





View of Buildings E & F and new piazza from Lukiškių g.

Our proposal for the new Ministries Quarter has four key objectives:

- Strengthen National Identity as important architectural expressions of the Lithuanian Government the new buildings of the Quarter must reinforce the national identity for both Lithuanians and foreign visitors. Architecturally our scheme seeks to be distinguished, reserved, legible and efficient. These timeless qualities reflect the values and importance of the Government and its Ministries.
- 2. Urban Integration and Regeneration the project offers a unique opportunity to open up a closed urban block and create new connections from north to south. By linking the banks of the Neris River to the parliament district and emerging Lukiškių cultural quarter the site can become a significant addition to the cityscape of Vilnius.
- 3. Sustainable development in response to the climate emergency the project is an excellent opportunity for the Government to lead by example and deliver a project with exceptional sustainability credentials. Flexibility and adaptability are at the heart of the design, allowing the Ministries to respond to the changes and opportunities in the future.
- 4. Healthy Workplace Delivering an excellent working environment that focuses on collaboration, efficiency, productivity and wellbeing.



New pedestrian routes

The existing buildings on the site create a north-south barrier making it impossible to walk through the block. A key objective of the project is to open up the urban block and create new pedestrian routes across the site linking the banks of the Neris river with the parliament district and Lukiškių cultural quarter.

The existing Buildings E and F on Lukiškių g. are demolished and two new shared surface routes are formed either side of Building B. Predominantly for use by pedestrians, the routes would also be used for occasional VIP drop-off and service deliveries. On the west side this creates a new link towards the parliament district and Gynėjų g. On the east side, at the junction of Mečetės g and Lukiškių g. a new public piazza is created, forming an entrance to the site from the Lukiškių cultural quarter.



Ancient routes across the site



New pedestrian routes



Figure ground plan

Massing

Building A – an additional floor is added to Building A, raising its height to 26m. It's footprint remains unchanged.

Building $B\-$ this site is excluded from the proposal

Building C - an additional floor is added to Building C, raising its height to 31.5m. A new wing is also added on the north side, facing the Neris River. This creates an internal atrium separating the new and old parts of the building.

Building D – this site is excluded from the proposal, but it assumed that at some point in the future it will be included within the overall masterplan and removed. This would significantly improve the connectivity across the site, and the quality of the inner courtyard between buildings B, C and F.

Buildings E & F - The two pedestrian routes determine the massing of the new Buildings E and F. Both buildings respect and respond to the street orientations, as well as guiding people through the site and away from the streets. Each building is 7 storeys high (31m above street level), aligning with the Accenture office block in the south west corner of the site. The ground floors are 6m high (5.25m floor to ceiling) and upper floors 4.05m high (3.3m floor to soffit).



Civic Spaces





Lukiškių Piazza



A. Goštauto Piazza & Neris Riverfront

A series of new public spaces is created across the site:

Lukiškių Piazza – Located in the south-east corner of the site the new piazza draws people into the site from the south and forms the main external entrance space for Buildings E & F. The piazza would include a major piece of public art to strengthen the civic identity of the Ministry Quarter.

A. Goštauto Piazza – In front of Building B a new piazza is created. The piazza links the new routes through the Ministry Quarter with the pedestrian crossing over A. Goštauto g, leading to the Neris Riverfront.

Neris Riverfront - The south bank of the Neris River is included in the overall masterplan. The dominant feature is a wide set of steps, incorporating a gentle ramp that link A. Goštauto g. with the riverbank level. In plan the steps mirror the width of Building B, and are connected to the Ministries Quarter by a central pedestrian crossing. Planting, seating areas and trees are incorporated within the steps, enabling them to become a key recreational facility for the Ministry Quarter and wider city. A floating pontoon can used as a stage for events with spectators sitting on the steps. To each side the slopped banks are planted with a combination of low level shrubs and small trees, interspersed with grassed seating areas. Indigenous plants that nurture and reinforce the local biodiversity would be used throughout the scheme.

Tatar Garden and Courtyard Gardens – Within the site, between the Ministry buildings a series of landscaped gardens is created. Where possible the existing trees are retained, subject to a detailed assessment of their condition and life expectancy. The gardens would form additional recreational spaces for both government staff and the wider public. The landscape planting strategy would prioritise a wide range of indigenous plants that contribute to biodiversity within the site.

Transport Connections



Punderground Parking C Ground-level parking C Ground-level C MP drop-off route **Bus** - the two existing bus stops, on A. Goštauto g. and Lukiškių g. are retained in the masterplan.

Taxi – A taxi drop-off collection point is located on Mečetės g. adjacent to Building E. It would also be used by occupants of Building F. Buildings A, B and C are served by a shared surface lane running parallel to A. Goštauto g.

VIP – Chauffer driven visitors to Buildings A, B and C would arrive along the shared surface lane used by taxis. Visitors to Buildings E and F would be dropped off in the Lukiškių Piazza, having arrived from the north along the shared surface pedestrian routes. It is assumed such visitors would be very occasional.

Car Parking – Two underground car parks, providing a total of 626 spaces, are incorporated within the masterplan. Beneath the new wing of Building C 242 spaces are provided over two basement levels, with an internal access ramp from A. Goštauto g. Beneath Buildings E & F a further 384 spaces are provided over two basement levels, with an external access ramp from Mečetės g. The access and parking to Building D is retained until the site is incorporated within the overall masterplan and is removed.

Cycle Provision – Cycleparks and changing facilities are included within Buildings B and E, providing a total of 270 spaces.

Deliveries / Refuse collection – a loading dock is incorporated within Building E, facing Mečetės g. Occasional service access to the other buildings is also possible using the shared surface routes that cross the site.



View of Buildings E & F and new piazza from Lukiškių g.



Phase 1 has been split into two new buildings – E & F, with a total net internal floor area of 9,470m2 and 10,570m2 each. Both buildings have a central core, enabling each floor to be easily split between two users if required.

A key driver in the proposal is flexibility – the diagram left shows how the Ministries could be arranged within Buildings E & F. Due to the simplicity and efficiency of the floorplates, multiple alternative configurations are also possible

Building E

The main entrance and lobby space for Building E faces the new Lukiškių Piazza. Within the lobby, in addition to seated waiting areas, a café opens out onto the piazza. Meeting rooms and education spaces are accessed directly from the lobby. Four elevators are positioned beyond the security turnstiles. Also located at ground floor level are:

- Kindergarten including protected external garden / play area 13 on plan below
- Multi-function space 14 on plan below •
- Corner coffee shop 15 on plan below
- Loading bay for deliveries to both Building E and F 44 on plan below •

The central lift core serves all floors and permits the floors to be split 60/40. Each office floor is 22.4m wide between glazed facades, creating a 6.6m deep zone for cellular offices and open work spaces close to the façade, and a central 5.6m wide zone for meeting rooms, kitchenettes, WCs etc.

The plan is flexible so that the exact location of individual functions can be adjusted to suit or adapted in the future should the requirements of the departments change. The offices can be grouped at one end of the plan, arranged along one façade or separated into clusters dispersed amongst the flexi-space. The corridors can be closed off or left open to encourage collaborative working.

A service lift in the secondary on the north elevation connects each floor with the basement. On the top floor the façade is set back by 1.35m to create a linear roof terrace. Half of the floor is reserved for mechanical equipment that serve both Buildings E & F – air source heat pumps etc.







View of Building E from Mečetės g.

Building F

The main entrance and lobby space for Building F also faces the new Lukiškių Piazza. Four elevators are positioned beyond the security turnstiles. Also located at ground floor level are:

- Conference facing Lukiškių g. with direct access from the street 16/19 on plan below
- Canteen also facing Lukiškių g. with the possibility of being accessed from the office lobby, conference suite and street, depending on user group. 12 on plan below

As per Building E, the central lift core serves all floors and permits the floors to be split 60/40. Each office floor is 22.4m wide between glazed facades, creating a 6.6m deep zone for cellular offices and open work spaces close to the façade, and a central 5.6m wide zone for meeting rooms, kitchenettes, WCs etc. A service lift in the secondary core on the north elevation connects each floor with the basement. Soft spots within the slabs enable connecting stairs between levels to be incorporated.

On the top floor the façade is set back by 1.35m to create a linear roof terrace, with a larger open air terrace at the east end of the building, looking down on the piazza. The remainder of the floor accommodates the shared meeting rooms, enabling users to use the roof terrace as a break out space.



Ground Floor Plan



Typical Upper Floor Plan



6th Floor Plan

Structure

Above ground structure - All buildings have an exposed reinforced concrete frame. The precast perimeter columns are located inside the thermal line / façade. The structural grid along the length of the building is 8.1m which accommodates the car park spacing in the basement and the planning grid within the offices (1.35m grid). Similarly, the column spacing across the building is 10.8m which allows for cellular office or flexi-space to be located on either side of the plan. The office types have the flexibility to be swapped or adapted throughout the detailed design or in the future as the company changes and grows.

The floor slabs are coffered rather than being flat slabs. This has multiple benefits including:

- A 30% reduction in the quantity of concrete resulting in 15% lower carbon footprint for the frame.
- This reduction in concrete translates to a 15% lighter building which also reduces the cost of foundations.
- The high-level services (chilled beams / lighting / electrics etc.) can run between the coffers which allow the perceived height of the spaces to be a generous three metres.
- A suspended ceiling typically needs to be replaced every 15-20 years. By omitting it there are considerable long-term savings in replacement costs.
- The thermal mass of the concrete soffit can be used to naturally cool the interior of the building through the process of night-time cooling. Every other window can be opened at night to allow the concrete to cool. The surface area of a coffered ceiling is appreciably more than a flat slab (33%) and therefore is substantially more effective at cooling the building.
- Proprietary, re-usable formwork products (e.g. Geoplast Skyrail) could be used to create the coffers, so the frame can be constructed quickly and economically.
- The width of the coffers is 1.35m to align with the planning grid. Internal walls can be easily located along the lines of the ribs which also align with the window mullions.

In order to reduce the embodied carbon of the structure further we propose maximising the use of low carbon materials such as GGBS (Ground Granulated Blast-furnace Slag) as a substitute for cement. The amount of reduction in cement that can be achieved will be limited by construction practicalities.

We propose to engage with key potential concrete contractors at an early design stage, to review their construction methodology and the opportunities for minimising the cement content, with the aspiration to achieve a 50% reduction in cement content in superstructure elements and 70% in foundations. A 50% reduction in cement content will typically lower the carbon footprint of the structure by 22%. The possibility of using recycled steel reinforcement will also be investigated, as this could make very significant further reductions in the embodied carbon of this scheme, making it comparable to that of a timber scheme (ignoring sequestration).

Basement structure / foundations - The above and below-ground structural frames have been carefully coordinated so that the planning of the car park fits with the planning of the offices. This means that the columns run vertically through the building with no offsets or expensive transfer structures.

The basement slab and walls will be constructed from reinforced concrete with integral shallow spread foundations. As there is only parking and technical equipment in the basement (and no office accommodation or document storage) the basement is only required to achieve a basic level of water resistance. This will be achieved through the use of water-resistant concrete construction, avoiding the need for any additional waterproofing barriers or drained cavities.

Archaeology – In general the proposal follows the footprint of previous developments which will have impacted any archaeological remains below ground. Even so, the current basement layout does encroach in some areas on the site of the cemetery. As a result a detailed archaeological assessment and trial excavations would be required to understand whether mitigating measures are required, or whether the design needs to be adapted - eg reconfiguration of basement layout, use of transfer structures to avoid sensitive areas etc.



Building E & F south elevation facing Lukiškių g.



Building E west elevation



Facade

The façade is characterised by a deep extending floor slab which provides natural sun shading during the summer months. The extending slab is formed from precast concrete elements, thermally broken from the internal structural slab and finished with a pale terrazzo finish. The vertical structural grid is expressed externally by a series of pre-cast concrete fins, also thermally broken from the façade and finished in terrazzo.



The vertical façade uses an aluminium / timber frame glazing system. Triple glazed units with solar control glass ensure maximum insulation and low heat gain. One 1.35m window module per 4.05m bay is openable for natural ventilation and night time purging. The solid spandrel panels are clad in electropolished stainless steel. The solid wall / glass ratio of 45/55 maximises daylight within the floorspace and ensures low heat loss / gain in general, thereby reducing heating and cooling loads.

In addition to the shading provided by the extending floor slabs, external roller blinds on the south facing facades reduce solar gain when necessary. Manually operated internal blinds can be used to control glare and for privacy when required.

Car & Cycle Parking

A single car park for 384 vehicles, on two levels, extends under both Building E and F. The car park is accessed via a ramp from Mečetės g. Level -1 accommodates 183 parking spaces, Level -2 accommodates 201 parking spaces. This includes disabled access spaces and electric charging spaces. The 8.1m structural grid ensures 3 parking spaces per structural bay.

A cycle parking zone for 100 bicycles is also located at basement level and uses a dedicated ramp adjacent to car park entrance. Showers and changing facilities would be included with the cycle store.

From the basement, users can either directly access the lift core (subject to clarification of the security strategy) or use an independent lift and stair to ground level and enter the building via the main entrance and lobby. At weekends, if the car park is open to the public, the independent lift and stair would be used.



B1 Basement Plan

Servicing & Mechanical Plant Areas

A combined loading dock for both buildings is located in Building E, adjacent to the car parking ramp off Mečetės g. The loading dock would be used for major deliveries and to store recycling bins etc. Each building has a dedicated service lift in the secondary core. The service lift serves all floors, including the basement, which can be used to connect the two buildings. The secondary core also contains a small plant room for the on-floor air handling equipment that serves each level independently. The main plant spaces are at basement level and at roof level on Building E.

Sustainability

Lithuania aims to achieve a 45% renewable energy share by 2030 and is committed to achieve carbon neutrality by 2050. In response to this target the carbon emissions intensity of the electricity grid is reducing and will eventually become a cleaner energy source than gas or local district heating systems (NB it is noted that some of Vilnius' district heating suppliers intend to convert to fully renewable energy sources in the future which may influence the energy strategy of the project).

The new Ministries Quarter will respond to this by being one of Vilnius's first all-electric buildings using electrical power not just for lighting but also heating and cooling. This future proofs the building as a low energy, low carbon project.



Sustainability Schema

Our design includes a number of passive and active features to reduce the energy demand and promote a sustainable use of the building:

Passive design

- The façade includes fixed horizontal shading to limit solar gain.
- The façade is triple glazed to improve comfort and reduce heating demand.
- The façade includes openable sections to allow natural ventilation. The local climate is relatively mild for much of the year so natural ventilation will work well. Cool nights is summer also enable effective night time purging.
- The structure of building is made from concrete which will absorb heat and reduce cooling energy.

Low carbon active systems

- Office areas will be conditioned using an underfloor air supply and passive chilled beams. This system is a low energy system, provides excellent air quality due to the underfloor air supply and exceptional indoor comfort.
- Heating and cooling will be generated by air source heat pumps at roof level on Building E. Thermal storage tanks will be included to allow seasonal heat storage from summer to winter.
- Electrical energy will be drawn from the local electricity grid.

Renewable energy

- The roofs of both Buildings E and F will include photovoltaic arrays to generate approximately 10% of the building's energy demand
- Grid-synchronised battery storage will be included in the basement. The batteries will be charged up when the power grid is running at its lowest carbon intensity and discharged when the grid has poor carbon intensity. This allows a 10-20% reduction in operational carbon emissions.

Sustainable transport

- The project will include charging points for electric bikes and cars (minimum 40 spaces) to allow staff to charge their vehicles.
- The building's site is adjacent to multiple public transport nodes
- The building includes cycle storage in the basement for staff travelling to work by bicycle or electric bikes.

Low water use

• The design includes rainwater and grey water recycling systems capturing water from the roof and from showers and wash basins and re-using the water to flush toilets and for irrigation.

Low embodied carbon

- The project will be built using low carbon concrete with high fly ash content to reduce embodied carbon.
- The building's concrete construction will be self-finishing with minimum ceilings and surface covering, minimising the use of materials and embodied carbon.

Sustainability Targets - The project will target exemplary sustainability and energy benchmarks including:

- Operational energy of less than 55 kWh/m2. This figure is in line with 2030 low carbon building targets. The target should be ensured by using the Nabers rating system from the start of the project, to analyse the design and include enhanced commissioning to ensure it performs;
- The embodied carbon targets is less 600 kgCO2/m2 for its initial construction, including fit-out. This target will need to be tested as the design evolves and contractors become involved;
- We recommend the use of either LEED or BREEAM as internationally recognised sustainability rating tools. The project should target a Platinum / Outstanding rating.



We spend 90% of our time in buildings. The quality of the environment inside impacts how we feel and our health. In turn, our health and wellbeing impacts on our productivity, which in turn is an important driver for all responsible employers. Optimising the well-being of all users is a primary objective of the project. This will be achieved by a range of measures including:

- Maximising daylight within all workspaces, and including manual internal glare control blinds that can be controlled by individual users;
- Manually openable windows in each façade bay, permitting natural ventilation controlled by the user when appropriate;
- Horizontal window format with solid lower spandrel, maximising views out above desk height and providing privacy when viewed from street level;
- Use of low velocity displacement air system, maximising thermal comfort;
- Use of intelligent LED lighting systems and task lighting that maximise user comfort;
- Careful acoustic design within all spaces;
- Use of natural materials wood, terrazzo, terracotta, natural fibre carpets etc in all internal spaces;
- Integration of biophilia and internal planting in lobby areas and work spaces;
- External roof terrace in Building F with extensive planting, seating etc for use as a break out space;
- Provision of high quality welfare facilities onsite, including canteen, kindergarten and multifunction space for use as a gym / fitness centre;
- Provision of cycle parking and changing facilities onsite;
- Creation of public gardens and rest areas both on site and along the Neris River as lunchtime recreation spaces.

We would target a WELL Platinum standard for this project.



Building A – The configuration of building A remains largely unchanged. The location of the main entrance and lobby, facing A. Goštauto g. is retained. An additional floor, using lightweight construction (eg steel or timber if permitted by the future regulations) is added, increasing the internal floor area to 8450m2.

Typical Floor Plan



View from West



View from North



View from East



Ground Floor Plan - not to scale



Building C – Two key additions are made to Building C in order to increase the total internal floor area from 11900m2 to 23800m2, including:

- An additional floor, using lightweight construction (eg steel or timber if permitted by the future regulations) is added to the existing building;
- A new 6 storey wing is added facing the A. Goštauto g.

The new wing follows the alignment of Buildings A and B, forming a stepped arrangement in plan. Between the new and old wings a 10m wide glazed atrium brings natural daylight into the heart of the building and forms a central hub space in the largest single building of the Ministries Quarter.

The main entrance is relocated to the north-east corner of the building, adjacent to Building B. It faces the car / taxi drop-off zone and the pedestrian links through the site to the other Ministry Buildings. The prominent north west corner houses a large retail / restaurant unit facing the Neris River.

Two levels of car parking are included below the new wing, providing a total of 242 parking spaces. Access to the parking is via a ramp within the building on the north elevation. A pedestrian lift and stair is located on the east side of the building, permitting the car park to be used by the public at weekends. 170 cycle parking spaces are located on the lower ground level of the existing building, adjacent to a small service yard.

Typical Upper Floor Plan- not to scale



Basement Plan - not to scale

BUILDING A

					Sub-	
Floor	Refurbishmer	nt	New built Extens	sion	Total	
Ground Floor	1490	m ²	0	m ²	1490	m ²
Floor 01	1490	m ²	0	m ²	1490	m ²
Floor 02	1490	m ²	0	m ²	1490	m ²
Floor 03	1490	m ²	0	m ²	1490	m ²
Floor 04	1490	m²	0	m ²	1490	m²
Floor 05	0	m ²	1000	m ²	1000	m ²
Total	7450	m²	1000	m²	8450	m²

BUILDING C

							Sub-	
Floor	Refurbishmer	nt	New built Extens	sion	New Buil	d	Total	
Ground Floor	1000	m^2	0	m ²	1700	m ²	2700	m^2
Floor 01	2024	m ²	0	m ²	1600	m ²	3624	m ²
Floor 02	2024	m ²	0	m ²	1600	m^2	3624	m ²
Floor 03	2024	m ²	0	m ²	1600	m ²	3624	m ²
Floor 04	2024	m ²	0	m ²	1600	m^2	3624	m^2
Floor 05	0	m ²	2024	m ²	1600	m ²	1600	m ²
Floor 06	0	m ²	1400	m ²	1600	m ²	1600	m ²
Total	9096	m²	3424	m²	11300	m²	23820	m²

BUILDING E

Floor	Space	Above Ground A	rea	Core	
Ground Floor	Lobby & Common Areas	550	m ²		m^2
	Commercial Functions	480	m ²		m ²
	Functional Backroom Spaces	100	m ²		m^2
	Core		m ²	120	m ²
Floor 01	Work Spaces	1150	m ²		m ²
	Circulation	240	m ²		m ²
	Functional Backroom Spaces	100	m²		m ²
	Core		m ²	120	m ²
Floor 02	Work Spaces	1150	m ²		m ²
	Circulation	240	m ²		m^2
	Functional Backroom Spaces	100	m ²		m ²
	Core		m ²	120	m ²
Floor 03	Work Spaces	1150	m ²		m ²
	Circulation	240	m ²		m ²
	Functional Backroom Spaces	100	m²		m ²
	Core		m ²	120	m ²
Floor 04	Work Spaces	1150	m ²		m ²
	Circulation	240	m ²		m ²
	Functional Backroom Spaces	100	m ²		m ²
	Core		m ²	120	m ²
Floor 05	Work Spaces	1150	m ²		m ²
	Circulation	240	m ²		m ²
	Functional Backroom Spaces	100	m²		m²
	Core		m ²	120	m ²
Floor 06	Work Spaces	490	m ²		m^2
	Circulation	210	m ²		m ²
	Functional Backroom Spaces	70	m ²		m ²
	Core & Plant Room		m ²	400	m ²
Total		9470	m²	1000	m²

	Ministry				
Floor	Justice	Social Security and Labour	Finance	Common	
01	1610 m ²				
02	350 m ²	1260 m2			
03		1610 m2			
04			1610 m2		
05			1610 m2		
06			770 m2		
Total	1960 m ²	2870 m ²	3990 m ²		

BUILDING F

Floor	Space	Above Ground A	rea	Core	
Ground Floor	Lobby & Common Areas	310	m ²		m ²
	Commercial Functions	900	m ²		m ²
	Functional Backroom Spaces	50	m²		m²
	Core		m ²	100	m ²
Floor 01	Work Spaces	1250	m ²		m ²
	Circulation	325	m ²		m ²
	Functional Backroom Spaces	110	m ²		m ²
	Core		m ²	100	m ²
Floor 02	Work Spaces	1250	m ²		m^2
	Circulation	325	m ²		m ²
	Functional Backroom Spaces	110	m ²		m ²
	Core		m ²	100	m ²
Floor 03	Work Spaces	1250	m ²		m^2
	Circulation	325	m ²		m ²
	Functional Backroom Spaces	110	m ²		m^2
	Core		m ²	100	m ²
Floor 04	Work Spaces	1250	m ²		m ²
	Circulation	325	m ²		m ²
	Functional Backroom Spaces	110	m ²		m ²
	Core		m ²	100	m ²
Floor 05	Work Spaces	1250	m ²		m ²
	Circulation	325	m ²		m ²
	Functional Backroom Spaces	110	m ²		m²
	Core		m ²	100	m ²
Floor 06	Work Spaces & Meeting Rooms	690	m ²		m ²
	Circulation	160	m ²		m ²
	Functional Backroom Spaces	35	m ²		m ²
	Core & Plant Room		m ²	100	m ²
Total		10570	m²	700	m²

	Ministry				
Floor	Economy & Innovation	Energy	Environment	Common	
01	1785 m2				
02	1785 m2				
03		1785 m2			
04			1785 m2		
05			1785 m2		
06				985 m2	
Total	3570 m ²	1785 m ²	3570 m ²	985 m ²	

BASEMENT AREAS

BUILDING C

Floor	Below Ground Area			
Level -1	5350 m ²			
Level -2	5350 m ²			
Total	10700 m²			

BUILDING E+F

Floor	Below Ground Area			
Level -1	6800	m ²		
Level -2	6800	m ²		
Total	13600	m²		

CAR PARKING PROVISION

Plot Name	Above Ground Area	Main Area
А	23820 m ²	14292 m ²
С	8450 m ²	5070 m ²
E+F	20040 m ²	12024 m ²
Total	52310 m ²	31386 m ²

Car parking required		
1 car park / 25m2 of 'Main Area'		
Coefficient Reduction: 0.5		
Parking Required (1/25m ² Main Area)	1255	No.
Parking Required (0.5 coefficient applied)	628	No.

Car parking provided						
Location	Level	No.				
Building C	L-1	121				
	L-2	121				
			242	No.		
Building E+F	L-1	183				
	L-2	201				
			384	No.		
Street	Street Level	6	6	No.		
Total			632	No.		