ON THE PLANS, THE CONTRACTOR SHALL UTILIZE THESE AREAS FOR STRUCTURE CONSTRUCTION.
 - CONSTRUCT UNDERGROUND UTILITY WORK INCLUDING STORM DRAINAGE FACILITIES. UPON INSTALLATION OF STORM DRAINAGE CATCH BASINS, YARD DRAINS AND INLETS, INSTALL REQUIRED SILT INLET PROTECTION.
 - DO NOT REPLACE ANY TOPSOIL, SEED OR INSTALL FINAL PAVEMENT PRIOR TO COMPLETION OF BUILDING SHELL. SHOULD SITEWORK BE COMPLETED PRIOR TO THIS DATE, MULCH DISTURBED AREAS TO BE PLANTED AND INSTALL STONE SUBBASE IN DISTURBED AREAS TO BE PAVED.
 - FOLLOWING COMPLETION OF BUILDING SHELL AND PAVEMENT INSTALLATION, BEGIN LANDSCAPE INSTALLATION.
 - COMPLETE SITEWORK, PAVEMENT MARKINGS AND FINAL CLEAN-UP. RESEED ANY AREAS THAT MAY REQUIRE ATTENTION IMMEDIATELY. NOTE THAT LAWN AREAS WILL NOT BE DEEMED STABLE UNTIL A MINIMUM 80% VEGETATIVE DENSITY HAS BEEN ACHIEVED.
 - MAINTAIN EROSION & SEDIMENTATION CONTROL MEASURES UNTIL THE SITE HAS BEEN COMPLETELY STABILIZED. ALL AREAS OF VEGETATIVE SURFACE, WHETHER PERMANENT OR TEMPORARY, SHALL BE CONSIDERED TO BE IN PLACE AND FUNCTIONAL WHEN THE REQUIRED UNIFORM RATE OF COVERAGE (80%) IS OBTAINED.
 - REMOVE SEDIMENT CONTROLS.

- ### LEGEND
- (SEE SHEET C-001 FOR GENERAL LEGEND)
- FS PROPOSED COMPOST FILTER SOCK REFER TO SWPP DETAILS
 - IP PROPOSED SILT BARRIER REFER TO SWPP DETAILS
 - SF PROPOSED SILT FENCE REFER TO SWPP DETAILS
 - CE PROPOSED CONSTRUCTION ENTRANCE REFER TO SWPP DETAILS
 - CW PROPOSED CONCRETE WASHOUT FACILITY REFER TO SWPP DETAILS
 - LOD PROJECT LIMITS OF DISTURBANCE
 - Aa USDA NATIONAL SOIL TYPE AND LIMITS

PROJECT DESCRIPTION

THIS SITE IS HOME TO THE LUDLOW SCHOOL BUILDING. ON THE SITE, ALONG WITH THE BUILDING, IS A PARKING LOT, SPORTS FIELDS, PLAYGROUND EQUIPMENT, CONCRETE SIDEWALKS, AND GRASS AREAS WITH TREES. THE SITE IS UNDERGOING A RENOVATION TO ACCOMMODATE AN EXPANDED PRE-K PROGRAM. THE RENOVATION TO THE BUILDING INCLUDES UPGRADES WITHIN THE WALLS AND TWO ADDITIONAL ENTRYWAYS THAT WILL PROVIDE ADA ACCESS FROM THE PARKING LOT AND MORE FUNCTIONALITY. THE CURRENT PLAYGROUND AREA IS BEING UPGRADED AND EXPANDED. THE PARKING LOT IS BEING RECONFIGURED TO SUPPORT THE ADDITIONS AND PROVIDE BETTER ACCESS AND MOVEMENT. THE PROPOSED WORK INCLUDES ASPHALT PAVEMENT, CONCRETE SIDEWALKS AND PAVEMENT, CONCRETE STAIRS, ADA ACCESSIBLE RAMPS, AND NEW STORM MANAGEMENT SYSTEM.

PROJECT COMPLETION STATISTICS

PARCEL SIZE:	3.60 ACRES
TOTAL DISTURBED AREA:	1.10 ACRES
EXISTING LAND USE FOR THE SITE IS A PRE-K SCHOOL FACILITY.	
ESTIMATED PRE-CONSTRUCTION IMPERVIOUS AREA:	0.93 ACRES
ESTIMATED PRE-CONSTRUCTION IMPERVIOUS PERCENT:	26.3%
PRE-CONSTRUCTION RUN-OFF COEFFICIENT:	85
PROPOSED LAND USE WILL BE A PRE-K SCHOOL FACILITY.	
ESTIMATED POST-CONSTRUCTION IMPERVIOUS AREA:	1.09 ACRES
ESTIMATED POST-CONSTRUCTION IMPERVIOUS PERCENT:	30.3%
POST-CONSTRUCTION RUN-OFF COEFFICIENT:	86

PROJECT LOCATION:

LATITUDE: 41.4760° LONGITUDE: -81.5838°

EXISTING SITE SOIL TYPES:

UmB: URBAN LAND - MAHONING COMPLEX 2 TO 6 PERCENT SLOPES.
 REFERENCE: USDA NATIONAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY.

WETLAND INFORMATION:

THERE ARE NO KNOWN WETLANDS ON THIS SITE.

FIRST AND SUBSEQUENT RECEIVING STREAM:

INITIAL RECEIVING WATER IS DOAN BROOK - FRONTAL LAKE ERIE AND THE SUBSEQUENT RECEIVING WATER IS THE LAKE ERIE CENTRAL BASIN SHORELINE.

FLOODZONE INFORMATION:

FEMA FIRMEETTE PUBLISHED DECEMBER 3, 2010 REFERENCING FLOOD INSURANCE RATE MAP, INDICATES THIS SURVEY AREA IS LOCATED IN ZONE X (AREA OF MINIMAL FLOOD HAZARD).
 REFERENCE: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

CONTRACTOR SHALL MAINTAIN A CONSTRUCTION LOG DOCUMENTING ALL GRADING AND STABILIZATION ACTIVITIES.

POST CONSTRUCTION WQV / BMP DESCRIPTION

THIS PROJECT IS NOT REQUIRED TO PROVIDE ANY WATER QUALITY IMPROVEMENTS BECAUSE THE SITE DISCHARGES INTO A COMBINED SEWER WHICH IS ROUTED TO A WATER TREATMENT PLANT. THE CITY OF SHAKER HEIGHTS IS NOT REQUIRING ANY FURTHER ACTION. THIS PROJECT WILL NOT BE REQUIRED TO PROVIDE STORM WATER DETENTION BECAUSE THE AMOUNT OF IMPERVIOUS AREA HAS BEEN DECREASED FROM THE ORIGINAL SITE PARAMETERS THAT WERE DEMOLISHED AROUND 1998.

OWNER CONTACT:

SHAKER HEIGHTS CITY SCHOOLS
 15600 PARKLAND DRIVE
 SHAKER HEIGHTS, OHIO 44120
 216.295.4200

ANTICIPATED TIMING:

CONSTRUCTION BEGIN: XXXXX, 20XX
 CONSTRUCTION COMPLETE: XXXXX, 20XX

CONTRACTOR:

T.B.D.
 CONTACT: _____
 PHONE NUMBER: _____

CONTRACTOR SHALL MAINTAIN A CONSTRUCTION LOG DOCUMENTING ALL GRADING AND STABILIZATION ACTIVITIES.

BENCHMARKS:

STATE PLANE GRD NORTH, NAD 83 (2011), OHIO NORTH ZONE.
 ELEVATIONS ARE NAVD 83, GEOID 18.
 TIED BY GPS TO THE OHIO REAL TIME NETWORK.

BENCHMARK #2 - ARROW ON FIRE HYDRANT FLANGE.
 N: 860770, E: 2219531
 ELEVATION=931.85

BENCHMARK #4 - 'X' CUT ON NORTH BOLT FIRE HYDRANT FLANGE.
 N: 860547, E: 2219729
 ELEVATION=933.34

SEE SURVEY FOR ADDITIONAL BENCHMARK INFORMATION.



REV.	DATE	DESCRIPTION

PRELIMINARY DRAFT
 NOT FOR CONSTRUCTION,
 BID, RELIANCE,
 RECORDING PURPOSES
 OR IMPLEMENTATION.

SHAKER HEIGHTS CITY SCHOOL DISTRICT
 14201 SOUTHWINGTON ROAD
 SHAKER HEIGHTS, OH 44120

ISSUED FOR:

PERMIT	XXXXXX
BID	XXXXXX
CONSTRUCTION	XXXXXX
RECORD	XXXXXX

PROJECT MANAGER	DESIGNER
AF	PE

JOB NO.
 2023197.01

C-011



SWPP PLAN



GENERAL NOTES

1. FOR STORM WATER POLLUTION PREVENTION SEE SHEETS C-010 AND C-011.
2. FOR DEMOLITION INFORMATION REFER TO SHEETS C-101.
3. FOR SITE GRADING INFORMATION REFER TO SHEET C-121.
4. FOR SITE UTILITY INFORMATION REFER TO SHEET C-131.
5. CONTRACTOR TO PROVIDE TOPSOIL AND PERMANENT SEED IN ALL DISTURBED AREAS PER SPECIFICATION SECTION 32 92 00 TURF AND GRASSES.

REFERENCE NOTES

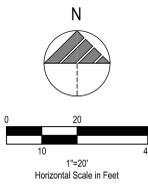
- | | |
|----------|------------------|
| 31 20 00 | EARTH MOVING |
| 32 12 16 | ASPHALT PAVEMENT |
| 32 13 13 | CONCRETE PAVING |
| 32 91 13 | SOIL PREPARATION |
| 32 92 00 | TURF AND GRASSES |

OVERALL SITE KEYNOTES

1. PROPOSED CONCRETE CURB. SEE DETAIL SHEET C-501.
2. PROPOSED CONCRETE CURBED WALK. SEE DETAIL SHEET C-501.
3. PROPOSED CONCRETE WALK. SEE DETAIL SHEET C-501.
4. PROPOSED HANDICAPPED PARKING SIGN. SEE DETAIL SHEET C-501.
5. PROPOSED LANDSCAPING AREA. SEED ALL DISTURBED AREAS EXCEPT WHERE PLANTING BEDS ARE INDICATED. SEE SHEET L-101.
6. PROPOSED PAINTED TRANSVERSE STRIPING. SEE DETAIL SHEET C-501.
7. PROPOSED PAINTED TRANSVERSE STRIPING FOR ADA ACCESSIBLE. SEE DETAIL SHEET C-501.
8. PROPOSED PAINTED CROSSWALK STRIPING. SEE DETAIL SHEET C-501.
9. PROPOSED PAINTED 4" WIDE SOLID STRIPE - WHITE ON ASPHALT, YELLOW ON CONCRETE. SEE PAVEMENT MARKINGS AND NOTES ON SHEET C-501.
10. PROPOSED PAINTED ADA PAVEMENT SYMBOL. PER ADA SPECIFICATIONS AND DETAIL SHEET C-501.
11. NOT USED.
12. PROPOSED ADA ACCESSIBLE RAMP PER ADA SPECIFICATIONS AND SHEET C-502.
13. PROPOSED CATCH BASIN WITH CONCRETE COLLAR. SEE SHEET C-131 FOR DESIGN INFORMATION.
14. CONCRETE APRON PER SHAKER HEIGHTS STANDARD DRAWING. SEE SHEET C-504.
15. PROPOSED MASONRY DUMPSTER ENCLOSURE. SEE ARCHITECTURAL PLANS.
16. PROPOSED WOOD FIBER SAFETY SURFACING PLAYGROUND AREA. SEE DETAIL SHEET C-502.
17. PROPOSED CONCRETE RETAINING WALL WITH ORNAMENTAL FENCE. SEE GRADING PLAN FOR ELEVATIONS AND SHEET STRUCTURAL SHEETS FOR DETAIL. SEE ORNAMENTAL FENCE AND GATE (ON WALL) DETAIL ON SHEET C-502.
18. PROPOSED CLEANOUT UTILITY STRUCTURE. SEE SHEET C-131 FOR DESIGN INFORMATION.
19. PROPOSED FLUSH CURB AND WALK AT PLAYGROUND. SEE DETAIL SHEET C-502.
20. EXISTING WALK AND FRONT STAIR TO REMAIN AND BE PROTECTED. CONTRACTOR SHALL REPLACE ANY WALK DAMAGED DURING THE INSTALLATION OF WATERPROOFING AT THE BUILDING FACE.
21. PROPOSED 8" PCC PAVEMENT W/W.F. 6"x6" W2.8XW2.9 (CONTROL JOINTS 12'-0" O.C.) OVER 6" ODOT 304 LIMESTONE BASE. APPLY LIQUID ASPHALT AT ALL JOINTS BETWEEN CONCRETE AND ASPHALT.
22. PROPOSED CONCRETE STEPPED WALK SEE GRADING PLAN FOR ELEVATIONS. SEE CONCRETE CURBED WALK DETAIL SHEET C-501.
23. PROPOSED 4" CURB TAPER. SEE DETAIL SHEET C-501.
24. PROPOSED ADA ENTRY RAMP. SEE ARCHITECTURAL PLANS.
25. PROPOSED ENTRY STAIR. SEE STRUCTURAL PLANS.
26. PROPOSED BUILDING ADDITION. SEE ARCHITECTURAL PLANS.
27. PROPOSED BUILT-IN BENCH. SEE ARCHITECTURAL PLANS.
28. PROPOSED FROST SLAB. SEE STRUCTURAL PLANS.
29. PROPOSED ADA ACCESSIBLE RAMP WITH HANDRAIL PER ADA SPECIFICATIONS AND SEE SHEET C-502.
30. PROPOSED MASONRY ENCLOSURE FOR ELECTRIC / MECHANICAL EQUIPMENT. SEE ARCHITECTURAL PLANS.
31. PROPOSED ORNAMENTAL FENCE. SEE ORNAMENTAL FENCE AND GATE DETAIL ON SHEET C-502.
32. PROPOSED 4" WIDE FENCE GATE. SEE SHEET C-502.
33. PROPOSED 8" WIDE DOUBLE LEAF GATE WITH 180 DEGREE SWING HINGE. SEE SHEET C-502.
34. PROPOSED PLAYGROUND FURNITURE.
35. NOT USED.
36. PROPOSED 1.33" CONCRETE BANDING WITH FENCE. SEE SHEET C-502.
37. EXISTING STAIRS, WALL, AND RAILING TO BE REPLACED AND MATCH EXISTING. SEE STRUCTURAL PLANS.
38. REPLACE ASPHALT PAVEMENT AS NEEDED FOR INSTALLATION OF DRIVE APRON AND CURBSING PER CITY OF SHAKER HEIGHTS REQUIREMENTS. COORDINATE WITH THE CITY OF SHAKER HEIGHTS FOR REPLACEMENT LIMITS. CONTRACTOR SHALL MATCH PAVEMENT THICKNESS WITH EXISTING ASPHALT.
39. REPLACE CONCRETE SIDEWALK AS NEEDED FOR DRIVE APRON INSTALLATION. SEE SHAKER HEIGHTS STANDARD DRAWINGS ON SHEET C-504.
40. PROPOSED CONCRETE CURB PER CITY OF SHAKER HEIGHTS REQUIREMENTS. SEE CONCRETE CURB DETAIL ON SHEET C-502 FOR MINIMUM REQUIREMENTS.

LEGEND
 (SEE SHEET C-001 FOR GENERAL LEGEND)

	PROPOSED STANDARD DUTY ASPHALT PER SHEET C-501.
	PROPOSED HEAVY DUTY ASPHALT PER SHEET C-501.
	PROPOSED CONCRETE
	PROPOSED WOOD FIBER SAFETY SURFACING
	CONSTRUCTION KEYNOTE
	PROPOSED PARKING SPACE NUMBER



EXISTING LUDLOW SCHOOL BUILDING
 SEE ARCHITECTURAL PLANS FOR
 BUILDING UPDATES

BENCHMARKS:
 STATE PLANE GRD NORTH, NAD 83 (2011), OHIO NORTH ZONE.
 ELEVATIONS ARE NAVD 83, GEOID 18,
 TIED BY GPS TO THE OHIO REAL TIME NETWORK.
 BENCHMARK #2 - ARROW ON FIRE HYDRANT FLANGE.
 N: 660770, E: 2219531
 ELEVATION=491.85
 BENCHMARK #4 - 'X' CUT ON NORTH BOLT FIRE HYDRANT FLANGE.
 N: 665451, E: 2219729
 ELEVATION=493.34
 SEE SURVEY FOR ADDITIONAL BENCHMARK INFORMATION.

REV	DATE	DESCRIPTION

PRELIMINARY DRAFT
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 RECORDING PURPOSES
 OR IMPLEMENTATION.

SHAKER HEIGHTS CITY SCHOOL DISTRICT
 14201 SOUTHWINGTON ROAD
 SHAKER HEIGHTS, OH 44120

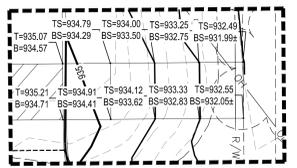
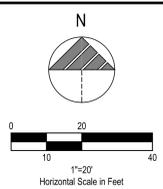
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PERMIT	XXXXXX
BID	XXXXXX
CONSTRUCTION	XXXXXX
RECORD	XXXXXX
PROJECT MANAGER	DESIGNER
AR	ALF

JOB NO.
 2023197.01

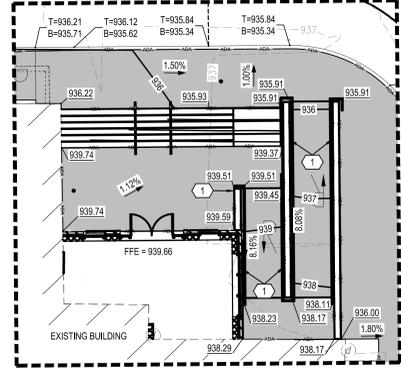
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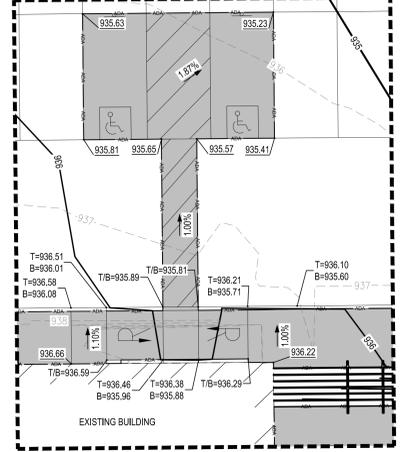
REFERENCE NOTES	
01 58 39	TREE & PLANT PROTECTION
31 10 00	SITE CLEARING
31 20 00	EARTH MOVING
32 92 00	TURF AND GRASSES
LEGEND	
(SEE SHEET C-001 FOR GENERAL LEGEND)	
---	PROPOSED CONTOUR
XXX.XX±	EXISTING SPOT ELEVATION/ MATCH EXISTING GRADE
XXX.XX	PROPOSED ELEVATION @ FINISHED GROUND ELEVATION
TS=XXX.XX	TOP OF STEP ELEVATION
BS=XXXXXX	BOTTOM OF STEP / FINISHED PAVEMENT ELEVATION
TB=XXX.XX	PROPOSED FLUSH CURB ELEVATION
T=XXX.XX	TOP OF CURB ELEVATION
B=XXXXXX	BOTTOM OF CURB/FINISHED PAVEMENT ELEVATION
TW=XXX.XX	TOP OF WALL FINISHED GRADE ELEVATION (SIDEWALK ELEVATION IN PLAYGROUND)
BW=XXXXXX	BOTTOM OF WALL FINISHED GRADE ELEVATION
0.0%	PROPOSED DRAINAGE SLOPE & DIRECTION
LIMITS OF ADA ROUTING - SEE ADA GRADING NOTES ON SHEET C-001.	
PLAN KEYNOTES	
1. FOR TOP OF WALL CAPSTONE ELEVATION, SEE ARCHITECTURAL PLANS.	



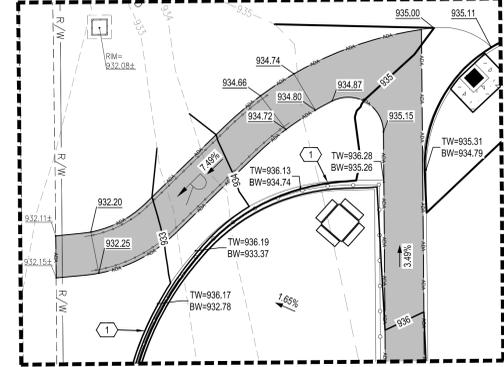
E2 ENLARGEMENT #1
1" = 10'



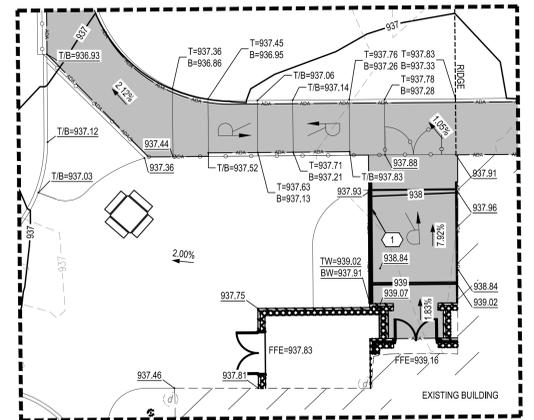
D3 ENLARGEMENT #2
1" = 10'



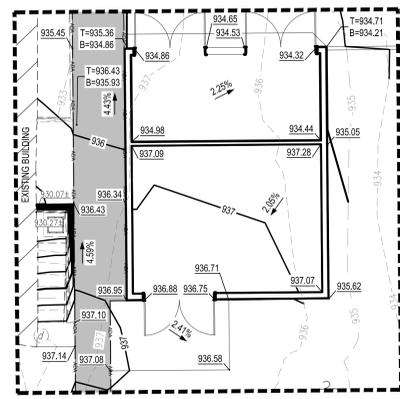
D4 ENLARGEMENT #3
1" = 10'



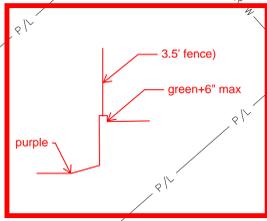
C4 ENLARGEMENT #4
1" = 10'



C5 ENLARGEMENT #5
1" = 10'



B5 ENLARGEMENT #6
1" = 10'



Overall Fence Heights	
(Inside FG + Cap) - sidewalk= total + fence= total height	
Red	(936.17+0.5') - 932.17= 4.50 + 3.5' = 8.0
Orange	(936.66+0.5') - 932.29= 4.87' + 3.5' = 8.37'
Cyan	(936.46+0.5') - 933.21= 3.75' + 3.5' = 7.25'
Pink	(936.24+0.5') - 933.38= 3.36' + 3.5' = 6.86'

BENCHMARKS:	
STATE PLANE GRD NORTH, NAD 83 (2011), OHIO NORTH ZONE. ELEVATIONS ARE NAVD 83, GEOID 18, TIED BY GPS TO THE OHIO REAL TIME NETWORK.	
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SEE SURVEY FOR ADDITIONAL BENCHMARK INFORMATION.	

DESCRIPTION	DATE	REV

PRELIMINARY DRAWING
 NOT FOR CONSTRUCTION,
 BID, RELIANCE,
 RECORDING PURPOSES
 OR IMPLEMENTATION.

SHAKER HEIGHTS CITY SCHOOL DISTRICT
 14201 SOUTHLINGTON ROAD
 SHAKER HEIGHTS, OH 44120

GRADING PLAN

ISSUED FOR:	
PERMIT	XXXXXX
BID	XXXXXX
CONSTRUCTION	XXXXXX
RECORD	XXXXXX
PROJECT MANAGER	DESIGNER
AF	PE

JOB NO.
2023197.01

C-121

GENERAL NOTES

- FOR STORM WATER POLLUTION PREVENTION SEE SHEET C-010 AND C-011.
- FOR SITE INFORMATION REFER TO SHEET C-110.
- FOR SITE GRADING INFORMATION REFER TO SHEETS C-121.
- CONTRACTOR TO PROVIDE TOPSOIL AND PERMANENT SEED IN ALL DISTURBED AREAS PER SPECIFICATION SECTION 32 92 00 TURF AND GRASSES.

REFERENCE NOTES

- 33 05 00 COMMON WORK RESULTS FOR UTILITIES
- 33 11 00 WATER DISTRIBUTION
- 33 41 00 STORM UTILITY DRAINAGE PIPING
- 33 46 00 SUBDRAINAGE

PLAN KEYNOTES

- STORM**
- PROPOSED FINGER DRAIN. SEE SHEET C-503.
 - 25 LF OF 12" (HDPE) STORM SEWER @ 1.68%.
 - 68 LF OF 12" (HDPE) STORM SEWER @ 1.50%.
 - 62 LF OF 6" (PVC) STORM SEWER @ 1.0% MINIMUM.
 - CLEANOUT INVERT=929.75. RIM TO BE SET FLUSH WITH GRADE.
 - 22 LF OF 6" (PVC) STORM SEWER @ 1.0% MINIMUM.
 - DOWNSPOUT CONNECTION AT BUILDING. INVERT=930.00. COORDINATE CONNECTION WITH PLUMBING CONTRACTOR.
 - WYE CONNECTION. INV.=929.93.
 - 22 LF OF 6" (PVC) STORM SEWER @ 1.0% MINIMUM.
 - CLEANOUT INVERT=930.15. RIM TO BE SET FLUSH WITH GRADE.
 - 6 LF OF 6" (PVC) STORM SEWER @ 1.0% MINIMUM.
 - DOWNSPOUT CONNECTION AT BUILDING. INV.=930.21. COORDINATE CONNECTION WITH PLUMBING CONTRACTOR.
 - 54 LF OF 12" (HDPE) STORM SEWER @ 3.50%.
 - PROPOSED PLAYGROUND UNDERDRAIN. SEE DETAIL SHEET C-503. CONTRACTOR SHALL CAP UPSTREAM ENDS OF ALL UNDERDRAINS. COORDINATE FINAL LAYOUT WITH PLAYGROUND SUPPLIER TO ENSURE NO INTERFERENCE WITH PLAY STRUCTURE FOUNDATIONS. MAXIMUM SPACING OF UNDERDRAINS SHALL BE 40'.
 - PROPOSED CLEANOUT SET FLUSH WITH BOTTOM OF MULCH GRADE. SEE DETAIL SHEET C-503.
 - 35 LF OF 6" PVC @ 1.0% MINIMUM.
 - 24 LF OF 6" PVC @ 1.0% MINIMUM.
 - PROVIDE A WATERTIGHT CONNECTION TO EXISTING CATCH BASIN.
 - PROPOSED TRENCH DRAIN TO THE INTO EXISTING OUTLET. CONTRACTOR SHALL BE PERMITTED TO REUSE EXISTING GRATES.
- WATER**
- PROPOSED WATER SERVICE TAP PER CITY OF CLEVELAND WATER DEPARTMENT REQUIREMENTS AND STANDARDS.
 - PROPOSED 4" (C900) WATER SERVICE LINE FOR FIRE PROTECTION. COORDINATE ALL WORK WITH THE CLEVELAND WATER DEPARTMENT.
 - PROPOSED WATERLINE CONNECTION TO BUILDING. COORDINATE EXACT LOCATION WITH PLUMBING PLANS.
- GAS**
- PROPOSED GAS SERVICE TAP PER ENBRIDGE OHIO REQUIREMENTS AND STANDARDS.
 - PROPOSED 4" GAS SERVICE LINE TO BUILDING.
 - PROPOSED GAS METER. COORDINATE EXACT LOCATION WITH PLUMBING PLANS AND ENBRIDGE OHIO.
- ELECTRIC AND COMMUNICATIONS**
- LOCATION OF MAIN ELECTRICAL FEED FROM RECORD DRAWINGS. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL FIELD LOCATE THE ELECTRIC LINE AND ENSURE NO CONFLICT WITH PROPOSED DESIGN.

UTILITY CROSSINGS

GENERAL UTILITY CROSSING NOTES:

- CONTRACTOR SHALL COORDINATE ALL CROSSINGS/RELOCATIONS WITH THE RESPECTIVE UTILITY COMPANIES.
 - EXISTING AND PROPOSED PRESSURIZED WATER (GAS) AND SECONDARY (ELECTRIC & COMMUNICATIONS) UTILITIES SHALL DEFLECT TO MAINTAIN 18" CLEAR AT SANITARY OR STORM SEWER CROSSINGS WHEN CONFLICTS OCCUR.
 - WHEN A PROPOSED PRESSURIZED SECONDARY UTILITY IS IN CROSSING CONFLICT WITH AN EXISTING PRESSURIZED SECONDARY UTILITY, THE PROPOSED UTILITY SHALL DEFLECT TO OBTAIN MINIMUM CLEARANCE.
 - CONTRACTOR SHALL FIELD LOCATE EXISTING PRESSURIZED SECONDARY UTILITIES AT PROPOSED CROSSINGS.
 - FOR CLEARANCE BETWEEN PIPES OF LESS THAN 18", THE CONTRACTOR SHALL PROVIDE CONCRETE ENCASMENT PER SHEET C-303.
- ① CONTRACTOR TO DEFLECT WATERLINE AS NECESSARY TO AVOID EXISTING UTILITY.

LEGEND

(SEE SHEET C-001 FOR GENERAL LEGEND)

- ST PROPOSED STORM SEWER
- W PROPOSED WATER SERVICE
- A APPURTENANCES
- E UTILITY CONSTRUCTION KEYNOTE

BENCHMARKS:

STATE PLANE GRD NORTH, NAD 83 (2011), OHIO NORTH ZONE.
 ELEVATIONS ARE NAVD 83, GEOID 18,
 TIED BY GPS TO THE OHIO REAL TIME NETWORK.

BENCHMARK #2 - ARROW ON FIRE HYDRANT FLANGE.
 N: 860770, E: 2219531
 ELEVATION=931.85

BENCHMARK #4 - "X" CUT ON NORTH BOLT FIRE HYDRANT FLANGE.
 N: 860541, E: 2219729
 ELEVATION=935.34

SEE SURVEY FOR ADDITIONAL BENCHMARK INFORMATION.



PROPOSED STRUCTURE TABLE

Structure Name	Structure Details
ST-1	2X2 CATCH BASIN (SEE SHEET C-502) 4" FINGER DRAINS (SE, SW) RIM = 928.95 12" HDPE INV (SE)=928.37 12" HDPE INV (N)=928.37
ST-2	2X2 CATCH BASIN (SEE SHEET C-502) 4" FINGER DRAINS (N, S) RIM = 928.81 12" HDPE INV (NW)=929.39
ST-3	2X2 CATCH BASIN (SEE SHEET C-502) 4" FINGER DRAINS (N, SW) RIM = 934.55 12" HDPE INV (SW)=931.10

EXISTING STRUCTURES

STRUCT. ID	STRUCTURE DETAILS
EX CB 100	EXISTING CATCH BASIN T/C = 929.94 INV. 4" SPP (NE)=929.24
EX CB 103	EXISTING CATCH BASIN T/C = 930.68 INV. 12" VCP (SW)=927.78
EX CB 104	EXISTING CATCH BASIN T/C = 931.01 INV. 12" VCP (NE)=927.31
EX CB 105	EXISTING CATCH BASIN T/C = 932.44 INV. 24" VCP (NW)=923.29 INV. 24" VCP (SE) = 923.34
EX STMH 111	EXISTING STORM SEWER MANHOLE T/C = 933.30 INV. 24" BRICK No.2 (NW)=923.75 INV. 24" BRICK No.2 (SE) 923.75
EX CB 112	EXISTING CATCH BASIN T/C = 932.71 INV. 12" VCP (SW)=928.86
EX CB 113	EXISTING CATCH BASIN T/C = 932.79 INV. 12" VCP (NE)=928.24 INV. 6" SPP (W)=930.09
EX CB 115	EXISTING CATCH BASIN T/C = 932.98 INV. 12" SPP (N)=929.58 INV. 4" SPP (S)=929.78
EX CB 116	EXISTING CATCH BASIN T/C = 930.80 INV. 12" SPP (N)=927.85 INV. 12" SPP (S)=927.85 PROP. INV. 12" HDPE (S) = 927.95
EX CB 117	EXISTING CATCH BASIN T/C = 930.07 INV. 12" VCP (N)=926.10 12" SPP (SE)=927.00 4" SPP (NW)=927.80
EX CB 118	EXISTING CATCH BASIN T/C = 929.97 INV. 12" VCP (NE)=925.27
EX CB 119	EXISTING CATCH BASIN T/C = 932.22 INV. 36" BRICK (NW)=920.67 INV. 24" BRICK (SE)=920.67 INV. 12" VCP (S)=923.47
EX CB 125	EXISTING CATCH BASIN* T/C = 931.32 FULL OF DEBRIS/ NO PIPES VISIBLE TOP OF DEBRIS = 929.22 PROP. 6" PVC (NE) = 929.00± PROP. 12" HDPE (N) = 929.00±

*EXISTING CATCH BASINS TO BE CLEANED AND PIPES LOCATED PRIOR TO CONSTRUCTION DOCUMENT SUBMISSION.

REV	DATE	DESCRIPTION

PRELIMINARY DRAFT
 NOT FOR CONSTRUCTION,
 BID, RELIANCE,
 RECORDING PURPOSES
 OR IMPLEMENTATION.

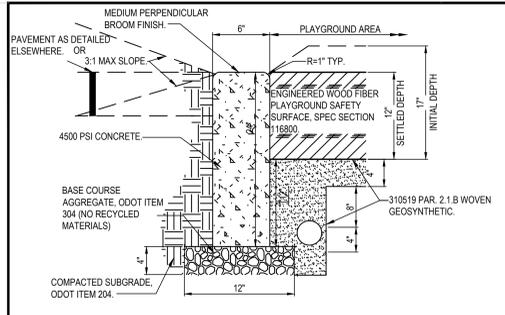
UTILITY PLAN

SHAKER HEIGHTS CITY SCHOOL DISTRICT
 14201 SOUTHLINGTON ROAD
 SHAKER HEIGHTS, OH 44120

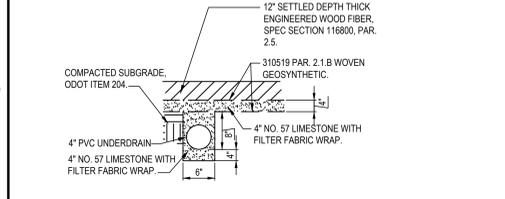
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PERMIT	XXXXXX
BID	XXXXXX
CONSTRUCTION	XXXXXX
RECORD	XXXXXX
PROJECT MANAGER	DESIGNER
AF	PE

JOB NO.
 2023197.01

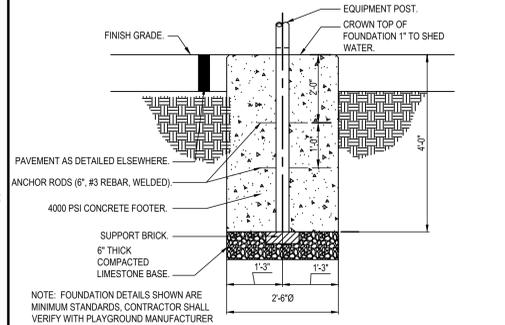
C-131



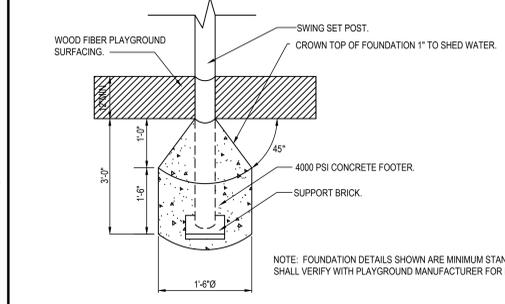
E1 FLUSH CONCRETE CURB AT PLAYGROUND
N.T.S.



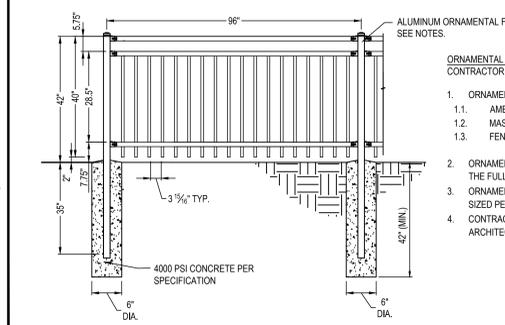
D1 WOOD FIBER SAFETY SURFACING
N.T.S.



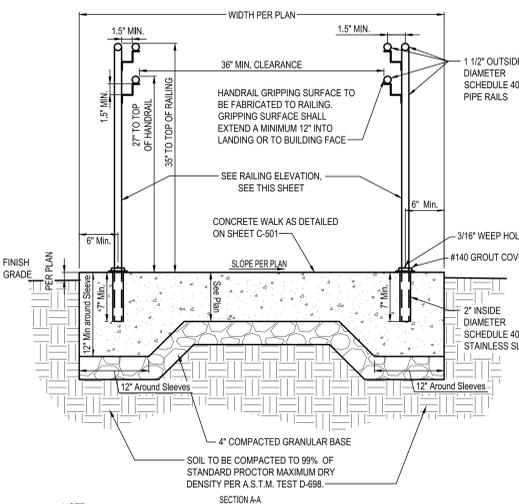
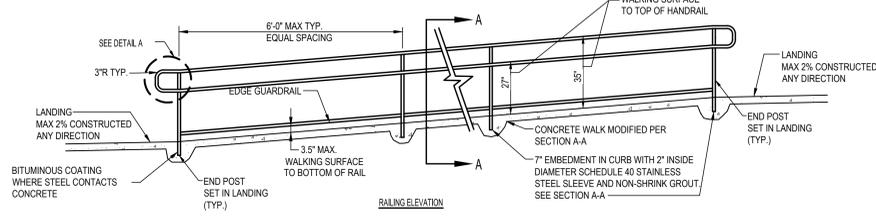
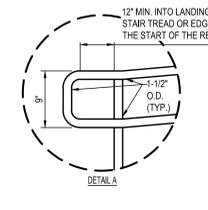
C1 POST FOUNDATION DETAIL
N.T.S.



B1 SWING SET FOUNDATION DETAIL
N.T.S.

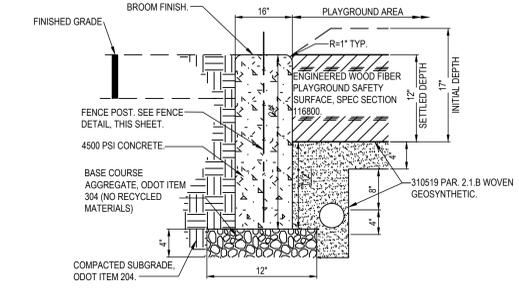


A1 ORNAMENTAL FENCE AND GATE (ON WALL) DETAIL
N.T.S.

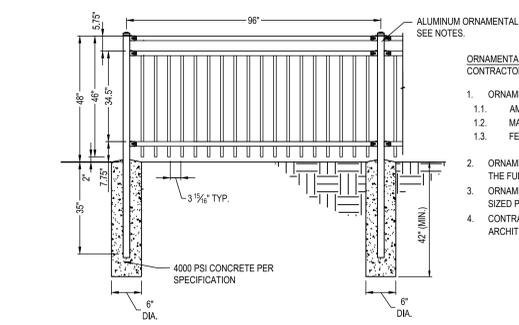


NOTE: CONTRACTOR SHALL ADHERE TO ALL CURRENT ADA AND LOCAL/FEDERAL REGULATIONS (WHICHEVER MORE STRINGENT) FOR ALL ACCESSIBLE ROUTES APPLICABLE FOR THE SUBJECT PROPERTY IMPROVEMENT. IF ANY DISCREPANCIES OCCUR, CURRENT ADA REGULATIONS AND LOCAL REGULATIONS TAKE PRECEDENCE OVER THE PROJECT SITE PLANS.

C3 ADA ACCESSIBLE RAMP AND HANDRAIL
N.T.S.

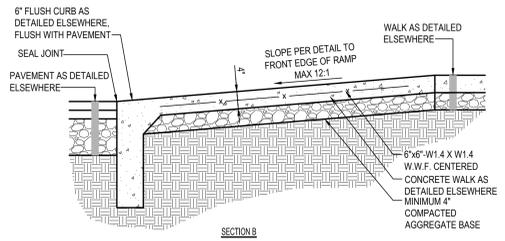


B3 1.33' CONCRETE BANDING WITH FENCE
N.T.S.

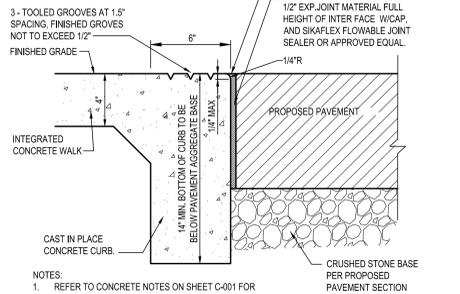


A3 ORNAMENTAL FENCE AND GATE DETAIL
N.T.S.

- RAILING NOTES:**
1. PROVIDE 1 1/2" OUTSIDE DIAMETER SCHEDULE 40 STEEL PIPE RAIL FRAMES, WELD ALL JOINTS AND GRIND SMOOTH, PRIME & PAINT PER OWNER SPECIFICATIONS.
 2. PROVIDE METAL FREE FROM PITTING, SEAM MARKS, ROLLER MARKS, GRINDING MARKS AND STAINS AT AREAS EXPOSED TO VIEW ON COMPLETED RAIL UNITS.
 3. PROVIDE "SKATE STOPPERS" OR APPROVED EQUAL ANTI-SKATE BLOCKS, INSTALLED ONLY ALONG THE BOTTOM EDGE GUARDRAIL AT 6" ON CENTER PER MANUFACTURER'S RECOMMENDATIONS, NOT TO BE USED ON THE GRIPPING SURFACE OF THE HANDRAIL.
 4. RAILINGS SHALL RESIST A CONCENTRATED LOAD OF 200# IN ANY DIRECTION & A 50# LF LOAD IN ANY DIRECTION, (NOT CONCURRENTLY). SET SUPPORT POSTS 7" DEEP (Min.) IN 12" CONCRETE WALK, SEE SECTION A-A.
 5. ALL UNPAINTED METAL SHALL RECEIVE 2 COATS OF ALKYD SEMI-GLOSS PAINT (OWNER SPECIFIED) OVER SHOP-APPLIED PRIMER.
 6. ALL SUPPORT POSTS SHALL SINGLE POSTS WITH RAILING SUPPORTS EXCEPT AT VERTICAL RETURN ENDS WHERE POSTS SHALL BE PROVIDED FOR EACH RAIL.
 7. HANDRAILS SHALL BE PROVIDED ON BOTH SIDES OF WALKWAYS REQUIRING HANDRAILS, WITH A MINIMUM OF 36 INCHES CLEAR SPACE ALONG THE ENTIRE LENGTH OF THE WALKWAY. MAXIMUM VERTICAL RISE BETWEEN LANDINGS SHALL BE 30 INCHES.
 8. 7" EMBEDMENT (Min.) WITH 2" INSIDE DIAMETER SCHEDULE 40 STAINLESS SLEEVE AND NON-SHRINK GROUT TO BE USED AT ALL VERTICAL RAILING SUPPORTS.
 9. HANDRAIL GRIPPING SURFACE TO BE FABRICATED TO 1 1/2" VERTICAL RAILING POSTS.
 10. CONTRACTOR SHALL SUBMIT SHOP DRAWING FOR HANDRAILS PRIOR TO PURCHASE AND INSTALLATION.
 11. STEEL MATERIAL:
 - a. TUBING: ASTM A 500 OR ASTM A 513
 - b. PIPE: ASTM A 53A, TYPE F OR TYPE S, GRADE A, STANDARD WEIGHT (SCHEDULE 40), PROVIDE CLEAR POWDER COAT FINISH WITH 2604 POWDER, CLEAR ANODIZED COATING SHALL BE M10C22A41 WITH A NOMINAL THICKNESS OF .7 MIL.
 - c. PLATES, SHAPES AND BAR: ASTM A 36/A 36M
 - d. FITTINGS: ASTM A 276/A 479 TYPE 304 OR TYPE 316.

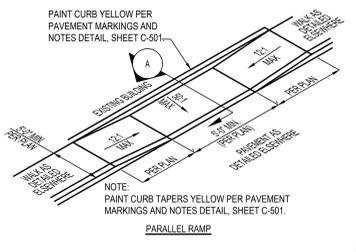


E5 ADA ACCESSIBLE RAMP
N.T.S.



D5 FLUSH CURB
N.T.S.

- NOTES:**
1. REFER TO CONCRETE NOTES ON SHEET C-001 FOR CONCRETE SPECIFICATION.
 2. SIDEWALK WIDTH AND SLOPE AS SHOWN ON SITE PLAN.



PARALLEL RAMP
N.T.S.

REV.	DATE	DESCRIPTION

PRELIMINARY DRAFT
NOT FOR CONSTRUCTION,
BID, RELIANCE,
RECORDING PURPOSES
OR IMPLEMENTATION.

SHAKER HEIGHTS CITY SCHOOL DISTRICT
14201 SOUTHWINGTON ROAD
SHAKER HEIGHTS, OH 44120

SITE DETAILS

ISSUED FOR:	
PERMIT	XXXXXX
BID	XXXXXX
CONSTRUCTION	XXXXXX
RECORD	XXXXXX
PROJECT MANAGER	DESIGNER
AF	PE

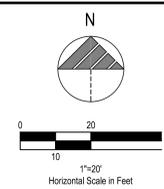
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C-502

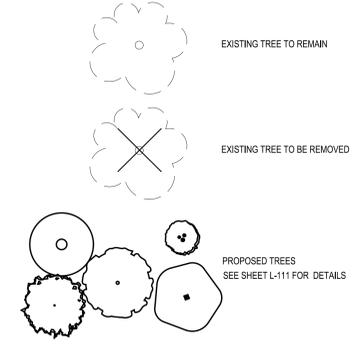
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SHEET NOTES

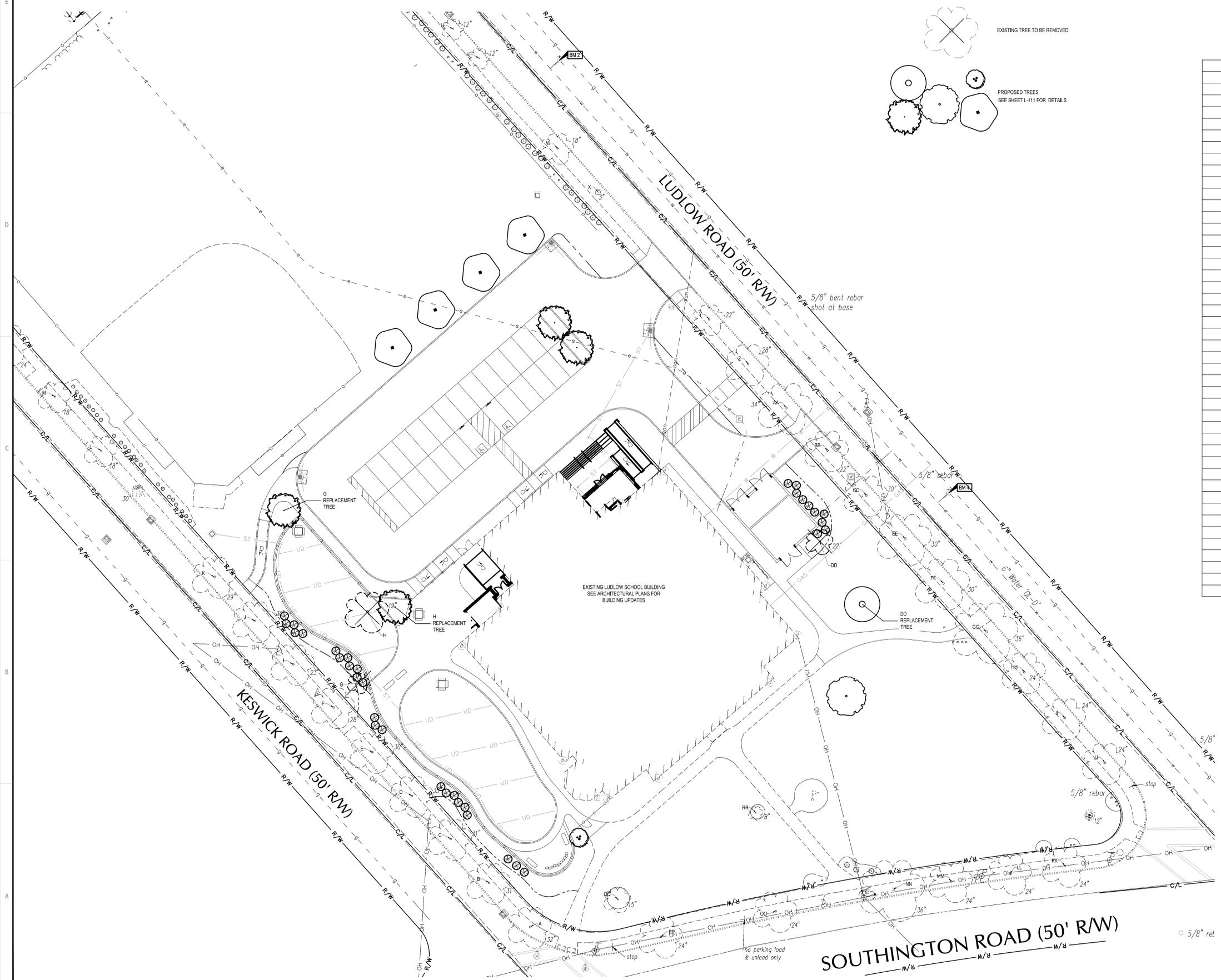
1. SEE SHEET L-111 FOR PROPOSED PLANT SCHEDULE.



LEGEND
 (SEE SHEET G-001 FOR GENERAL LEGEND)



TREE PRESERVATION KEY			
ID	SIZE	SPECIES	STATUS
A	32"	OAK	PRESERVE
B	31"	OAK	PRESERVE
C	31"	OAK	PRESERVE
D	35"	OAK	PRESERVE
E	30"	OAK	PRESERVE
F	28"	OAK	PRESERVE
G	12"	HONEY LOCUST	REPLACE
H	19"	HONEY LOCUST	REPLACE
I	23"	OAK	PRESERVE
J	30"	OAK	PRESERVE
K	29"	OAK	PRESERVE
L	18"	OAK	PRESERVE
M	18"	OAK	PRESERVE
N	24"	OAK	PRESERVE
O	24"	OAK	PRESERVE
P	24"	OAK	PRESERVE
Q	24"	OAK	PRESERVE
R	8"	MAPLE	PRESERVE
S	8"	LINDEN	PRESERVE
T	8"	MAPLE	PRESERVE
U	12"	MAPLE	PRESERVE
V	12"	MAPLE	PRESERVE
W	18"	OAK	PRESERVE
X	3"	YELLOWWOOD	PRESERVE
Y	22"	OAK	PRESERVE
Z	28"	OAK	PRESERVE
AA	34"	OAK	PRESERVE
BB	22"	OAK	PRESERVE
CC	30"	OAK	PRESERVE
DD	22"	MAPLE	REPLACE
EE	30"	OAK	PRESERVE
FF	30"	OAK	PRESERVE
GG	36"	OAK	PRESERVE
HH	24"	OAK	PRESERVE
II	24"	OAK	PRESERVE
JJ	24"	OAK	PRESERVE
KK	24"	OAK	PRESERVE
LL	24"	OAK	PRESERVE
MM	24"	OAK	PRESERVE
NN	36"	OAK	PRESERVE
OO	24"	OAK	PRESERVE
PP	24"	OAK	PRESERVE
QQ	24"	BUCKEYE	PRESERVE
RR	8"	OAK	PRESERVE



REV.	DATE	DESCRIPTION

PRELIMINARY DRAFT
 NOT FOR CONSTRUCTION,
 BID, RELIANCE,
 RECORDING PURPOSES
 OR IMPLEMENTATION.

SHAKER HEIGHTS CITY SCHOOL DISTRICT
 14201 SOUTHTON ROAD
 SHAKER HEIGHTS, OH 44120

TREE PRESERVATION PLAN



BENCHMARKS:
 STATE PLANE GRID NORTH, NAD 83 (2011), OHIO NORTH ZONE.
 ELEVATIONS ARE NAVD 88, GEOID 18.
 TIED BY GPS TO THE OHIO REAL TIME NETWORK.

BENCHMARK #2 - ARROW ON FIRE HYDRANT FLAG.
 N: 660770, E: 2219531
 ELEVATION=831.85

BENCHMARK #4 - 'X' CUT ON NORTH BOLT FIRE HYDRANT FLANGE.
 N: 660547, E: 2219729
 ELEVATION=835.34

SEE SURVEY FOR ADDITIONAL BENCHMARK INFORMATION.

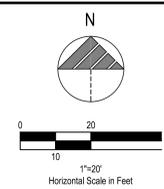
ISSUED FOR:	
PERMIT	XXXXXX
BID	XXXXXX
CONSTRUCTION	XXXXXX
RECORD	XXXXXX
PROJECT MANAGER	DESIGNER
AF	AS

JOB NO.
2023197.01

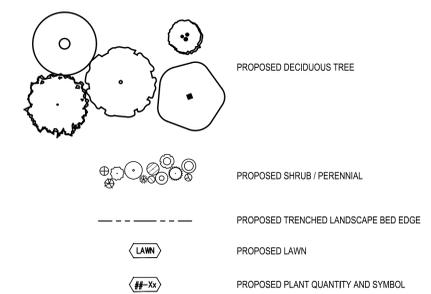
L-101

SHEET NOTES

- EXISTING SCHOOL LAWN SHALL BE RENOVATED. LOW AREAS SHALL HAVE TOPSOIL ADDED TO PROVIDE POSITIVE DRAINAGE PRIOR TO THE AREA BEING OVERSEEDED.

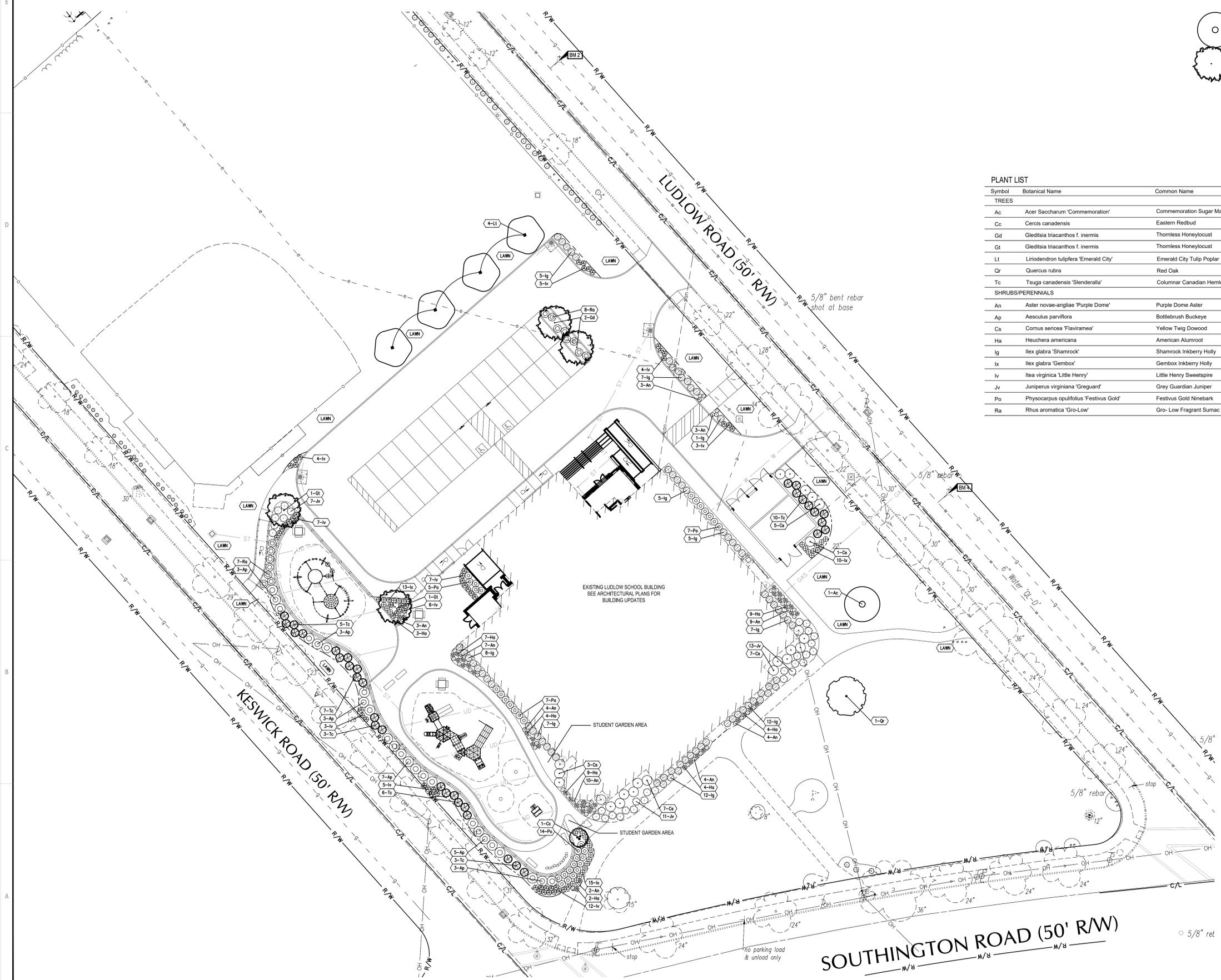


LEGEND
(SEE SHEET C-001 FOR GENERAL LEGEND)



PLANT LIST

Symbol	Botanical Name	Common Name	Quantity	Size	Condition	Remarks
TREES						
Ac	Acer Saccharum 'Commemoration'	Commemoration Sugar Maple	1	4" Cal.	B&B	Specimen
Cc	Cercis canadensis	Eastern Redbud	1	1.5" Cal.	B&B	Single Stem
Gd	Gleditsia triacanthos f. inermis	Thornless Honeylocust	2	2" Cal.	B&B	Matching
Gt	Gleditsia triacanthos f. inermis	Thornless Honeylocust	2	4" Cal.	B&B	Matching
Lt	Liriodendron tulipifera 'Emerald City'	Emerald City Tulip Poplar	4	2" Cal.	B&B	Specimen
Qr	Quercus rubra	Red Oak	1	3" Cal.	B&B	Specimen
Tc	Tsuga canadensis 'Slenderella'	Columnar Canadian Hemlock	34	4" H Min.	B&B	Upright
SHRUBS/PERENNIALS						
An	Aster novae-angliae 'Purple Dome'	Purple Dome Aster	49	No. 1	Cont.	2' o/c
Ap	Aesculus parviflora	Bottlebrush Buckeye	24	36" Ht., No. 5	Cont.	Per Plan
Cs	Cornus sericea 'Flaviramea'	Yellow Twig Dogwood	23	36" Ht., No. 5	Cont.	Per Plan
Ha	Heuchera americana	American Alumroot	42	No. 1	Cont.	2' o/c
Ig	Ilex glabra 'Shamrock'	Shamrock Inkberry Holly	69	18" Ht., No. 5	Cont.	3.5' o/c
Ix	Ilex glabra 'Gembox'	Gembox Inkberry Holly	36	18" Ht., No. 3	Cont.	2.5' o/c
Iv	Itea virginica 'Little Henry'	Little Henry Sweetspire	56	18" Ht., No. 3	Cont.	2.5' o/c
Jv	Juniperus virginiana 'Guard'	Grey Guardian Juniper	31	24" Sprd.	Cont.	3.5' o/c
Po	Physocarpus opulifolius 'Festivus Gold'	Festivus Gold Ninebark	49	24" Ht., No. 5	Cont.	3.5' o/c
Ra	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	15	24" Sprd., No. 3	Cont.	4' o/c



DESCRIPTION	
DATE	
REV	
PRELIMINARY DRAFT NOT FOR CONSTRUCTION, BID, RELIANCE, RECORDING PURPOSES OR IMPLEMENTATION.	

SHAKER HEIGHTS CITY SCHOOL DISTRICT
 14201 SOUTHLINGTON ROAD
 SHAKER HEIGHTS, OH 44120

LANDSCAPE PLAN



BENCHMARKS:

STATE PLANE GRID NORTH, NAD 83 (2011), OHIO NORTH ZONE. ELEVATIONS ARE NAVD 88, GEOID 18. TIED BY GPS TO THE OHIO REAL TIME NETWORK.

BENCHMARK #2 - ARROW ON FIRE HYDRANT FLAGE.
 N: 660770, E: 2219531
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 N: 660547, E: 2219729
 ELEVATION=835.34

SEE SURVEY FOR ADDITIONAL BENCHMARK INFORMATION.

ISSUED FOR:	
PERMIT	XXXXXX
BID	XXXXXX
CONSTRUCTION	XXXXXX
RECORD	XXXXXX
PROJECT MANAGER	DESIGNER
AF	AS

JOB NO.
2023197.01

L-111

1

2

3

4

5

6

E

D

C

B

A

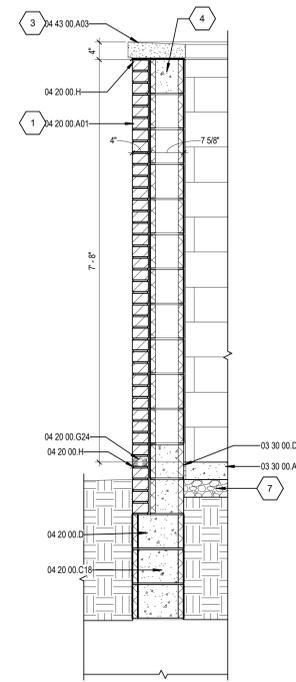
GENERAL NOTES

REFERENCED KEYNOTES

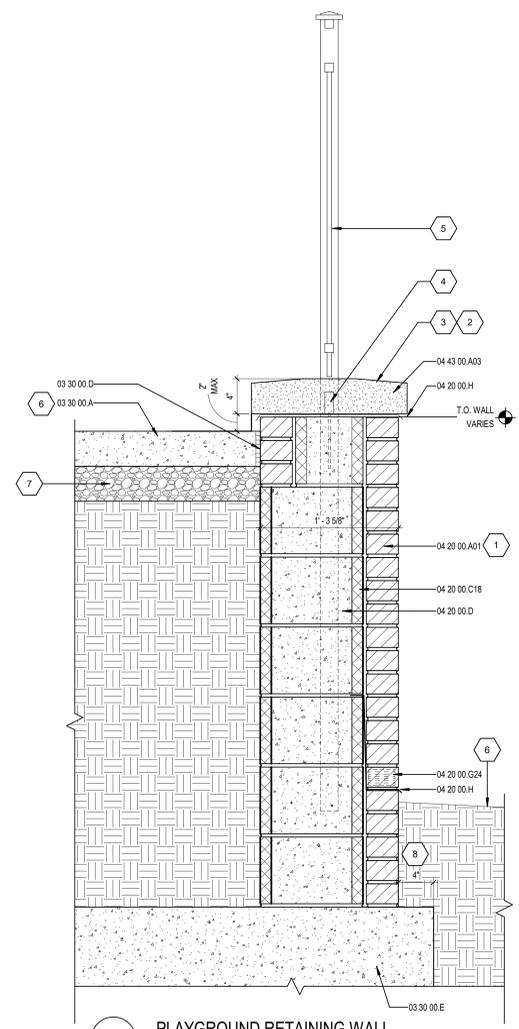
- 03 30.00.A CONCRETE SLAB ON GRADE
- 03 30.00.D JOINT FILLER
- 03 30.00.E CONCRETE FOOTING - REFER TO STRUCTURAL DWGS.
- 04 20.00.A01 CLAY MASONRY VENEER (TYPE 1)
- 04 20.00.C18 STANDARD CMU (12x8x16)
- 04 20.00.D GROUT FILL
- 04 20.00.G24 WEEPS (2" O.C.)
- 04 20.00.H EMBEDDED FLASHING
- 04 43.00.A03 LIMESTONE

WALL SECTION KEYNOTES

- 1. NEW BRICK TO MATCH EXISTING.
- 2. STEP RETAINING WALL TO MAINTAIN REQUIRED HEIGHT AROUND PLAYGROUND.
- 3. RAKE MORTAR JOINTS 3/4" MIN. FOR INSTALLATION OF BACKER ROD AND SEALANT.
- 4. STAINLESS STEEL STONE ANCHOR.
- 5. ORNAMENTAL FENCE. REFER TO CIVIL DRAWINGS.
- 6. REFER TO CIVIL DRAWING FOR GRADE ELEVATIONS.
- 7. COMPACT GRAVEL FILL. REFER TO CIVIL DRAWINGS FOR REQUIRED THICKNESS.
- 8. FOUNDATION SHALL NOT EXCEED 4" TO LIMIT DISTURBANCE OF EXISTING TREE ROOTS.



A4 UTILITY WALL SECTION
3/4" = 1'-0"



A5 PLAYGROUND RETAINING WALL
1 1/2" = 1'-0"

REV.	DATE	DESCRIPTION

PRELIMINARY DRAFT
 NOT FOR CONSTRUCTION,
 BID, RELIANCE,
 RECORDING PURPOSES OR
 IMPLEMENTATION.

SHAKER HEIGHTS - LUDLOW PreK RENOVATION
 14201 SOUTHWINGTON ROAD, SHAKER HEIGHTS, OHIO 44120

WALL SECTIONS

ISSUED FOR:	
PERMIT	---/---/---
BID	---/---/---
CONSTRUCTION	---/---/---
RECORD	---/---/---
PROJECT MANAGER	DESIGNER
Approver	Designer

JOB NO.
2023197.01

A-304

June 21,2024

Dear Planning Commission members,

On July 2nd, the Shaker School District will go to the Shaker Heights Planning Commission asking to make substantial changes at Ludlow School. This new investment in the Ludlow neighborhood has been a long time coming and is so welcome! Many residents who care about sustainability have been following the progress of this proposal through the Architectural Board of Review and the Planning Commission processes. After reading the current proposal on the July 2 Planning Commission agenda, many of us are feeling increasingly that certain details being presented are less than ideal and less than our children and community deserve.

We, the undersigned, believe that **Ludlow School, the surrounding neighborhood and all the pre-K children who will be ultimately educated in this building and its surrounding greenspaces deserve a quality project.**

We ask that all planning bodies in the City and Schools give additional thought to the following aspects of the plans being presented:

1. Our trees must be protected. Majestic Oaks on all three sides of the school are more than 75 years old, and if properly protected, could live another 200 years. Experts who care for trees cite the **danger during construction of disturbing and compacting the roots that extend out to the edge of the leaf canopy above**, which can cause trees to sicken and die. At present, the plan shows lots of earth moving and new pavement that can cut or crush these roots. In addition, other experts have observed that **the tree sizes recorded on sheets L-101 appear to be smaller than the actual trees on the property by anywhere from 6-11 inches.** Additionally, the **radius of the critical root zone is miscalculated and should be a 1.5 foot radius for every inch of DBH (or higher).** Given how important it is to protect these mature trees during construction and **to include several trees along Ludlow within the area being regraded and worked for changes to the drive and trash enclosures**, we believe that we need a plan by an independent certified arborist to confirm these trees will be protected for our next generation.

2. We need a greener site. The new plan surrounds the building on three sides with **big fields of impervious asphalt and concrete surfaces and wood chips.** There are almost no plantings or trees to break up that area. That is not how other Shaker Schools are treated and shouldn't be what we see around Ludlow School. There are **4-foot islands with no trees being proposed whereas in other plans 7-foot islands with trees are common.** There is room to add new green areas! **Concrete in the playgrounds can be replaced with pervious surface materials and plantings.** The Shaker Schools have added more parking spaces compared to what they have shown previously, but **there is plenty available on-street and no need to fill the site.** Curb parking worked for PEP, will work again here, and helps slow traffic to make our streets safer.

3. We need a great playground. **Play areas at other schools in the district include areas for trees and plantings integrated as part of the well-equipped playgrounds, making shady places to play.** With the current scope of climate change, this is more essential than ever. At present, the site plan shows concrete and wood chips for an

area 250 feet long and 60 feet wide without interruption. This is the only place for kids in the Ludlow neighborhood. **A greener playground is needed to be more welcoming for everyone.**

4. We need a plan for traffic. Pre-K children will come from everywhere in the school district. The Chief Operating Officer for the Shaker Schools has said this will cause big changes in traffic patterns as parents come to drop-off and pick-up their children for multiple sessions, both morning and afternoon. We know this can work, because it happens at neighborhood schools, **but it needs to be well-planned with careful strategies for on-street parking and traffic management.** Will our streets need one-way traffic at certain times? Will we need better signs or signals? Speed bumps? The plan must include a traffic study so we know how this will work.

5. We need the site to be cared for. The plan currently doesn't include any work in the play field area. **Yet chain link fences are rusty or have peeling paint, shrubs are either dead, missing, or overgrown and filled with invasive plants. Stormwater run-off spills out without proper drainage, leaving over 100 feet of the Keswick sidewalk covered with inches of water and mud much of the year.** We are spending close to \$20 million on this project, now is the time to fix what has been neglected!

6. We need the school district to listen. When Fernway Elementary caught fire, the entire City of Shaker Heights supported them to bring back a quality school. There were fundraisers and the school sent surveys to the community asking what was important for their outdoor space. The Ludlow School renovation deserves the same. The Ludlow Community Association is active and positively committed to change, but it doesn't have many resources. **Yet to date, the schools have relied only on the LCA instead of reaching out directly to the people that will be affected.** Many of the Ludlow neighbors don't yet know about the project even though they've been making plans for over a year. **The Shaker Schools need to spend time coming to meet and hear concerns.** They've been late in getting started, but there's still time to make changes. **We should not rush this process. We will have one chance to get this right!**

Thank you for considering our appeal to move more slowly with the design approval process and consider each point above to achieve the best greenspaces design for the surrounding area and to preserve as many mature trees as possible to maintain canopy and fight climate change effects. Greenspaces are healthier environments for children who deserve the best conditions for learning that we can provide. Thank you!

Nancy R. Moore

Ted Auch

Nick Fletcher

Alan Gross

Timothy Kalan

Christine Medvedev

Michael Peters

Mimi Plevin-Foust

Anne Williams

Kevin Dreyfuss-Wells, 3021 Ludlow Road

June 27, 2024

Dear City Planning Commission / Board of Zoning Appeals members,

I am writing to you to support the Ludlow School Pre-K project, and the building restoration and site improvements necessary to realize the Shaker Schools' admirable and innovative commitment to make quality early childhood learning a citywide offering. As a Ludlow Road resident less than 200 feet from school property, I'm absolutely thrilled this project will happen on my street. This project may be the largest investment in our neighborhood since the school was first constructed, and a sea change for our community after living with Ludlow School's closure and the ensuing impacts on this neighborhood that are still reverberating 37 years later.

However, I am not writing to support the project as it has been presented for your July 2 review. It is vitally important that this renovation be of the highest quality, and it is not yet. High standards for this project are not just important for me and my neighbors, but for the children that will learn there, the teachers that will work there, for our entire city and for the more sustainable community we wish to become.

The Shaker School district has on many occasions said they value the qualities I and my neighbors find important: Safe streets for children and families. Protecting irreplaceable trees. A carefully tended site and building. Beautiful, welcoming outdoor spaces for children to play and learn. Places for my neighbors to gather, places for the entire community to enjoy recreation together.

What we have not seen yet is a realization of that shared vision that fully accomplishes what could be created for school and neighborhood on this site with a conscientious approach. The applicant instead is requesting variances that work at cross-purposes to achieving these aims, and which are in large part detrimental to our neighborhood's essential character and welfare. The request has not demonstrated hardships or proposed ways to ameliorate the impacts of non-compliance on the neighborhood. Rather the design is largely using the variance process to avoid solving difficulties of its own making.

The design challenges are a result of an overcrowded program, and that program is dominated by substantial automobile parking and circulation. The applicant might suggest that the present quantity of parking and pavement is essential to their core educational mission, even if it comes at some expense to neighborhood quality of life. I argue instead that a greener, shadier, and more beautiful site will be better for everyone. Our children, teachers, and neighbors alike are worthy of great places to play, work, and live.

Ludlow deserves the same quality in design, engagement, and execution as we would want for any of our Shaker schools or neighborhoods. So do the children that will learn here. So do the teachers. To that end I have attached a range of observations and suggestions with the hope they help lead to a stronger project. I am convinced a much better solution is available, one that we can all be proud of. I trust that with this commission's assistance and support, that will result.

Best regards,

Kevin Dreyfuss-Wells
3021 Ludlow Road

General: Ludlow School is unquestionably the most significant structure and site in the neighborhood, and the heart of our community. This 1926 building is listed as an important contributing structure to the Shaker Village Historic District on the National Register of Historic places.¹

This renovation will be the most significant investment Ludlow will see in my lifetime and has the potential to be an economic development engine for the neighborhood and the city. The same will be the case for many of the school district’s projects yet to come and their neighborhoods.

With that context, it is disappointing to see a submission that is incomplete compared to what CPC-BZA is typically presented for projects of similar significance. While this is clearly not a final submission, to present this project without showing any information on the proposed building renovation or addition, not providing color-rendered site or elevation drawings, perspectives, initial site furniture and lighting ideas or similar details is limiting both to the CPC but also the ability of residents to become meaningfully engaged. Similarly, the absence of meaningful quantitative or qualitative analysis regarding issues such as tree protection, traffic or parking challenges the ability for the public discussion this project deserves on these issues.

Given the schedules for construction the school has published I am concerned the review may be rushed. However, an incomplete review process not only disadvantages the public, but misses the benefits to project value for the city that can otherwise spring from careful development of ideas over time.

I have been encouraging the District and their design team to more actively engage with the City’s design review process since their kick-off presentation in October 2023. Similarly I have for several months suggested they reach out directly both to adjacent neighbors and to broader groups of stakeholders. Instead, they’ve relied only on the Ludlow Community Association. While we have a great community organization, it has limited reach and is not equipped to take over the school district’s responsibilities for outreach on its own.

Suggested Action: I believe this is a project where the CPC’s overarching site plan review standards in **§1213.06-E** may be just as critical as individual provisions in the zoning code:

E. Standards for Site Plan Review. The City Planning Commission and staff, when evaluating site plans, may review the following characteristics of the site plan:

- 1. The relationship of the site plan to adopted land use policies.
- 2. Parking layout with respect to how well it achieves the following objectives:
 - a. Minimize dangerous traffic movements.
 - b. Achieve efficient traffic flow.
 - c. Provide for the appropriate number of off-street parking spaces, while maintaining City design standards.
 - d. Provide for the appropriate location and number of driveways.
- 3. Landscaping, with respect to how well it achieves the following objectives:
 - a. Maintain existing mature trees and shrubs to the maximum extent practicable.
 - b. Buffer adjacent incompatible uses.
 - c. Screen unsightly activities from public view.
 - d. Break up large expanses of asphalt with plant material.
 - e. Provide an aesthetically pleasing landscaping design.
 - f. Provide plant materials and landscaping designs that can withstand the City’s climate, and the microclimate on the property.

Trees and Protection:

The significance of the existing trees on the site should not be understated, and in particular the mature oak street trees that exceed 75 years of age. They are a significant asset to the character of the community, marking where primary streets cross at the core of the neighborhood. They are irreplaceable in any of our lifetimes.

The services that such trees provide have by now been well documented and quantified: increased property values, absorbing pollution, reducing summer temperatures, absorbing stormwater, improving public health, and even slowing traffic and reducing auto crashes².

The applicant has not yet provided the care and attention that the conservation of these public assets should warrant.

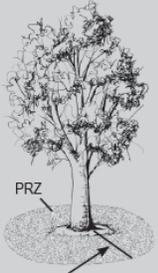
- Site is designed with significant encroachment under the driplines, with significant regrading, new pavement, retaining walls, and other threats to roots and tree health.
- Submitted tree sizes were presented inaccurately, with actual diameters substantially larger. Tree protection standards are directly related to trunk diameter

- Applicant proposes a Critical Root Zone protection area of 1.0 feet per inch of trunk diameter (DBH). The US Dept. of Agriculture suggests that factor only for young trees. For trees that are mature or stressed, a protection factor 50% bigger at 1.5 feet per inch DBH is recommended³. This is the standard referenced by the International Society of Arboriculture (ISA)⁴

**How Close Is Too Close?
Defining The Protected Root Zone (PRZ)**

The tree's Protected Root Zone (PRZ) can be identified as follows:

1. Measure the diameter (width) of the trunk at chest height, to the nearest inch. To do this, either wrap a tape measure around the trunk and divide that number by 3 or hold a yard stick up to the trunk and approximate the distance.
2. Multiply that number by 1.5 for mature or stressed trees or by 1.0 for young, healthy trees. Express the result in feet.
3. Measure that distance from the trunk of the tree. The area within this radius is the Protected Root Zone (PRZ).



PRZ radius (ft) =
1.0 or 1.5 x trunk diameter (in)

- Applicant proposes that it is acceptable to damage up to 25% of tree root areas. Reviewing with an ISA-certified arborist, they indicated that while guidelines vary by tree species, location, age and other factors, typical practice is to limit impacts to no more than 15% of the root mass.
- From the same ISA-certified arborist *"We've seen construction damage take up to 10 years to show up in mature trees and rapid decline follows. Construction damage can also occur without subsurface damage. Something as simple as staging equipment an/or job material under a tree can cause rapid decline a handful of years down the line depending on the species."*

Additionally, several existing street trees have been removed over time without replacement, particularly bordering the recreation field along both Ludlow and Keswick Roads.

Kevin Dreyfuss-Wells, 3021 Ludlow Road

Suggested Actions, trees:

Recommendations from a third-party independent arborist should be developed, with a plan including

- More thorough assessment of existing trees and their condition
- A conservative tree protection plan, assessing the specific conditions related to each tree, based on less risky protection standards
- Re-working of grading and hardscape locations to avoid threats to mature street trees.
- Study alternative grading and or soil/drainage treatments as strategies to reduce impacts on work within root zones
- Develop robust tree protection measures during construction including semi-permanent protective fencing that cannot be easily moved, staging of construction trailers and equipment, etc. so there is no unnecessary work, compaction, or other damage.

Review variance requests related to setbacks for accessory / recreational structures, fencing, retaining walls, and similar encroachments into required yards in light of the related impacts on trees

Require restoration of the street tree canopy per **§1253.07-D**, requiring new parkway trees where there are currently gaps in excess of the 40-foot maximum.

Require interior islands planted with trees, proportional to the quantity of pavement (see Parking below).

Ludlow School tree sizes

6/17/2024

Tree ID	Sizes reported by applicant		vs Sizes measured on site			Critical root zone impacts		
	GPD reported size	Species	Measured circumference at 4.5 ft. above grade 6/17/2024	Calculated DBH	DBH Discrepancy: % larger compared to GPD dimension	Typically cited critical root zone radius, range based on calc'd DBH		Critical Root Zone radius Discrepancy: % larger than GPD dimension
A	24 in.	Oak	100 in.	32 in.	33%	1.3 ft. per inch diameter	1.5 ft. per inch diameter*	8 in. larger than size reported
B	24 in.	Oak	96 in.	31 in.	27%	41 ft.	48 ft.	7 in.
C	24 in.	Oak	98 in.	31 in.	30%	40 ft.	46 ft.	7 in.
D	24 in.	Oak	109 in.	35 in.	45%	41 ft.	47 ft.	7 in.
E	24 in.	Oak	96 in.	31 in.	27%	45 ft.	52 ft.	11 in.
F	24 in.	Oak	90 in.	29 in.	19%	40 ft.	46 ft.	7 in.
H	24 in.	Honey Locust	59 in.	19 in.	-22%	37 ft.	43 ft.	5 in.
I	24 in.	Oak	73 in.	23 in.	-3%	24 ft.	28 ft.	-5 in.
J	24 in.	Oak	94 in.	30 in.	25%	30 ft.	35 ft.	-1 in.
K	24 in.	Oak	90 in.	29 in.	19%	39 ft.	45 ft.	6 in.
Y	18 in.	Oak	70 in.	22 in.	24%	37 ft.	43 ft.	5 in.
Z	24 in.	Oak	88 in.	28 in.	17%	29 ft.	33 ft.	4 in.
AA	30 in.	Oak	110 in.	35 in.	17%	36 ft.	42 ft.	4 in.
BB	24 in.	Oak	72 in.	23 in.	-5%	46 ft.	53 ft.	5 in.
CC	24 in.	Oak	96 in.	31 in.	27%	30 ft.	34 ft.	-1 in.
DD	15 in.	Maple	68 in.	22 in.	44%	40 ft.	46 ft.	7 in.
QQ	15 in.	Oak	75 in.	24 in.	59%	28 ft.	32 ft.	7 in.
						31 ft.	36 ft.	9 in. larger than size reported

*The International Society of Arboriculture recommends protecting 1.5 feet per inch of diameter for mature or stressed trees. The smaller 1.0 foot root protection factor is their recommendation for young trees. See page 24 of their published guidance:

Tree measurements are 5 in. larger on average than sizes reported on submission

Parking Quantity:	<p>Applicant has inaccurately represented the relationship between zoning and the parking, stating that 27 spaces are required and provided. Given that §1251.03 allows credit for on-street parking adjacent to the site, that quantity omits 63 street spaces, so the true availability in the current design is 90 spaces.</p> <p>Applicant reports 24 staff persons are anticipated, but has also previously noted in public meetings that it is critical to have a number of open spaces available during the day for staff that travels from other schools and for visiting parents, as well as accessible parking for the mobility impaired. Accounting for these other needs, there is not adequate parking in the private off-street lot and a strategy to reserve space for priority users needs to be developed.</p> <p>Parking here is a management issue not a space problem. There are no meaningful differences in the safety and convenience of a private lot or curb parking here. In either case people will be walking a short distance outdoors to reach a door. Ludlow is safe – my wife has been running solo in early morning hours, year-round and nearly daily for the 16 years we've lived here.</p> <p>Applicant has suggested that on-street parking might interfere with parent drop-off traffic. Yet 36 of the curb spaces are on Southington and Keswick, 50% more than the applicants' stated staff parking needs. However, a little interference with traffic might not be a bad thing. On-street traffic reliably slows traffic speeds, and last thing you want around an early childhood facility is speeding cars. (See traffic comments)</p> <p>To a resident like me, it appears Ludlow is being asked to accept a degraded, paved site and risks to landmark trees all for the sake of a minor increase in perceived convenience for a small handful of extra cars.</p>
Parking Quality:	<p>Applicant suggests without explanation that Shaker's zoning standards for tree islands should not be applied, complying with neither the required area, nor dimensions, nor the requirement to plant trees per §1253.08-C. This is a hardship springing from voluntary design choices including the intent to forego use of ample parking available on-street.</p> <p>Per a diagram appended to this letter, what's striking to see is the large proportion of circulation in relation to the number of parking stalls. The net effect is that even if the applicant complied with zoning, the amount of green and shade would be far less than most other parking lots in Shaker, since unfortunately our code uses parking spaces rather than paved area as a metric.</p>
Suggested Actions, parking:	<p>Review project site and variance requests in consideration with the CPC's site review mandate per §1213.06-E with its charge to "Break up large expanses of asphalt with plant material" and "Maintain existing mature trees to the maximum extent practicable".</p> <p>Require a more detailed study of parking requirements and potential strategies. We have been presented no meaningful data regarding the details of staff, projected visitors, alternative strategies considered, potential variation during different times of day or projected growth over future years, if any. All will be important to developing meaningful alternative strategies to manage parking.</p> <p>Bicycle travel will be a likely transportation mode for some parents. Parking strategy should include generous bike parking, including allowances for larger cargo bikes often used by parents with younger kids.</p>

Traffic: The design team and District administrators have frequently stated their expectations that the new use will bring significant traffic into the Ludlow neighborhood. However there has been no professional assessment presented to define the details of those traffic volumes, at times of day, safety impacts, recommended strategies, neighborhood impacts, etc.

The unique nature of drop/pick activities at an early childhood center has likewise been often noted, and is undoubtedly the case, but again few details have been provided. There have been unclear assertions of some relationships between that drop/pick traffic and parking, both when on-street and in a private lot, but again the vehicle movements and safety impacts have not been described clearly, and it is hard to see how a larger parking lot has a positive benefit on the drop/pick activity.

Parking on-site might be affecting safety negatively. The outer loop queuing through the private lot seems crowded, with a narrow perimeter sidewalk, accessible paths cutting through the middle of active traffic, and great potential for movements of cars in and out of parking stalls to collide with the perimeter loop flow. Safety is obviously paramount, but it is not clear that this layout optimizes for it.

I would observe that a single row in the center rather the current double row would provide additional flexibility and breathing room, creating more space for safe circulation as well as reducing impacts on the play field.

It's also worth keeping in mind that safe traffic is more important than fast traffic, and fast traffic nearly always less safe on a neighborhood street. A proven strategy to slowing traffic is the narrowing of lanes resulting from on-street traffic, where a car might need to slow or pull a bit to the side to negotiate passage past a parked car or one traveling in the opposite direction.⁵ Ludlow Road is a frequent cut-through street from Milverton to South Woodland and that traffic can approach 50 mph. When the street is parked for soccer games speeds naturally slow to 25 mph.

Suggested Actions, traffic: Require a traffic study from appropriate professionals to better quantify anticipated volumes and strategies for safety and reducing impacts on neighbors. This shouldn't be something left for after the start of construction, as the findings may suggest changes to the site design.

- Prioritize safety, particularly for the most vulnerable modes: small children, adult pedestrians, and cyclists in that order.
- Prioritize strategies where the physical landscape requires traffic to slow, rather than relying first on signage or signals that are often ignored.
- Study safe drop-off and best practices.
- Consider one-way traffic with care – while one-way streets can smooth traffic congestion, smooth is fast and fast is dangerous.
- Identify sign and signal locations
- Identify the traffic management plan for the construction period.

Playground: The importance of creating a quality playground at Ludlow can't be understated. For young Pre-K children, I'm sure others can speak better to the importance of quality outdoor space as part of a holistic learning environment. But it seems intuitive that more diversity in the experience and inclusion of natural elements is likely highly important at this stage of development. The Dept. of Health and Human Services 'Head Start Play Space Assessment tool emphasizes a range of critical categories that include variety and flexibility in play areas, the importance of shade, natural features, and sensory elements⁶. Surely there are opportunities to better integrate plantings, greater variety in surfacings, and nature play to make a more welcoming playground.

Likewise the absence of a real playground in Ludlow other than a de minimus piece of equipment for such a long period of time has been difficult to understand. Other schools that were closed in 1987 like Sussex and Malvern maintained substantial playgrounds with a variety of equipment even after they transitioned to new uses. Moreland has a great facility at Chelton Park in addition to the Main Library.

The expanded playground at Ludlow will be welcomed and appreciated, and will be the only playground between Woodbury and Luke Easter Park, remarkable particularly given the number of residents and children within the broader Ludlow community served by the district – approximately 3,000 residents, 21% under 18. It's appropriate to create a playground to match the quality long enjoyed by other school facilities and neighborhoods, including well-integrated trees and green space.

Suggested Actions: Add green, both within the boundaries and around the perimeter. It can be the difference between a joyful place to play and a holding pen. Some softness needs to be introduced for the benefit of both kids and passing neighbors.

Reconsider the relative positions of the play areas for the Pre-K kids vs the space intended for community use. In my observations at Ludlow field, the parents and younger tots will like to play next to the baseball diamond where they can keep an eye on the action of an older sibling while more closely supervising a smaller child. The older siblings tend to be more independent, and parents more comfortable letting them range further out of eye-shot. Swapping these areas seems to make more sense.

Field

This recreation field has been widely used by families from across the city for soccer and baseball, and at its size it's particularly well-suited to use by our city's younger kids, which are the rec teams we typically see playing here. Like other community fields, it's also in frequent use by neighborhood kids and families for a game of catch or just running around.

It's a true asset, and the activity is great for Ludlow – it enlivens the streets, and introduces families from elsewhere in Shaker to our great neighborhood.

**Suggested
Actions:**

The proposed changes reduce the usability for soccer, both by eliminating a berm often used for seating, and by pushing the field west against an existing drain location that will shorten the field. Relocating the drain seems a reasonable step to maintain usability.

The landscape design isn't yet in tune with how our Shaker community tends to use these facilities. Typically parents' lawn chairs get arrayed along the edge of the parking lot. It's nice that some new trees have been added, which is a great investment in the future shade and usability of this area. However, the parking lot is cut off from the field, permeability in that shrub edge on the west side of the paving will make this more usable. The choice of holly with sharp corners on leaves makes that edge particularly unwelcoming.

Identify how visitors to the field will reach the bleachers and seating areas around the field perimeter, particularly those with less mobility. ADA compliance may be an issue.⁷

- Site Maintenance:** Care of the site has often fallen short of what's typically seen at other Shaker Schools facilities. That neglect has been particularly evident at the field and areas more remote from the existing building:
- The site drains significant quantities of water and sediment especially onto the Keswick sidewalk. In the spring a length greater than 100 feet is a continuous puddle. In the summer a thick layer of mud is left behind, quickly replaced with a new layer on the occasions it has been removed. This may be a violation of our Codified Ordinances **§361**.
 - Chain link fences on the north, west, and south are rusty, or have peeling paint, and the fence fabric has been cut or opened in areas.
 - Shrubs along Keswick have been removed by the District, though screening appears to be required by zoning **§1262.05**.
 - At many locations, including along Southington as well as the west boundary of the field, shrubs have been infiltrated by invasive plants, and many times have killed the original ornamental plantings while maintenance crews continue to trim the invasives as topiary.

All of these have given an impression that the school has considered Ludlow a low priority compared to their other facilities. It is likely true that many of these could simply be pursued as property maintenance violations via the City's compliant process, and cited as most homeowners would be during the regular inspection process.

The school has said they do not presently have these areas included within the project's scope of work, and have also indicated they do not currently have funds budgeted. Both statements are undoubtedly true, but as a resident it can be hard to understand why that would be the case, given their relatively small cost in proportion to the total work.

Budgets are budgets. But it is perhaps worth remembering that after Fernway suffered a fire that closed the school for 2-years, fundraisers were organized, and significant donations were solicited and received in order to upgrade the playground. Certainly Ludlow is equally worthy of similar support from the District and City to solve the deferred maintenance issues that linger after a 37-year closure.

When the project is completed, if these small items have been ignored the new center will begin its life looking rough and untended. This is perhaps an odd first impression when rolling out such a great new program for the City and greeting new neighbors.

¹ <https://www.shakerheightsoh.gov/DocumentCenter/View/2799/Shaker-Village-Historic-District-PDF?bidId=>, p. 14.

² Walkable City Rules, Jeff Speck, 2018, pp. 186-187

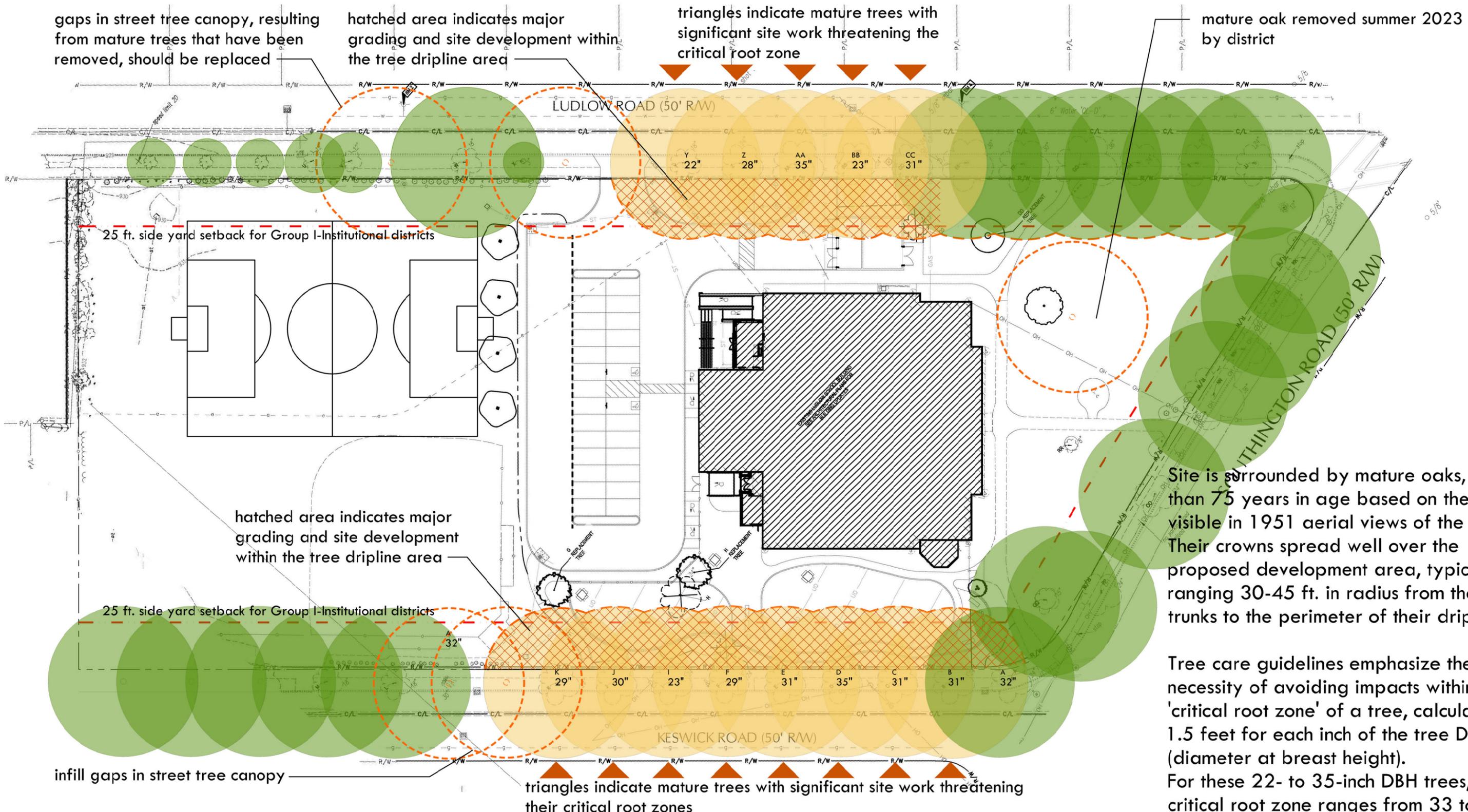
³ https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5368392.pdf, p. 28

⁴ <https://www.treesaregood.org/about>

⁵ Walkable City Rules, Jeff Speck, 2018, pp. 118-119

⁶ <https://eclkc.ohs.acf.hhs.gov/sites/default/files/pdf/play-space-assessment-preschool.pdf>

⁷ <https://www.access-board.gov/ada/guides/chapter-10-sports-facilities/>



Site is surrounded by mature oaks, more than 75 years in age based on their sizes visible in 1951 aerial views of the site. Their crowns spread well over the proposed development area, typically ranging 30-45 ft. in radius from their trunks to the perimeter of their driplines.

Tree care guidelines emphasize the necessity of avoiding impacts within the 'critical root zone' of a tree, calculated at 1.5 feet for each inch of the tree DBH (diameter at breast height). For these 22- to 35-inch DBH trees, the critical root zone ranges from 33 to 52 feet in radius from the trunk

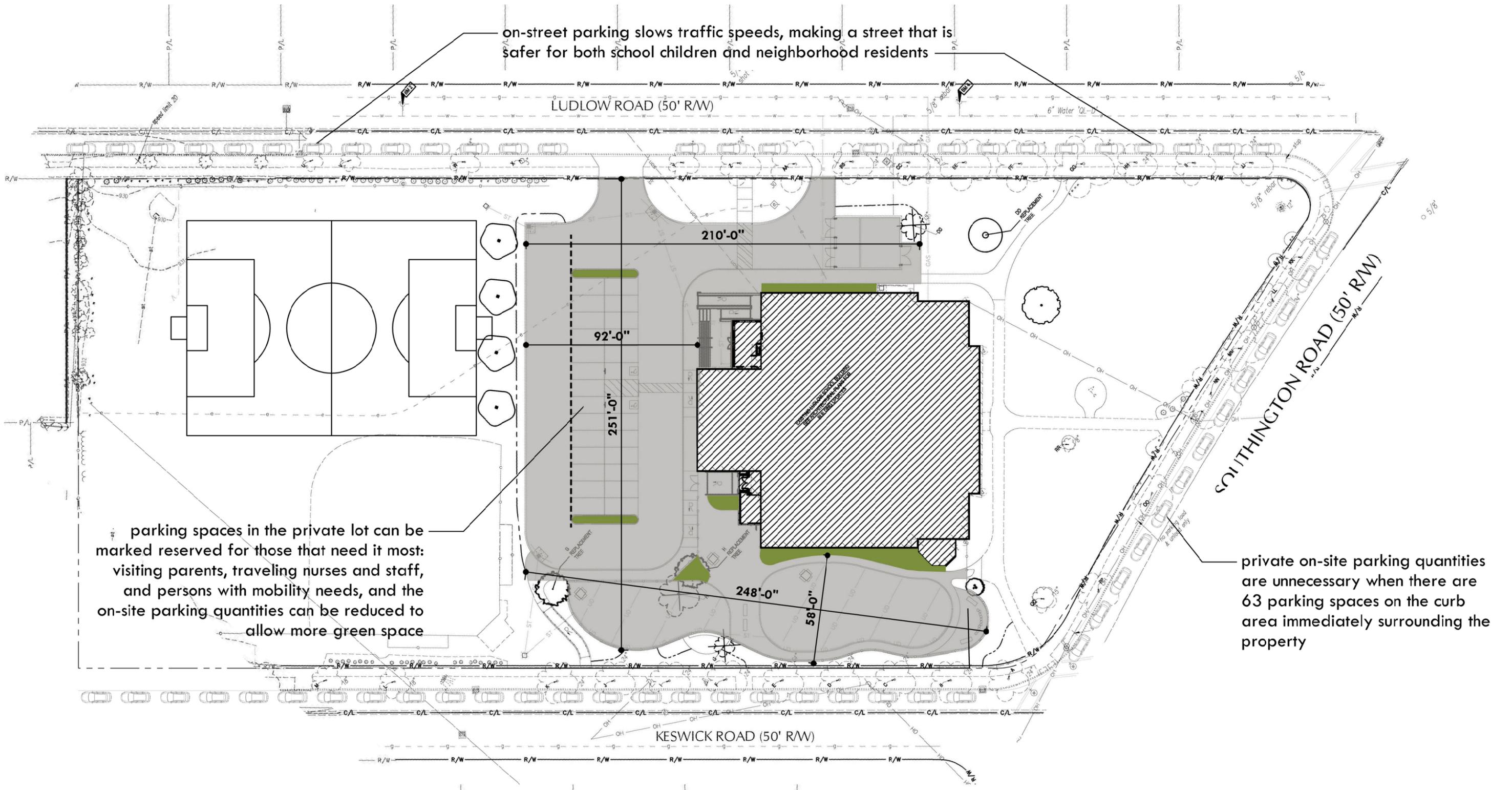
Consultation with a certified arborist is essential before proceeding with design to avoid threats to tree survival.

LUDLOW SCHOOL - site design analysis

tree protection

scale: 1" = 50 ft

06.17.2024



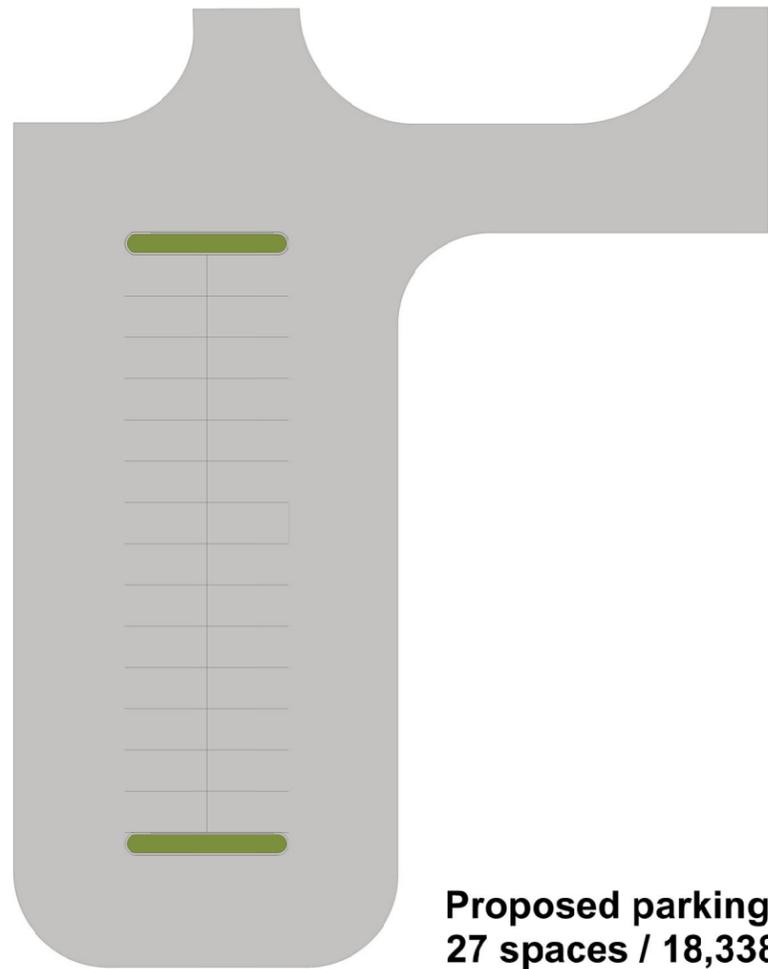
LUDLOW SCHOOL - site design analysis

pavement / hard and unplanted surfaces

scale: 1" = 50 ft

06.17.2024

Grey shaded area represents approx. 33,650 sq. ft. of hard / unplanted surfaces: asphalt, sidewalks, trash enclosure, safety surface surrounding the school on three sides, nearly uninterrupted by planting areas or trees save for a few very small pockets that could be planted.

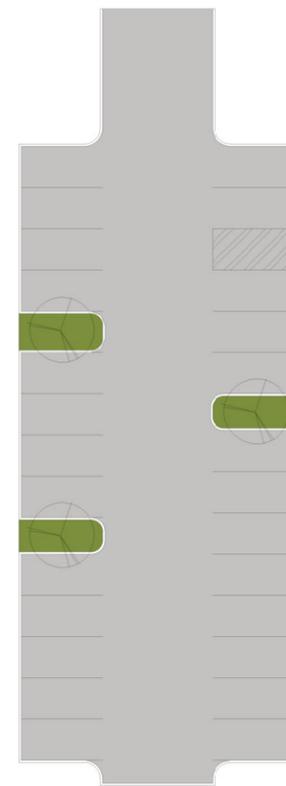


**Proposed parking lot:
27 spaces / 18,338 sf pavement**

parking stall area = 4,536 sf = 25%
auto circulation = 75%

$27 / 10 = 2.7 * 120$ sf tree island per 10 spaces
= 324 sf green space required

272 sf green space provided
in area between curb interior edges



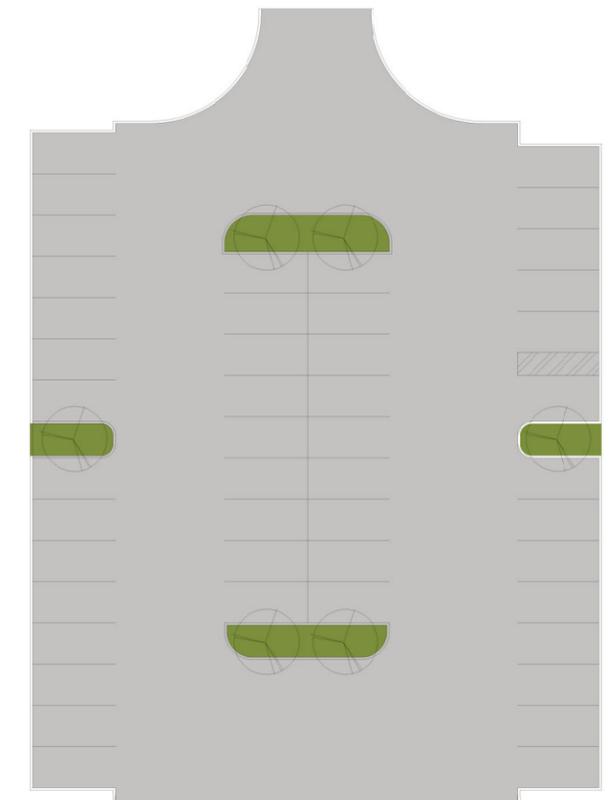
**Typical parking lot of 27 spaces:
8,605 sf pavement**

parking stall area = 4,536 sf = 53%
auto circulation = 47%

$27 / 10 = 2.7 * 120$ sf tree island per 10 spaces
= 324 sf green space required

395 sf green space provided

This conventional parking lot layout provides the same parking quantity in an asphalt surface that is 47% smaller



**Typical parking lot of 18,338 sf
48 parking spaces**

parking stall area = 7,884 sf = 43%
auto circulation = 57%

$48 / 10 = 4.8 * 120$ sf tree island per 10 spaces
= 576 sf green space required

751 sf green space illustrated

This conventional lot layout of identical surface area to the proposed design requires 178% more tree island area than the proposed design

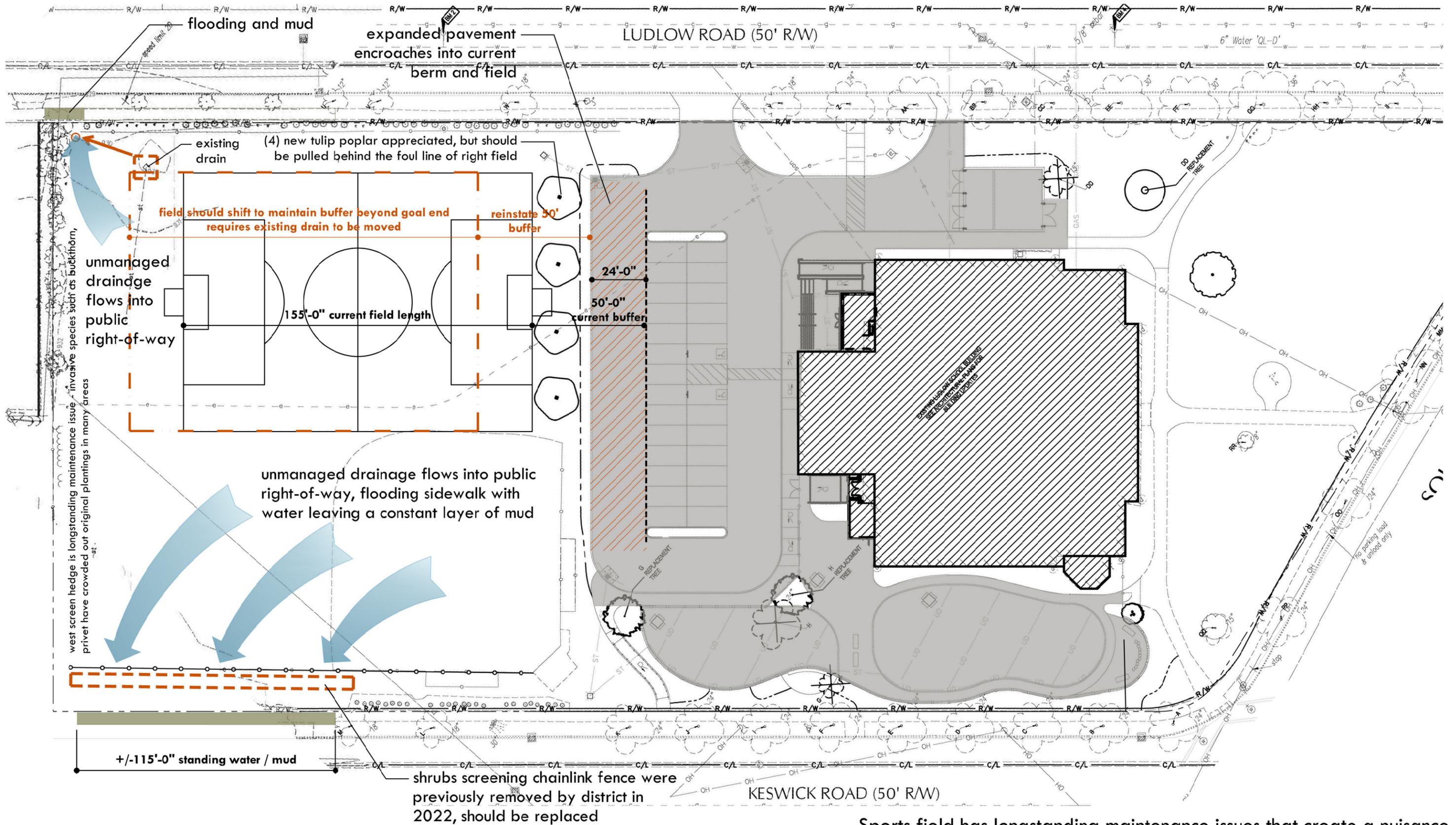
**LUDLOW SCHOOL - site design analysis
parking lot tree islands and green space**

scale: 1" = 40 ft

06.19.2024

Zoning code section 1253.08-C does not adequately address the intent of avoiding uninterrupted asphalt in a case like the proposal that is circulation intensive.

However, section 1213.06-E-3-d in describing the CPC's standards for site plan review notes the specific charge to "Break up large expanses of asphalt with plant material", and certainly additional interior parking lot landscaping is necessary to do so here.



LUDLOW SCHOOL - site design analysis
sports field / maintenance / nuisance issues

scale: 1" = 40 ft

06.17.2024

Sports field has longstanding maintenance issues that create a nuisance for the neighborhood, many going back at least 15 years, likely longer. Given the significant scope of work planned for the property, it is the appropriate time to address these items, which appear likely to be out of compliance with zoning and nuisance ordinances.



Site Plan

LUDLOW PRE-K
alternate site plan option b

scale: 1" = 50 ft 04.27.2024

	<i>GPD design</i>	<i>alternate design option b</i>
parent drop-off	5 spaces	9 spaces (+80%)
pavement area	19,850 sf	13,460 sf (-32%)
available parking	27 + 62 = 89 spaces	9 + 62 = 71 spaces (+6 opt. angled spaces = 77)

From: Marika Emerson <marikaemerson@gmail.com>
Sent: Saturday, June 22, 2024 9:30 AM
Subject: Commentary regarding Ludlow School development

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Hello,

I am writing as a resident of Ludlow Road in Cleveland, Ohio to echo the care and concerns put forth by my neighbor Kevin Dreyfuss-Wells regarding the Ludlow School project.

My husband is originally from Ohio but I am not. In 2021, we relocated to Cleveland from Portland, Oregon. Part of the reason for our move was wanting to be closer to family and to have access to better quality school systems than were available to us in Portland, for when we ultimately had a child or children of our own. We purchased a home on Ludlow Road and have fallen in love with the street, the community and neighborhood here as well as the rich history of the area.

While we were searching for a new home, the Shaker School District appealed to us for many reasons: the high quality education (I was an International Baccalaureate student myself so am quite familiar with the program,) the diversity of the student body, the beautiful historic buildings, as well as the community involvement and care for the school district and the student population.

Someday, perhaps not far in the future, we will be just a few doors away from Ludlow School once our child or children are Pre-K age. We will be able to walk them down the street to school, under the gorgeous historic oak trees that line the road. Right now feels like a moment frozen in time a bit, before big (positive) changes happen. It seems that this space has been long dormant, and while I haven't met a single person who isn't thrilled about the building being repurposed for Pre-K, it deserves to be done right.

Below I am sharing what was shared with me by Kevin Dreyfuss-Wells, which I'm sure he shared with you as well. I agree with Kevin on all points.

Ludlow deserves a beautiful school and a well-executed project to benefit this community now and in the future.

Best Regards,
Marika Emerson

In 1987, the Shaker Heights Board of Education closed Ludlow School, changing our neighborhood significantly. Home prices dropped, and Ludlow children no longer could go to school where they lived. **For 37 years, it sometimes seemed like the school district had forgotten about us.** The building has not always been well cared for. Sometimes grass has grown knee-high, and the Keswick sidewalk still fills with mud. Our playground is tiny, nothing like the size or quality that every other neighborhood in Shaker has had for their children of all ages.

We have a chance to change things for the better. But your voice is needed. The school district has decided to place its Pre-Kindergarten program here and will make a once-in-a-lifetime investment in the building. Their current plans are not yet what our neighborhood

deserves. A new Pre-K can change our neighborhood for the better, and I will be glad to see this project happen. **But right now this plan needs some work.**

This project needs more thought:

1. Our trees must be protected. Majestic oaks on all three sides of the school are more than 75 years old, and if taken care of could live another 200 years. But experts who care for trees say you must avoid disturbing the roots that extend out to the edge of the leaf canopy above, or the trees can sicken and die. Right now the plan shows lots of earth moving and new pavement that can cut or crush these roots. We need a plan by an independent certified arborist to confirm these trees will be protected for our next generation.

2. We need a greener site. The new plan surrounds the building on three sides with big fields of asphalt, concrete and wood chips. There are almost no plantings or trees to break up that area. That's not how other Shaker Schools are treated, and shouldn't be what we see around Ludlow. And there's room to add new green areas! Concrete in the playgrounds can be replaced with planting. The school added more parking spaces compared to what they had shown previously, but there is plenty available on-street and no need to fill the site. Curb parking worked for PEP and will work again here, and helps slow traffic to make our streets safer.

3. We need a great playground. Play areas at other schools in the district include areas for trees and plantings integrated as part of the well-equipped playgrounds, making shady places to play. Right now the site plan shows concrete and wood chips for an area 250 feet long and 60 feet wide without interruption. This is the only place for kids in our neighborhood. A greener playground is needed to be more welcoming for everyone.

4. We need a plan for traffic. Pre-K children will come from everywhere in the school district. The Chief Operating Officer for the Shaker Schools has said this will cause big changes in traffic patterns as parents come to drop-off and pick-up their children for multiple sessions, both morning and afternoon. We know this can work, because it happens at neighborhood schools.. But it needs to be well-planned with careful strategies for on-street parking and traffic management. Will our streets need one-way traffic at certain times? Will we need better signs or signals? Speed bumps? The plan must include a traffic study so we know how this will work.

5. We need the site to be cared for. The plan currently doesn't include any work in the play field area. Yet chain link fences are rusty or have peeling paint, shrubs are either dead, missing, or overgrown and filled with invasive plants. Run-off spills out without proper drainage, leaving over 100 feet of the Keswick sidewalk covered with inches of water and mud much of the year. We are spending close to \$20 million on this project, now is the time to fix what's been neglected.

6. We need the school district to listen. When Fernway Elementary caught fire, the entire City of Shaker Heights supported them to bring back a quality school. There were fundraisers and the school sent surveys to the community asking what was important for their outdoor space. Ludlow deserves the same. Our Ludlow Community Association is terrific but doesn't have many resources. Yet so far the schools have relied only on the LCA instead of reaching out directly to the people that will be affected. Many of our neighbors don't yet know about the project even though they've been making plans for over a year. The school needs to spend time coming to meet and hear concerns. They've been late in getting started, but there's still time to make changes. We should not rush this process.

Daniel Feinstein

From: B.H. Friedman-Romell <bhfr0108@gmail.com>
Sent: Wednesday, June 26, 2024 5:21 PM
To: Planning Dept Web Mailbox; glasner_d@shaker.org; Heather Weingart; cover_l@shaker.org; Alison Bibb-Carson; scott_p@shaker.org; Doug Wang
Cc: Kevin Dreyfuss-Wells; benjaminlhsu@gmail.com
Subject: Plans for Ludlow Elementary School

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Dear members of the Planning Commission, School Board, and Dr. Glasner,

I am writing to express my concerns about the proposed outdoor renovation plans for Ludlow Elementary School. I work until 8:30 p.m. in Willoughby when the meeting will be held, or I would definitely be there in person on July 2. Please read my comments and share them at the meeting if possible.

As a 20+ year resident of Ludlow Rd, and the parent of two Shaker grads, I am thrilled that we are bringing a district-wide preschool opportunity to the community of Ludlow. I live across the street from the school, and often wished that my children could have gone there for elementary. I also wished that there was a functional and attractive playground for them to go to, rather than the neglected afterthought that is currently at that location. The rehab is a unique opportunity to create something special not only for young children, but for the neighborhood as a whole.

What the site has going for it currently: Mature trees and shade. Grass. A big field. An attractive, historic building. A safe, cohesive neighborhood that is proud of its history and heritage.

What the site doesn't need: More asphalt. I oppose **strongly** ANY increase to impermeable surface, which will result in increased run-off, more heat in the summer, and ugliness. There is ample room for folks to park on the street. The teachers can get over themselves if they don't want to walk 25 or 50 extra feet to the building. Seriously. The parking lot does not need to be bigger. Please set aside enough reserved parking for disabled individuals in the existing lot, and facilitate on street parking for the overflow, as happens at the High School and Woodbury currently. Also I don't understand the proposal to move the trash bins from the back of the building to the front, and create a tall screening wall. Why make an eyesore at the front of the building?

For traffic calming purposes, Ludlow and Keswick could become one-way during school hours, like Woodbury. As a resident of the block, I would not mind this at all. In fact, we would appreciate the reduction in cars zooming down the street at 45-50 mph.

Please preserve green space, and all the trees, and create a wonderful new playground for kids of all ages and abilities, that is in the shade. I recently participated in a focus group for Parks and Rec, and the need for shady playgrounds came up frequently in the discussion. It could be divided for preschool and older kids if need be. Maybe there could be a learning garden like Peter's Garden at Onaway. Please also enhance the sports field, so more team sports could be played there.

In short, please treat the Ludlow neighborhood and school like you treat the neighborhoods and schools to the north and east of us. It's a matter of equity.

Thank you,

Beth Friedman-Romell, PhD, MT-BC (she, her, hers)

3029 Ludlow Rd., Shaker Hts. OH 44120

216-396-8835

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Cantor Beth Friedman-Romell, Ph.D, MT-BC (She, Her, Hers)

Knesseth Israel Temple

Wooster, OH

330-262-3516 (w)

216-396-8835 (c)

bhfr0108@gmail.com

Daniel Feinstein

From: Rosa Hand <rosa.k.hand@gmail.com>
Sent: Monday, June 24, 2024 8:05 PM
To: Daniel Feinstein
Subject: Planning commission comment—Ludlow School

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Hi

As a Ludlow Rd resident I want to express my support for the variances requested for the school renovation. The plans incorporate community feedback and balance those with school needs and neighborhood character.

Thank you
Rosa Hand
3175 Ludlow Rd